

**A Twenty-First Century
Library of Selected Thought
and Analysis
About Public Media**

Volume 1

The Hennock Institute

Contents

Volume 1

OVERVIEW OF THE LANDSCAPE

Report on the Future of Public Broadcasting— <i>Carnegie Commission, 1979</i>	4
Public Media Spectrum Policy and Rethinking Public Interest Obligations for the 21st Century — <i>New American Foundation</i>	12
Building a Digital Democracy Through Public Media— <i>Center for American Progress Action Fund</i>	39
2009 Media and Tech Priorities— <i>Freepress Action Fund</i>	50
Civic Engagement and Community Information— <i>Knight Commission</i>	62
Public Radio 2010—Challenge and Opportunity— <i>Station Resource Group</i>	102
Informing Communities: Sustaining Democracies in the Digital Age — <i>Knight Commission</i>	114
Public Media 2.0—Dynamic, Engaged Publics— <i>American Univ., Center for Social Media</i>	262
Rethinking Public Media— <i>Knight Commission</i>	290
Connecting the Edges — <i>Aspen Institute</i>	344

EDUCATION

A Digital Gift to the Nation— <i>Larry Grossman & Newton Minow</i>	401
Digital and Media Literacy: A Plan of Action — <i>Knight Commission</i>	405

Volume 2

PUBLIC TELEVISION

Is There Still a Place for Public Service Television? — <i>Reuters Institute, Oxford University</i>	468
The End of Television as We Know It — <i>IBM Business Consulting Services</i>	549
Scenarios for the Future of Public Broadcasting — <i>Dennis Haarsager</i>	576
Big Bird to the Rescue? — <i>Elizabeth Jensen, Columbia Journalism Review</i>	584

NEW MEDIA

Government Transparency: Six Strategies for a More Open and Participatory Government — <i>Knight Commission</i>	595
Creating Local Online Hubs — <i>Knight Commission</i>	635
Universal Broadband: Targeting Investments to Bring Broadband Services to All Americans— <i>Knight Commission</i>	669

Mobile Internet and Broadcast Radio — <i>Skip Pizzi, Station Resource Group</i>	704
Public Radio in the New Network Age — <i>Station Resource Group</i>	711
Public Radio 2.0: New Media Working Group — <i>Skip Pizzi, Public Radio New Media Working Group</i>	810
NPR Opens Pandora’s Box on News Strategy— <i>Digital Skeptic</i>	816

INSTITUTIONAL STRUCTURE

The Path to Significance— <i>Station Resource Group</i>	818
Making the Case: Transformative Growth in Public Media’s Local Journalism— <i>Station Resource Group</i>	822
White Paper on Public Media Collaboration Models— <i>Corporation for Public Broadcasting</i>	832

FINANCE

Examining the Great Divide Between Larger and Lesser Total Station Revenue Stations— <i>Mark Fuerst, Public Radio Futures Forum</i>	835
Annual Growth Rates in Licensee Revenues— <i>Mark Fuerst, Public Radio Futures Forum</i>	840
Finding the Next 100 Million Dollars— <i>Mark Fuerst, Public Radio Futures Forum</i>	848
Individual Giving to Public Radio Stations— <i>Station Resource Group</i>	864

Several articles contained in this compilation were originally created as Powerpoint presentations. The content of *A Digital Gift to the Nation, Scenarios for the Future of Public Broadcasting* and *Making the Case: Transformative Growth in Public Media’s Journalism* were, accordingly, ported into the document format contained here.

Report of the Carnegie Commission on the Future of Public Broadcasting — Summary of Findings and Recommendations

In 1977, a decade after the first Carnegie Commission established the idea of federal funding for noncommercial broadcasting, the Carnegie Corporation of New York appointed a followup panel to study the progress and needs of the field. Carnegie II's report, *A Public Trust*, was released Jan. 30, 1979, was generally less influential. See also the commission's [membership](#) and the [preface to the report](#). This is the report's summary:

[The Public Telecommunications Trust](#) | [The Endowment Funding](#) | [Television Programs and Services](#) | [Public Radio Technology](#) | [Education and Learning](#) | [Public Accountability](#)

Although few of us recognized it in 1965, an era of American dominance was coming to an end just as public broadcasting was coming to birth. Perhaps as acutely as any other American institution, the system of public broadcasting was caught in the transition from an American outlook that we could do anything we chose, to today's anxiety that we may have chosen to do too much. Public broadcasting was conceived as a major new national institution, an ambitious concept that would transcend the limited fare, centered principally on public education, offered by several hundred noncommercial television and radio stations then in existence.

In less than a dozen years, among the most turbulent and pivotal in our history, public broadcasting has managed to establish itself as a national treasure. From the backwaters of an industry long dominated by commercial advertising, the public system has come into its own. Millions now watch and hear, applaud, and criticize a unique public institution which daily enters their homes with programs that inform, engage, enlighten, and delight. In that sense, the ideal has been realized: public broadcasting has made a difference.

Public broadcasting is now firmly embedded in the national consciousness, financed by the people who use it, as well as by an array of organized elements within society, including businesses, state, and local governments, universities and school boards, foundations, and, of course, the federal government. It was the Congress and President who, in 1967, set up the organizational framework and turned on the flow of much-needed federal dollars supporting the operations and programs of public radio and television as we know them today.

There is a necessarily ambivalent relationship between public broadcasting — a highly visible creative and journalistic enterprise — and the government. The dynamics of a free press and a democratic government are unpredictable enough without adding the additional complication of federal financial support.

Herein lies the fundamental dilemma that has revealed itself over and over again in public broadcasting's brief history and led to the empanelment of this Commission: how can public broadcasting be organized so that sensitive judgments can be freely made and creative activity freely carried out without destructive quarreling over whether the system is subservient to a variety of powerful forces including the government?

Commercial broadcasting's entire output is defined by an imperative need to reach mass audiences in order to sell products. Despite the evident need for an alternative addressed more realistically to the problems and the triumphs of American life, public broadcasting has yet to resolve the dilemma posed by its own structure.

Upon the framework of the 1967 legislation a complex institution has been constructed, one that has not always been able to cultivate the creative in preference to the bureaucratic. Financial worries upstage creative urges, even among the best of institutions. And this one has experienced considerable financial worries. By 1970, the skeleton of a national structure was in place. The Corporation for Public Broadcasting (CPB) — a nonprofit leadership institution created by Congress and governed by private citizens appointed by the President — would receive federal and other funds, disburse them to stations and producers, and support a wide range of activities to strengthen and expand the system.

Two national, nonstatutory organizations created by CPB — the Public Broadcasting Service (PBS) for television and National Public Radio (NPR) for radio — would interconnect the stations, distribute programs, and provide other services to enhance the national and local programming mission. And there were the stations themselves, upon which the national system was built. Independent and diverse institutions scattered throughout the land, the public radio and television stations are the focal point for audiences because only they can determine the mix of programs that best serves the unique characteristics of their own communities.

There are high and low points in the telling of public broadcasting's first full decade — the 1972 veto of federal funding for the system, the reorganizations of PBS and NPR, multiyear funding in 1975, the development of the satellite and the Public Telecommunications Financing Act of 1978, not to mention innumerable programming successes and much-improved service.

Nonetheless, we find public broadcasting's financial, organizational and creative structure fundamentally flawed. In retrospect, what public broadcasting tried to invent was a truly radical idea: an instrument of mass communication that simultaneously respects the artistry of the individuals who create programs, the needs of the public that form the audience, and the forces of political power that supply the resources.

Sadly, we conclude that the invention did not work, or at least not very well. Institutional pressures became unbalanced in a dramatically short time. They remain today — despite the best efforts of the thousands within the industry and the millions who support it — out of kilter and badly in need of repair.

Our proposal is an attempt to balance the manifold pressures within and upon an institution that in many ways mirrors the complex divisions of today's America, providing the means with which the system can reach its fullest potential for creative excellence and program diversity. We necessarily concentrate upon the design of national organizations, their relation to the station system, and the funding mechanisms by which 'ill components of the system can enjoy a stable source of funding without threat of interference with programming independence.

The practical outcome of this proposal will be the establishment of institutions and the implementation of fiscal and management policies. However, our objective transcends this level of detail. Throughout our investigation and our report we return to a central theme: this institution, singularly positioned within the public debate, the creative and journalistic communities, and a technological horizon of uncertain consequences, is an absolutely indispensable tool for our people and our democracy.

The power of the communications media must be marshaled in the interest of human development, not merely for advertising revenue. The outcome of the institution of public broadcasting can best be understood as a social dividend of technology, a benefit fulfilling needs that cannot be met by commercial means. As television and radio are joined by a host of new technological advances, the need becomes

even more urgent for a nonprofit institution that can assist the nation in reducing the lag between the introduction of new telecommunications devices and their widespread social benefit.

The future for such matters is almost impossible to comprehend, much less to predict. America has entered a new era in telecommunications. Increasingly our work, our leisure, and our capacity to relate to the world are served and shaped by many electronic tools such as satellites, computers, microcircuitry, and wire and glass-fiber television distribution. Public broadcasting as an institution will be challenged and transformed: some say its future is here and that the institution is in fact already evolving rapidly into a public telecommunications complex of extraordinary importance to the future of our society.

As of now, a properly constructed and effective public broadcasting system can unleash the tremendous potential of America's creative artists so that the programming that comes into our homes can better educate and inform, entertain and delight.

While the system sometimes seems unwieldy and frustrating to those working within public broadcasting, the rewards are substantial: a sense of dedication and service, the opportunity to communicate and motivate, the rare coincidence of purpose with craft.

We have attempted, in designing improvements of the present system, to sort out the forces that encourage such creative efforts from those that frustrate it. The act of creation is not so much a mystical event as it is the intersection of inspiration and opportunity. The system must locate, at the center of its enterprise, the incentive to create — a sustained commitment to genuine artistry based upon ingenious uses of these powerful media.

1. *The Trust.* We conclude that there must be a structural reorganization of public broadcasting at the national level. For a variety of reasons, we believe that the existing national leadership organization, the Corporation for Public Broadcasting, is unable to fulfill this role. We recommend that the Corporation for Public Broadcasting be replaced by a new entity called the Public Telecommunications Trust. The Trust, a nongovernmental, nonprofit corporation, will be the principal fiduciary agent for the entire system and all of its components, disbursing federal funds to stations for operations and facilities expansion, as well as setting goals for the system and helping to evaluate performance. In addition, the Trust will supervise a wide range of leadership, long-range planning and system development activities.

One of the primary responsibilities of the Public Telecommunications Trust is to provide the system with protection from inappropriate interference in the sensitive area of program making that will occur both in and outside public broadcasting.

The Trust will also be charged with the responsibility of — administering activities designed to improve the system's service to the public, especially as the effects of social and technological changes are felt in the 1980s. Included among these responsibilities are expansion and improvement of facilities and signal coverage, broadening of station involvement with minorities and women, expansion of employment opportunities, development of sophisticated training programs, establishment of both accountability criteria for federal funds and informational and research activities.

The Public Telecommunications Trust will be governed by nine presidentially appointed trustees with staggered, nonrenewable, nine-year terms. We recommend that the President make his selections from a list of names presented to him by a panel, chaired by the Librarian of Congress, drawn from governmental institutions devoted to the arts, the sciences, the humanities, and the preservation of our heritage. In addition, in order to involve the public telecommunications system in this process, the panel would include two representatives drawn from the system.

We call this new organization a Trust and its board members Trustees to underscore our conviction that the nine people who guide the course of the noncommercial telecommunications field in the next decade hold a trust for both the people working within the system and the public that benefits from its services.

2. The Endowment. We also recommend the creation of a second statutory organization, the Program Services Endowment, to be established as a highly insulated, semiautonomous division of the Public Telecommunications Trust. The Endowment will have the sole objective of supporting creative excellence and will underwrite a broad range of television and radio productions and program services, including public affairs, drama, comedy, educational and learning research, and new applications of telecommunications technology.

We recommend that the Program Services Endowment be governed by a 15-member board appointed by the trustees of the Public Telecommunications Trust from candidates nominated by the board itself. Three members of the board must come from the public telecommunications community. All board members will serve staggered terms of three years, renewable once. Nominees for the initial Endowment Board will be proposed to the trustees by the nominating panel. The Chief Executive Officer of the Endowment will be chosen by the Endowment's Board.

Behind the recommendation of the Program Services Endowment is a desire to create a safe place for nurturing creative activity, which will otherwise become a casualty of the many other institutional priorities of this complex enterprise. It seems clear to us that there must be at least one place in the system offering to artists and journalists the principal prerequisite for creative achievement, the freedom to take risks.

3. Funding. The full-service public telecommunications enterprise we envision will require substantially greater funding than the system now receives. We realize that adequate funding alone is not a guarantee of complete success, but without it, success is unattainable.

We recommend that by 1985 total funding for America's public broadcasting system grow to about \$1.2 billion annually. We believe that the combined total from state government, viewers and listeners, the business community, and other nonfederal sources should rise from \$347 million in 1977 to \$570 million by 1985. We believe that the remainder of the estimated \$1.2 billion overall public broadcasting system — about one-half of all funds — should be provided by the federal government.

We recommend that federal support to stations be disbursed by the Trust in direct proportion to the nonfederal support each station generates. At two federal dollars for every three raised locally, the \$570 million in nonfederal support will generate \$380 million in federal money.

The Program Services Endowment will automatically receive federal funds equal to one-half the federal funds going to stations, or \$190 million.

In addition, we recommend that the Trust receive federal funds of \$20 million annually for its operating costs and activities, and \$50 million in each of the next five to seven years to support facilities expansion.

We recommend general revenues as the principal source of federal funds for public telecommunications. We recommend the establishment of a fee on licensed uses of the spectrum, with the income from this fee used to offset in part the increased requirement for general tax revenues.

We have designed this carefully balanced funding arrangement to accomplish several essential objectives. We believe our recommendations will provide nearly automatic support from the federal government, free to the maximum extent possible from partisan politics. We have made funding

recommendations that ensure the industry adequate levels of support generated from a variety of sources, but fatally dependent on none of them.

4. *Television Programs and Services.* The highest priority for the television system is the improvement in its capability to produce programs of excellence, diversity, and substance. Accordingly, we recommend that stations spend the bulk of their new resources on programming, locally, regionally, and nationally through aggregation of some of these funds. To emphasize this, we recommend that Community Service Grants — the federal matching grants to stations — be viewed as Program Service Grants. The Endowment will also supplement station efforts, by supporting innovative and untried programming ideas in a wide range of genres devised by producers working inside and outside the present system.

5. *Public Radio.* The top priority for the public radio system is the completion of the system so that it fully serves the nation in both large and small communities. In addition, the existing and the new stations must have a solid financial and community-support structure buttressing the service function that each licensee performs in its community.

Under the overall leadership of the Public Telecommunications Trust, we recommend the development and activation of an additional 250 to 300 public radio stations. The addition of new stations will result in improved national coverage for the public radio system, greater diversity among licensees, and broader local programming choice in many markets through multiple outlets.

The Trust, in cooperation with other elements of the public radio system, will develop a strategy of system expansion that includes regulatory reform activities and a radio development program that will assist in upgrading existing stations, activating new stations, and purchasing existing commercial or underutilized noncommercial stations.

We recommend that federal funds to public radio stations derived via our proposed matching formula be used for two purposes: improvement of local service and operations, and the financing by station consortiums of programming that transcends strictly local needs. We recommend that the Program Services Endowment support additional national radio programs, particularly new and innovative projects. The Endowment will also provide transitional support for the present National Public Radio programming services until such time as stations are able to aggregate funds to support programs of their choice.

6. *Technology.* In studying new telecommunications technology and public broadcasting's role within it, our goal has been to devise ways in which all the people can have full access to the products of a public telecommunications system. While we have examined the new technology, we have concentrated on ways it might be used by public broadcasting to meet human needs.

We have concluded that it is unwise for us to attempt to chart the future course of public broadcasting as it continues to interact with new technologies. We are convinced, however, that it is essential for public broadcasting to have both the money and the flexibility necessary to enable it to chart its own course as it responds to the future.

To help the industry fulfill this responsibility, we make three recommendations: that public broadcasting and government join together to bring public television and radio service to at least 90 percent of the population over the next five to seven years; that public broadcasting move rapidly to develop a stronger, integrated research and development capability so that it can use new technologies for the public good; and that public broadcasting adopt a broader and more flexible approach to the ways its programs and services are delivered to the public.

7. *Education and Learning.* American public broadcasting had its origins in instructional radio and television. We recommend that the industry recommit itself to providing programs and services that assist

in the education of all Americans. Because education in America is primarily a local matter, the major responsibility for this effort rests with the stations.

However, the quality of American education is also a national concern, and because we believe radio and television to have an important role in the process, we recommend that the Program Services Endowment initiate a major research effort to identify what radio and television can teach best, and to develop these capabilities. This is fundamental research, and the potential benefits of it for the entire society are immense.

We also believe that the Program Services Endowment should assume a central role in the creation of new instructional and educational programs. Consequently, we recommend that the Endowment finance and stimulate the development of quality programs that both test and demonstrate the potential of telecommunications for learning. We recommend that the Endowment, acting as a catalyst, allocate \$15 million per year for such research and demonstration programs on radio and television. This money might be used to fund several promising educational programs or series, or it could be used as a match for licensee money in coproduction efforts.

8. Public Accountability. Because public broad casting and the emerging public telecommunications industry enjoy widespread public support, stations, which are the focal point for interaction between the institution and the public, must provide serious opportunities for individuals to participate in and understand the system. Mechanisms for public participation in station

planning and development should be continued and strengthened. These include greater commitment to equal employment opportunity, broadened access by minorities, public involvement in station governance, more complete financial disclosure, and community ascertainment. These measures of public accountability should be devised so as to preserve the station's responsibility to maintain editorial freedom.

These methods, however, are not enough to provide stations with a systematic way to determine whether certain well-defined interests and needs of the public are being satisfied. We present a plan for the use of audience measurement data that will assist the public system in designing programs to meet a broad and diverse audience.

This report, as well as the process by which it was developed, is a testimony to the significance public broadcasting has come to assume in America today. Thousands of committed people within the industry are supported by a diverse, sometimes critical cross section of admirers from all walks of life. As listeners and viewers, as policymakers who will help mold the future of the system, as advocates of causes both great and small, as leaders of the many fields public broadcasting touches and illuminates, they came before us to express their views about an institution that matters. The true greatness of America lies in the strength that emerges from this kind of diversity of religious, racial, or cultural heritage. Public broadcasting must create an enterprise that attracts their continuing administration and support if it is to survive and flourish.

The revelation of diversity will not please some, notably the book burners and the dogmatists among us. It will startle and anger others, as well it should. But we have discovered in our own time that anger yields to understanding. America needs, perhaps even more than healing, a sense of understanding, something that is if we each continue to wall ourselves within the corner of society that we find safe, appealing, and comfortable.

Unless we grasp the means to broaden our conversation to include the diverse interests of the entire society, in ways that both illuminate our differences and distill our mutual hopes, more will be lost than the public broadcasting system.

Members of Carnegie II

William J. McGill, Chairman
President, Columbia University

Stephen K. Bailey
President, National Academy of Education

Red Burns
Executive Director, Alternate Media Center, School of the Arts
New York University

Henry J. Cauthen
Director, South Carolina Educational Television Network

Peggy Charren
President, Action for Children's Television

Wilbur B. Davenport, Jr.
Professor, Massachusetts Institute of Technology

Virginia B. Duncan
Board Member, Corporation for Public Broadcasting

Eli N. Evans
President, Charles H. Revson Foundation

John W. Gardner
Common Cause

Alex P. Haley
Author

Walter W. Heller
Professor, University of Minnesota

Josie R. Johnson
Board Member, National Public Radio

Kenneth Mason
President, Quaker Oats Company

Bill Moyers
WNET/I3

Kathleen Nolan
President, Screen Actors Guild

J. Leonard Reinsch
Chairman, Cox Broadcasting Corporation

Tomas Rivera

Executive Vice-President, University of Texas at El Paso

Bill Cosby, actor, **Carla Hills**, a former secretary of housing and urban development, and **Beverly Sills**, opera star, voluntarily resigned from the Commission during the course of this study as their participation became limited by other professional commitments.

- See more at: <http://www.current.org/1979/01/a-public-trust-the-report-of-the-carnegie-commission-on-the-future-of-public-broadcasting-carnegie-ii/#sthash.xymuylyH.dpuf>

POLICY PAPER

PUBLIC MEDIA, SPECTRUM POLICY, AND RETHINKING PUBLIC INTEREST OBLIGATIONS FOR THE 21ST CENTURY

BY BENJAMIN LENNETT, TOM GLAISYER AND SASCHA D. MEINRATH¹

JUNE 2012

SUPPORTED BY A GRANT FROM THE OPEN SOCIETY FOUNDATIONS

Executive Summary

In this paper we consider reforms and innovations in spectrum policy that would enable and sustain an expanded public media to better support quality news, journalism, education, arts, and civic information in the 21st century. The Internet has remade the landscape of free expression, access to news and information, and media production. Thus, we are well past the moment when spectrum allocated to broadcasting could be considered as distinct from that allocated to wireless broadband networks. Such networks serve as primary channels for access to news and information, increasingly edging out over-the-air broadcasting as the essential infrastructure for media distribution.

Throughout the history of U.S. policymaking, access to spectrum and the airwaves has been linked to free speech and expression. The public sphere now includes not just one-way broadcast, but two-way broadband and mobile communications platforms. Given this, spectrum allocation has to be considered not only in terms of how it can serve the historic priorities of the nation's Communications Act—localism, diversity and competition—but also the fact that anyone can produce and distribute media in the digital era. Simultaneously, the demands and structures of commercially driven media are swiftly eroding quality journalism, threatening a core foundation of our democracy. These developments necessitate new thinking on spectrum allocations and the obligations of spectrum licensees. More specifically, they underscore the need to develop policies that support and expand a broader public media to promote localism and a truly diverse marketplace of ideas, information, discourse and content.

Our proposals include:

- Supplementing ill-enforced public interest obligations on commercial broadcasters with spectrum license fees that could support multi-platform public media
- Supplanting one-time spectrum auctions with annual fees to sustain public media
- Requiring spectrum licensees for mobile broadband to adhere to non-discrimination rules for Internet content, applications, and services
- Requiring spectrum licenses for mobile broadband to adhere to universal service requirements

¹ Benjamin Lennett is Policy Director for the New America Foundation's Open Technology Institute, Tom Glaisyer is a Media Policy Fellow at the New America Foundation, and Sascha D. Meinrath is Director of the New America Foundation's Open Technology Institute. A draft of this paper was presented at the *Digital Diversity: Serving the Public Interest in the Age of Broadband* conference at Fordham University, May 3 – 5, 2011.

-
- Increasing the diversity of wireless providers in local communities
 - Facilitating community and locally owned wireless broadband infrastructure via unlicensed and opportunistic access to spectrum

Introduction

As Congress wrote in 1967, “[I]t is in the public interest to encourage the growth and development of public radio and television broadcasting, including the use of such media for instructional, educational, and cultural purposes; [and] it is in the public interest to encourage the growth and development of non broadcast telecommunications technologies for the delivery of public telecommunications services.”¹ Meeting these aspirational goals has always been a challenge for both public media makers and policymakers. Now, in a moment when the private sector is no longer generating the journalism for which it was previously celebrated, many questions have been raised about new roles for public media among those who believe, using Joseph Pulitzer’s words, “Our Republic and its press will rise and fall together.”²

In parallel, the Federal Communication Commission, set up in 1927, several decades prior to the establishment of a public broadcasting system, has most recently been grappling with the consequences of digitization of information and media and the resulting demands to increase wireless broadband capacity and access. In a February 2010 speech previewing the FCC spectrum plans for the National Broadband Plan, Chairman Genachowski described spectrum as “the oxygen of mobile broadband.”³ During the speech, the Chairman introduced a key goal of FCC’s National Broadband Plan: “freeing up to 500 Megahertz of spectrum over the next decade.”⁴ More recently, Congress has passed a law supporting, and the FCC has begun steps to implement, repurposing some of the frequencies currently used by over-the-air television broadcasters for mobile broadband.

As one might expect, policy decisions involving such a valuable resource as spectrum are highly contentious. Though the FCC’s plan relies on a voluntary approach, in which broadcast station owners would receive a percentage of auction proceeds if they agree to go off the air or to share a channel with another broadcaster, it has met significant resistance from a number of these commercial spectrum incumbents.⁵ Although their opposition can be largely attributed to financial motivation to not give up the rights and privileges associated with broadcast licenses, for those who want to actually remain broadcasters, such as public broadcasters, the proposal is also not particularly attractive. Those stations that choose to remain on the air and that do not agree to share a channel may be required by the FCC to transition to different frequencies in an effort to pack the remaining television signals closer together and clear as much spectrum as possible for auction. The move would occur not far removed from the recent digital television transition and would require those broadcasters to purchase new equipment and incur additional transition-related costs.⁶

Beyond these political issues, the proposal also has the potential to unravel the half-century old framework and agreement that rewarded commercial broadcasters with free, exclusive access to the airwaves in exchange for fulfilling certain obligations in their role as “trustees” of the public airwaves—a role that many have failed to fulfill meaningfully in recent years. Through “buying off” certain broadcasters, the proposal is setting a dangerous precedent for all existing spectrum licensees. Furthermore, it is enriching a constituency that has already received billions of dollars in giveaways as a result of their lucrative spectrum licenses—even as they have consistently lobbied both the FCC and Congress to eliminate most of the meaningful public interest obligations. The decisions the FCC makes in the next several years will fundamentally shape not only spectrum policy, but the environment for communications, public engagement, and journalism in the U.S for the coming decades. This offers a moment of opportunity to learn from our past successes and failures, to reassess the trustee model for broadcast licensees, to rework the nation’s policies for spectrum access and allocation, and to re-imagine a public

media framework that maintains our long tradition of viewing spectrum as public asset and protects it as an essential medium for speech.

Public Media, Spectrum, and New paradigms for Public Interest Obligations in the 21st Century

Given the current realities of media convergence, the national broadband plan recognizes that “public media must continue expanding beyond its original broadcast-based mission to form the core of a broader new public media network that better serves the new multi-platform information needs of America.”⁷ As Goodman and Chen have recently written, the modern media environment requires us to consider public media as having four layers – “infrastructure, creation, curation, and connection” that will be utilized and provisioned in a modular fashion by “newly reconfigured public media networks.”⁸ These ideas are still nascent, but the core concept is that we have to let go of the idea that public media is solely the responsibility of a small number of broadcast entities. With the advancement of technology, both for communications and content creation, nearly anyone can become a producer and distributor of news.

To a great extent, these advances require us to expand our notions of public media to include media produced *by the* public for civic purposes across multiple platforms and not just its historic format of mission-oriented non-commercial media produced *for* the public. Public Media can no longer be equated with just public broadcasting, but can be produced by a variety of individuals and entities working within established goals and standards. To date public broadcasting stations have been slower to take advantage of the online world and share content within the existing networks.⁹ There is ongoing collaboration around technology standards to aid this, but a great deal of work lies ahead before the promise of a 21st century public media sector can be fulfilled.

At the same time, traditional, commercially funded journalism has increasingly diminished, with newspaper closings and substantial cuts to print and broadcast newsrooms across the nation. To fill that void, many media analysts have advocated for an expansion of public media, including the Corporation for Public Broadcasting, NPR, PBS and local stations. Beyond concerns of ceding the responsibility of news and journalism to a few publicly funded entities, there remain some challenging questions about this idea. Who gets funding and from what sources? What about diversity in content and viewpoints? How do you account for convergence and move public media beyond just broadcasting? Is it enough simply to fund production, or do you need other ways to ensure the public has access to content?

“The decisions the FCC makes in the next several years will fundamentally shape not only spectrum policy, but the environment for communications, public engagement, and journalism in the U.S for the coming decades.”

All of these pressing concerns serve to reinforce the idea that we are currently at a critical juncture when policy decisions made now will cast the die for media structures, journalism and the information ecosystem for the next century. Not only are we driven to reconsider spectrum allocation (and the attendant public interest obligations) as a result of the paucity of news reporting produced by commercial entities allocated spectrum, but also because there are such tremendous possibilities for a new sort of media produced by non-commercial entities and the public at large.

Broadcasting Public Interest Obligations and the Limitations of

the Public “Trustee” Model

Before the Radio Act of 1927, over-the-air broadcasting was largely unregulated. The 1912 Radio Act allowed any citizen, upon request to the Secretary of Labor or Commerce, to receive a license to broadcast a radio signal.¹⁰ Given the infancy of the technology and the perceived ample supply of broadcast spectrum, there was not even a provision in the law to deny licenses.¹¹ However, by the mid-1920s, that had changed, as the number of radio stations soared and concerns over interference became an argument for greater regulation. The resulting debate and subsequent 1927 Act would establish a framework that has continued to shape thinking around spectrum allocation and broadcast media for nearly a century.

On one side of the debate, advocates from religious, education and labor groups proposed a common carrier system that would have required broadcasters to allow any group or individual to buy air time, ensuring widespread access to the airwaves.¹² Large commercial broadcasters represented by the National Association of Broadcasters (NAB), opposed such a framework. Citing a hyper-competitive market, they lobbied for national broadcast networks and for editorial control over programming and national networks.¹³ Congress attempted to strike a balance, falling well short of a common carrier model but requiring that broadcaster licensees act as trustees of the spectrum in exchange for exclusive use of designated frequencies in a local market.¹⁴ What duties or obligations were actually entailed in the “trustee” bargain was not clearly articulated by Congress, nor was a regulatory structure for enforcement established in the Act.¹⁵ As a consequence, guidelines for operating in the public interest have consistently changed, often in response to electoral changes and political whims.

The FCC was granted broad authority by the 1927 and 1934 Communications Acts in establishing and

modifying public interest obligations required of broadcasters to fulfill their trustee roles. In 1930, the Federal Radio Commission, the predecessor to the FCC, interpreted the trustee principle this:

[Despite the fact that] the conscience and judgment of a station’s management are necessarily personal...the station itself must be operated as if owned by the public...It is as if people of a community should own a station and turn it over to the best man in sight with this injunction: ‘Manage this station in our interest.’¹⁶

Over time, however, commercial broadcasters and the NAB have wielded their influence at the Commission and Congress to weaken specific requirements or their enforcement. The ambitious and controversial objectives of “The Blue Book” after World War II mandated four basic obligations of licensees to receive a renewal, including live local and public affairs programming, faced considerable backlash and lobbying from the NAB and commercial interests.¹⁷ The specific requirement of “the Fairness Doctrine” to cover different perspectives on political issues equally was replaced in the 1980s. The changes included the much less impactful “reasonable access” to candidates for federal office to purchase airtime for political advertisements, as well as offering “equal opportunities” for airtime to all candidates for a particular elected office (a rule that only applies to political advertisements and not to news programming).¹⁸

Currently, the remaining obligations stipulate that broadcasters will provide educational programming for children; local culture and community affairs, electoral campaign coverage and civic information; information during states of emergency; and, access to those who are visually or aurally disabled.¹⁹ Unfortunately, the extent to which these modest obligations are even binding is questionable: the broadcasting industry eliminated its own voluntary,

self-regulatory measures for programming and advertising in 1981, and the FCC scaled back its review of whether broadcasters were meeting their public interest obligations that same year, reverting to a “postcard renewal process” for licensing.²⁰ The FCC itself notes, “Because the Commission cannot dictate to licensees what programming they may air, each individual radio and TV station licensee generally has discretion to select what its station broadcasts and to otherwise determine how it can best serve its community of license.”²¹

The challenges inherent in the enforcement of behavioral- or content-based public interest obligations are underscored by a brief look at the stations’ public files. For example, stations that employ no reporters can have files longer than those who have many.²² Where they do report the provision of news and programming in the public interest, it suggests only the most cursory levels of reporting and a dereliction of their public duty. In 1968, Broadcasters allocated 43 seconds for presidential candidate sound-bites, by the 2000 election that number had dwindled to 7.3 seconds.²³

Moreover, while broadcasters are required to file quarterly reports that detail their programming that serves “the public interest, convenience and necessity” of their local communities,²⁴ they are not required to do so in a standardized format and the updating of the regulation to require them to post online has not yet been implemented after being adopted by the FCC in April 2012.²⁵ Up until now broadcasters have merely been required to maintain a “public inspection file” at their headquarters and to make that file available to the interested public upon request during regular business hours.²⁶ Because the files are not collected by the FCC itself, the Commission encourages the public to “be a valuable and effective advocate to ensure that your area’s stations comply with their localism obligation and other FCC requirements.”²⁷

The lone exception to this lax regulation is the public

interest obligations that ask broadcasters to air three hours of educational children’s programming per week and restrict inappropriate content during hours when children are likely to be watching.²⁸ As part of their public files, TV stations fill out tightly structured Children’s Television Programming Reports (FCC Form 398) each quarter, which identify the minimum three hours of instructional programming, along with documentation of the station’s adherence to restrictions on advertising during the airing of children’s content (i.e., advertising not exceed 10.5 minutes an hour on weekends and 12 minutes an hour on weekdays).²⁹ Even so, broadcasters only went along with such an obligation in exchange for protecting their valuable spectrum licenses from Congressional pressure for the FCC to take back a chunk of broadcaster spectrum allocated for digital television. When FCC Chairman Reed Hundt established the new specific guidelines, it was a condition of the FCC to provide safe haven for broadcasters as their licenses came up for renewal.³⁰

The aim of this criticism is not to say that policymakers should not aspire to enforce better reporting and fulfillment of public interest obligations. For example, former FCC Commissioner Michael Copps, in a speech in December 2010 at the Graduate School of Journalism at Columbia University, called for

[A] Public Value Test of every broadcast station at relicensing time.... If a station passes the Public Value Test, it of course keeps the license it has earned to use the people’s airwaves. If not, it goes on probation for a year, renewable for an additional year if it demonstrates measurable progress. If the station fails again, give the license to someone who will use it to serve the public interest.

His proposal outlined that such a test would include the following elements:

-
1. Meaningful Commitments to News and Public Affairs Programming.
 2. Enhanced Disclosure.
 3. Political Advertising Disclosure.
 4. Diversity
 5. Community Discovery.
 6. Local and Independent Programming.
 7. Public Safety

Although we are supportive of Commissioner Copps' aspirations for higher quality broadcasting, we recognize that any such recommendations seem unlikely to encourage currently disinclined commercial broadcasters to better fulfill the public interest obligations in ways they did in prior decades.³¹ Furthermore, as Henry Geller notes, "the object of PIOs is not just quantity but high-*quality* educational programming... the commercial system has no such incentive or history."³² Snider adds:

"Advertisers prefer programming that delivers audiences with preferred demographics... [that] include upper-class Americans with lots of money to spend and Americans between the ages of 18-39 who are not hardened in their buying habits. Programming that focuses on the interests of the young and old as well as the poor and minorities, thus receives proportionately less funding and prime time exposure."³³

In short, the behavioral regulation as currently constituted has yielded much less value than hoped, in part because of the challenges of enforcement as well as the incentives of for-profit commercial broadcasters. Thus, rather than continue to perpetuate a weak and ineffective system of programming and content obligations, it is time for policymakers to consider other options that require broadcasters to give considerably more back to the public in exchange for continued access to the valuable public airwaves.

Particularly in light of the challenges for journalism

and news, and the current debate over the future of over-the-air broadcasting, there is an impetus for a new public service model not just for broadcast licensees but for all licensees benefiting from exclusive access to the public airwaves.

Spectrum as "Private Property" and the Auction Model

FCC authority was first granted in the 1927 Radio Act, allowed for "the use of such [radio] channels, but not the ownership thereof."³⁴ This non-ownership clause was seamlessly transferred into the 1934 Communications Act.³⁵ Importantly, these acts clearly established the foundation for licensure rather than exclusive private ownership of the airwaves. Three decades later, Ronald Coase wrote his seminal 1959 article, "The Federal Communications Commission," which helped launch an intellectual movement in support of spectrum privatization. In it, he lamented the fact that these early laws codified the public interest doctrine and established spectrum as public property, albeit under federal oversight and management.³⁶ Coase's market-based approach was later adapted to fit a licensure model, falling short of treating spectrum as private property and instead replacing the comparative hearings model with allocating spectrum to the highest bidder via auctions, a practice that became increasingly standard in the 1990s.

"It is time for policymakers to consider other options that require broadcasters to give considerably more back to the public in exchange for continued access to the valuable public airwaves."

Although recent spectrum auctions have resulted in billions of dollars for the federal treasury, the auction approach has also disproportionately benefited powerful economic interests and privileged profit-making uses, especially given the

prohibitive upfront costs for purchasing exclusive rights to spectrum. Since pioneering the use of spectrum auctions as the dominant paradigm for frequency assignment, the United States has seen diversity and competition suffer greatly, with the levels of independent carriers and minority and women-owned spectrum licenses plummeting and consolidation of spectrum ownership increasing.³⁷ Combined, two companies, Verizon Wireless and AT&T Wireless, control over 75 percent of spectrum licenses auctioned since the 1990s.³⁸

“Although recent spectrum auctions have resulted in billions of dollars for the federal treasury, the auction approach has also disproportionately benefited powerful economic interests and privileged profit-making uses.”

The underlying rationale of the private property approach to spectrum management views the market as a neutral, if not benevolent, arbiter. As a consequence, auctions have often led policymakers to ignore the inherent biases of the approach toward the monetization of public interests and externalization of benefits that cannot be commoditized.

These concerns over the shortcomings of the auction model are increasing as traditional broadcasting, along with other forms of media and news content, are rapidly converging onto the Internet and broadband networks. Today’s broadband communications providers, both wired and wireless, are in an growing position of power to control the flow of information over their networks and fundamentally shape the public’s access to information, news, and multiplatform content. Just as many broadcasters nearly a century ago lobbied to maintain editorial control over the content that utilized their frequencies, many of today’s broadband providers are seeking to control the content that flows over their networks, including

what content and application users can access and how they can access it. As a consequence, the locus of the spectrum and public communications battle must increasingly shift away from broadcasting to mobile and wireless broadband, where there is a glaring need to develop policies to address issues of access, competition, innovation, and protection of a diverse ecosystem of ideas, information and news.

Reforming Public Interest Obligations (PIOs) to Fund Public Media and Promote Access to Diverse and Quality News and Journalism

In many respects, we are at a similar crossroads as 1927, as demand for spectrum is substantially outpacing current allocation policies and a national need to support quality news and journalism. This requires policymakers to consider as broadly as possible how spectrum should be allocated and how licensees should serve the public interest. Will we once again depend on the kindness of profit-driven providers to act as “trustees” of the public spectrum, or enact policies that empower the public to become media and news producers, ensure access to a rich and diverse marketplace of ideas, and support quality journalism and news production?

The 1927 Radio Act allowed for “the use of such [radio] channels, but not the ownership there of.”³⁹ This non-ownership clause has persisted, even as comparative hearings were replaced with auctions and in spite of considerable efforts by commercial interests and free market conservatives to wholly convert licensees into private property. Although the auction system has provided Verizon, AT&T and other carriers with certain aspects of property rights over the spectrum they gained (their payments for licenses are in exchange for exclusive rights to use the spectrum), the spectrum remains a publicly owned asset like the oceans, the atmosphere, and

national parks.

Given the vast importance of the airwaves in today's Information Age and their role as an essential medium for speech and media, the case for public interest obligations on spectrum licensees remains convincing. The scarcity argument that served as justification for imposing obligation on licensees still holds even as spectrum use has become increasingly efficient (Although, as we discuss later in the paper, the scarcity problem is no small part driven by antiquated spectrum policies that fail to leverage advances in wireless technology). The recent Presidential directive to re-allocate the 500 MHz spectrum for mobile broadband underscores that the scarcity is still as prevalent in the environment of wireless communications as it was in the broadcast context.

“Given the vast importance of the airwaves in today’s Information Age and their role as an essential medium for speech and media, the case for public interest obligations on spectrum licensees remains convincing.”

As the Supreme Court noted in its landmark decision in 1969 *Red Lion Broadcasting Company v. FCC*:

When there are substantially more individuals who want to broadcast than there are frequencies to allocate, it is idle to posit an unbridgeable First Amendment right to broadcast comparable to the right of every individual to speak, write or publish.... A license permits broadcasting, but the licensee has no constitutional right to be the one who holds the license or to monopolize a radio frequency to the exclusion of his fellow citizens.

In essence, because the 1927 and 1934 Act removed the public's free speech rights in broadcast, as only those licensed would be able to freely broadcast, it was only justified by requiring broadcasters to serve

the public interest, convenience, and necessity. In many respects, the Courts have recognized a clear connection between spectrum and free speech, and placed a premium on the speech rights of the broader public over the licensee. In light of the current scarcity reality and the growing import of wireless communications as a medium for information and news, the justification for requiring a broader class of spectrum licensees to serve the public interest remains. As broadcasting converges to broadband, and mobile broadband becomes increasingly pervasive, who has access to the public airwaves, what they provide in return for exclusive use rights, and how they utilize this valuable resource will have a considerable impact on public media and the nature of news and journalism.

We believe the success of an expanded public media will rest on three core structures: a broad, diverse vision of public media; a sustainable source of funding; and ubiquitous public access to its content and the opportunity to participate in its production. We do not cover the first item in this paper. Although in brief, we contend any expanded vision of public media must encompass funding beyond traditional sources such as CPB and NPR to include a variety of entities, business models, citizen journalism, and local news production.⁴⁰

With respect to the latter two structures, we believe the nation's spectrum policies will play a critical role in both the funding of public media and ensuring that the public has the ability to access and create content. Below we propose several critical and necessary reforms to public interest obligations of spectrum licensees that recognize the current challenges of quality journalism and the increasing relevance of the mobile communications to the future of public media and free speech.

Spectrum Fees and Funding Public Media

Among the main challenges for expanding public media to fill the journalism gap is a viable and

sustainable source of funding. Public media institutions such as PBS and NPR are currently sustained via fees from stations derived at least in part on funding from Corporation for Public Broadcasting, state funding, and donations from the viewing public. Any effort to expand their current programming would be severely limited by a lack of funding. While Congress could increase the current appropriation, it seems extremely unlikely given the current heightened discussion around the deficit and antipathy of many conservative policymakers towards public broadcasting.⁴¹ Thus, public media needs a more sustainable and secure stream of funds.

Federal trust funds, such as the Highway Trust fund, typically match an earmarked revenue source (including excise taxes, customs duties, royalties, rents, user fees and sales of goods). As the NAF report, “The Digital Future Initiative” noted:

[E]armarked funds have two obvious advantages: First, if they are properly structured, they can provide a dedicated source of funds that will be used to finance a specific activity; if the related expenditures are limited to the fund’s income, there is no adverse impact on the federal budget, nor even a need to go through a traditional appropriations process each year. Second, earmarked funds may appeal to a public interested in supporting a particular activity by linking funding sources to the targeted activity – and, of course, when a user fee is assigned to the public need, then those who consume the service provided will typically contribute most to its cost.⁴²

Given the current budget realities, establishing a similar fund for an expanded public media may be the most feasible way forward. This idea mirrors the proposal of the Carnegie Commission on the Future of Public Broadcasting (Carnegie II) in 1978 to create an endowment for public media as well as the more

recent the proposal to leverage spectrum auction proceeds to fund a trust for public media in the “Digital Opportunity Investment Trust, “developed by former FCC Chairman Newton Minow and former PBS President Lawrence Grossman in 2003.⁴³ The latter proposal would have leveraged proceeds of spectrum auctions and spectrum fees to create a permanent revenue stream for technology training, the arts, and public media.⁴⁴ As a *New America* paper also proposed several years ago, revenues generated from spectrum auction revenues and fees could be directed to support a private and independent “Digital Future Endowment, in much the same way that many of the nation’s pre-eminent cultural and educational institutions operate (such as the Kennedy Center for the Performing Arts and leading universities).”⁴⁵

Earmarking funds from spectrum auctions for specific public purposes is not unprecedented. For example, the Federal Spectrum Relocation Fund, established under the Commercial Spectrum Enhancement Act of 2004, reserves small portion of auction receipts of spectrum reallocated from federal use to commercial use. The funds cover costs for the military and other public agencies to purchase state-of-the-art digital equipment and other transition costs in return for clearing designated bands for commercial use.⁴⁶

Rethinking Behavioral PIOs for Broadcasting: A Spectrum Fee to Fund Public Media

In return for their modest service back to public, broadcasters have received a litany of benefits courtesy of their free licenses and bequeathed through federal policy. Notable examples include the 1996 Telecommunications Act, in which broadcasters were awarded an additional 6 MHz channel to broadcast digital television, and then held onto it for over a decade before finally being forced to give it back only after the 9/11 attacks and the need for additional spectrum for public safety.⁴⁷ They

were also given lucrative “must carry” rights on cable and satellite television. Broadcasters can use either their must-carry rights (zero cost carriage) or retransmission consent (a negotiated fee for carriage) depending on their bargaining strength.⁴⁸ The large media companies that own local broadcast network affiliates have considerable leverage in negotiating retransmission agreements above other content providers. As Snider notes, essentially “must-carry rights are negotiated on a cartel basis. If a satellite or cable provider wants to carry one local broadcast channel from a local market, it either must carry all the local broadcast TV channels from that market or carry none at all.”⁴⁹ As demonstrated by the *FOX vs. Cablevision* case, such negotiations have become showdowns between big media, with the public caught in the cross-fire.

For broadcasters, exclusive spectrum licenses have been the gift that keeps on giving. But the American public has received relatively little in return for its generosity. An alternative to the current ‘trustee model’ and behavioral enforcement of public interest obligations is assessing a spectrum fee on commercial broadcasters. This idea is not new. The former General Counsel of the FCC, Henry Geller, has long “argued that broadcasters ignore the local public interest, that the whole ‘public trustee’ idea is broken, and that instead of trying to make broadcasters play by the rules we should just make them pay a reasonable fee to support public broadcasting.”⁵⁰ Geller contends:

By taking some modest fee from commercial broadcasters for their use of the public spectrum in lieu of the public trustee obligation, noncommercial television could be adequately funded to deliver high-quality public service programming. The objective is to obtain such programming, but since the government soundly cannot review for quality, we are dependent upon the broadcaster to present the high-quality public service programs. The

noncommercial system has demonstrated that it will strive to do so; the commercial system, under fierce and growing competition, has no such history or incentive.⁵¹

Geller’s proposal would require Congress impose a spectrum usage fee of five percent of gross advertising revenues on commercial broadcast television licensees.⁵² As he further argues, “Five percent is the same levy Congress allows cities and towns to impose on cable companies’ gross revenues for terrestrial rights-of-way along city streets.” Five percent of gross revenues “is also the rate that Congress chose to levy broadcasters who operated ‘ancillary services’ (services other than free public video broadcasts) with the extra spectrum they were granted for high-definition television under the 1996 Communications Act.”⁵³

Recent administrations, including those of Clinton, Bush and Obama, have routinely submitted budgets to Congress proposing a spectrum user fee on commercial TV broadcast licenses. Due to the strong lobbying influence of broadcasters, however, it has never passed the Congress.⁵⁴ These political challenges present a considerable roadblock to implementing this policy. Advocates of maintaining existing broadcaster public interest obligations have, in the past, rightly been opposed to ceding them in exchange in for spectrum fees that may simply be funneled into the federal treasury. However, if policy can ensure that programming from an expanded public media sector fills the void of news that may result from a shift from behavioral public interest obligations to a user fee, then such a shift could garner much broader support.

For broadcasters, exclusive spectrum licenses have been the gift that keeps on giving. But the American public has received relatively little in return for its generosity.

The amount of funding generated from a modest 5

percent revenue spectrum use fee would be substantial—more than adequate to fund existing public broadcasting institutions as well as providing support to expand beyond the existing platforms, entities, and programming. According to a report from Free Press, a 5 percent spectrum fee would generate nearly \$1.8 billion in annual funding for public media based on local broadcast station revenues of \$26 billion in 2007.⁵⁵

Introducing a spectrum fee on broadcasters in exchange for the removal of certain programming requirements would also be a more sound economic policy than the planned approach to re-allocate broadcast television spectrum for mobile broadband uses. Thus, rather than setting the dangerous precedent of buying off licensees who were awarded exclusive spectrum rights for free, the introduction of a spectrum fee would create an opportunity cost for broadcasters. As Geller notes, this would “incentivize those licensees genuinely not interest[ed] in over the air broadcasting to go off the air, rather than sitting on the spectrum in hopes of waiting for a lucrative buyout.”⁵⁶

The considerable shortcomings of the current public trustee model raise the question of how much it is truly benefiting the public interest. Certainly there is a risk involved in changing the policy. However, sustainably funding entities actually interested in producing high-quality news and journalism in the public interest would seem to be a better way forward.

Thus we recommend specifically:

- Supplementing ill-enforced public interest obligations on commercial broadcasters with spectrum license fees that could support multiplatform public media.
- Collecting a modest spectrum use fee of 5 percent of revenues from all commercial broadcasters.
- Allocating revenue from the fee to a federal trust to support an expanded public media

including existing entities such as CPB and new local journalism outlets.

Beyond Broadcast: Auction Revenues, Annual Spectrum Fees, and other Use Fees to Fund Public Media

In similar fashion, since the spectrum allocations or re-allocations (in the case of the TV Band) for other communication forms, such as mobile broadband, will involve a tradeoff between the public’s free speech rights and commercial interests, it is justified to require these licensees to similarly serve the public interest, convenience, and necessity. The results of these and similar spectrum allocations will fundamentally shape the type of media the public produces (and consumes), and the monies generated from these are critical as we consider the nation’s media future.⁵⁷ Particularly, given the eroding dominance of broadcasting, the convergence of the public’s access to all forms of media on broadband networks including wireless, the economic value of spectrum access, and the subsequent power of these licensees within the broader media ecosystems, it follows that revenues from these uses would be appropriately directed to support public media.

The most immediate policy change would be to direct a modest percentage of funds from spectrum auctions to support an expanded public media. The FCC regularly auctions spectrum, often generating billions of dollars in revenues to the federal government. Congress could earmark a portion of the revenue from all future spectrum auctions to an established public media trust fund as discussed above. A similar proposal was included in legislation for the Digital Opportunity Investment Trust (DOIT) Act.⁵⁸

However, a more advantageous proposal would be to require all licensees pay an annual spectrum fee, which then could be directed to support public media. Rather than potential licensees bidding in

terms of a one-time payment, they can bid in terms of a fixed annual fee or a fee based on a small percentage of their revenues. Although auctions may offer a higher, immediate influx of revenues in return for an exclusive license, annual spectrum fees can help fund public media in perpetuity. One-time-only auction payments also deprive the public of a long term return on its asset. As evidenced by the recent demand for increased access to spectrum, it is difficult to predict how scarce or valuable spectrum will be in the future.⁵⁹ One-time auctions fail to account for this future value, often affected by market estimates as well as other current economic conditions such as access to credit, which can diminish the value of spectrum at auction. Annual spectrum fees allow for the public to earn a rate of return that reflects to actual value of the spectrum.

Annual spectrum fees have the added benefit of encouraging more entrants and greater competition by reducing the capital needed initially to acquire a license.⁶⁰ More importantly, they create an opportunity cost for the licensee to assist in aligning incentives away from spectrum warehousing or underutilization to more efficient use of spectrum and secondary market transactions.⁶¹ Currently, there is almost no option for systematically repurposing underused spectrum. Once a license is granted, it is extremely difficult for the government to reallocate it to other uses or users, even if it is underused or not used at all. Although a licensee may choose to ignore less profitable rural areas, an efficient spectrum fee could induce the licensee to lease spectrum to firms willing to serve those areas rather than leave the spectrum idle.⁶² Properly designed, spectrum fees could also accelerate the build-out of services while providing firms the flexibility to make appropriate business decisions.

Some sort of spectrum fee is used in multiple countries around the world as listed in Table 1 (see pg. 14). Most well-known is the UK case, where television users pay a yearly fee to the government and this funding is used to support the BBC.

Importantly it should be recognized that unlike the UK, where fees are levied on owners of television sets directly to raise funds dedicated solely to supporting the BBC, other countries levy fees on other (and in some cases all) spectrum allocation. However, not all fees raised are dedicated to funding public media.

Thus, we recommend specifically:

- Directing a percentage of revenues from future spectrum auctions to a federal trust dedicated to supporting public media.
- Supplanting one-time spectrum auctions with annual spectrum fees on licensees to ensure the public a long-term return on its asset and lower barriers to entry to enhance competition and diversity.
- Directing the new annual spectrum fees to a federal trust for public media.

Additional PIOs to ensure an open and accessible medium for public media and speech

We are living in an age where, using the analysis of the aforementioned Goodman and Chen, “the connection layer”... those functions that are specifically and exclusively focused on engaging individuals and communities with public service media” can be so much more rich and effective. Given that making the most of this involves approaches that extend well beyond those employed by traditional broadcasters, spectrum allocation becomes tremendously complicated. As Goodman and Chen describe, for example, a public health program led by a public broadcaster might be premised on collaboration across platforms rather than on a standalone solution delivered by the broadcaster alone.⁶³

In *Rethinking Public Media: More Local, More Inclusive, More Interactive*, Barbara Cochran describes these new assumptions further:

The new technology enables public media to transform from the one-to-many broadcast model to a distributed, networked model. Existing stations can transform into hubs that bring communities together, facilitate dialogue and curate vital information.

Laura Walker, president and CEO of New York Public Radio, wrote of her organization's mission to make government and institutions accountable to the people they serve. 'We'll create new, far-reaching tools to reflect and reach diverse audiences and to establish a variety of communities across interests, heritage, neighborhood, and demographics...We seek to create active, rather than passive, consumers of information, increased opportunities for participation by news consumers and marginalized communities, and more transparent, more effective, and more accountable civic and government agencies.'⁶⁴

Beyond securing adequate and sustainable funding for an expanded public media to produce quality news and journalism, it is critical to recognize the importance of ensuring that the public has access to this publicly-funded content as well as the opportunity to become creators. There is certainly no guarantee of this in the digital world of broadband communications, especially when it comes to wireless access.

Up until 2005, the U.S. regulatory precedent of common carriage and communications history from the telegraph, to the telephone, and even Internet access prevented providers from unjustly discriminating among users or uses of the network. However, no such protections exist in the current world of wireless broadband communications. Contradictory to Verizon's marketing rhetoric that its users "Rule the Air," it is in fact Verizon and AT&T that rule the nation's broadband airwaves, dictating which devices users can connect to the

network, and what content, applications, and speech they can access.

In similar fashion, if large segments of the public cannot access a vital medium of communication because it is not available or prohibitively expensive, then the goal of ensuring public access to a diverse marketplace of ideas, news and information will not be met either. Therefore, another critical issue in sustaining public media and ensuring access to its rich content is universal service. In the past, policymakers have imposed relatively few build-out requirements on licensees to ensure a provider deploys service to the entire license area. In fact, there are rarely any requirements whatsoever to ensure that an entity that secures a license at auction must deploy service at all.

Thus, we outline two key obligations on licensees for the 21st century: openness and universal service. This is in some ways a departure from the current regulatory framework for spectrum licenses awarded at auction. However, as the Commission noted after the 1927 act, the test for determining the public interest was "a matter of comparative and not an absolute standard" and the "emphasis must be first and foremost on the interest, the convenience, and the necessity of the listening public, and not on the interest, convenience, or necessity of the individual broadcaster or the advertiser."⁶⁵

"The FCC has considerable leeway to place specific conditions on licensees to further the public interest"

Moreover, the statute providing authority for the FCC to organize spectrum auctions does not specify the extent to which auction revenues should direct federal spectrum policy, only instructing the FCC to "pursue the public interest" and forbidding them from "merely equating the public interest with auction revenue."⁶⁶ The FCC has considerable leeway to place specific conditions on licensees to further the public interest and has placed conditions

and limitations on its past auctions in line with this goal, such as in the case of the auction of the 700 MHz C block, where the winning bidder was subject to open device requirements.⁶⁷

must balance the First Amendment rights of broadcasters against the First Amendment rights of the public. Crucially, it ruled that when these rights come into conflict, it is “the right of the viewers and

Country	Annual and Related Fees	Fee Type	License Types
Austria	0.1 – 0.2 % of gross turnover	Revenue sharing	All licences
Bahrain	1% of gross revenues	Revenue sharing	Mobile
Bhutan	Pre-determined fixed amount	Annual licensing fee	All licences
Chile	Variable fixed fees	Annual licensing fee	All licences
Croatia	USD 6.6M	Annual licensing fee	3G Mobile*
France	1% of 3G revenues	Revenue sharing	3G Mobile
Greece	.025 – 0.5% of gross turnover	Revenue sharing	All licences
Hong Kong, China	15% of gross revenues with escalating annual minimum payment	Revenue sharing	3G Mobile
India	6% - 10% of gross revenues	Revenue sharing	Fixed and mobile
Ireland	0.2% of gross turnover	Revenue sharing	Fixed and Mobile
Italy	EUR 38 million	Annual licensing fee	3G Mobile
Jordan	10% of gross revenues	Revenue sharing	Mobile
	USD 100,000	Annual licensing fee	Mobile
	5% gross revenues	Revenue sharing	Fixed monopoly
Kenya	0.5% of gross turnover	Revenue sharing	All licences except paging
Luxembourg	0.2% of gross turnover	Revenue sharing	Mobile
Maldives	5% of gross turnover	Revenue sharing	Mobile, Fixed and ISP's
Oman	12% gross revenues	Revenue sharing	Mobile
Korea (Rep.)	Approximately 1- 3.0% of gross revenues (annual adj.)	Revenue sharing	All licensed operators
Spain	0.2% of gross turnover	Revenue sharing	Fixed and Mobile
Tanzania	1.0% of annual turnover	Revenue sharing	Fixed, long distance
	1.5% of annual turnover		Mobile
Venezuela	5.3% of gross revenues	Revenue sharing	Mobile

Table 1 (Source: Dave Karan, Kumar Saurabh, Sarbjeet Kaur, Shubham Satyarth, and Valia Chintan. “Analyzing Revenue Sharing Model [sic] And Developing an Efficient Auction Framework.” (IPR, 2008).

Openness

In the *Red Lion* ruling in 1969, which remains the key Court doctrine on broadcasting and the First Amendment, the Supreme Court held that when the government regulates access to the spectrum, it

listeners, not the right of the broadcasters, which is paramount.”⁶⁸ Red Lion provides a key understanding of the context, one which is sometimes lost in debates, in which discussions about the Internet are separated from more traditional broadcasting. But key to the future is to

take the lessons learned from the Internet—that openness matters—and apply them to other realms.

First and foremost, the value the Internet has created in terms of media production has to be recognized. Much of this has come about as a result of its open nature. In this model, traffic is treated equally and not prioritized or differentiated. The key to much of its success in bringing new voices and more conversation into the public sphere has been relatively low barriers to entry to a market in which individuals and organizations have been able to experiment and innovate.

In the past, openness in broadcast was provided directly via the allocation of exclusive licenses to both private and public broadcasters. That was open enough, and consequently we live in a world where *Nova*, independent documentaries from ITVS, and Sesame Street reach households on the same terms, and with the same technical quality, as any commercial content. But we are at risk of entering a world in which the providers of 3D *Nova*, or human rights videos from WITNESS or mobile educational apps may simply not be able to afford the price of a ticket on the networks that carry that media in the 21st century.⁶⁹

Unlike telephone service, where the “government imposed common carrier rules, remove[ed] the phone carriers’ ‘editorial discretion’ over speech on their lines,”⁷⁰ mobile broadband providers, even with the FCC’s most recent Network Neutrality rules permit carrier discretion over what content, applications, and services can run over their network. The current ability of mobile providers to dictate the content and applications that are available over their networks have in no small part contributed to the proliferation of “walled gardens” of competing Internet application stores with gatekeepers, tied to specific devices and networks that look vastly different than accessing the internet via PCs in the wired world. It can be argued that existing public media institutions such as NPR have managed to succeed in some of these walled

gardens, and that an even more restrictive environment may seem more advantageous for financially supporting news and journalism. That said, it is important to recognize that these markets remain nascent. There is an unfortunate history of gatekeepers consistently leveraging their market power to prioritize profit and commercial interests over public interests when there is a lack of regulatory protection. The market for wireless communication remains quite consolidated, with two dominant providers—AT&T and Verizon—that control both the vast majority of wireless consumers and the most valuable spectrum available for mobile broadband.

“No less important than access to audiences by public media producers is reasonably priced and widely available broadband at speeds that permit two-way engagement in media production and consumption.”

Without regulatory protections to prevent market abuses and protect consumers’ access to all content and applications, including public media, network providers have a strong incentive to increasingly monetize scarcity on the network, thereby increasing barriers to entry for all public media creators and producers. Non-discrimination on wired and wireless broadband networks is the first line of defense for maintaining public access to public media, given that most consumers rely on commercial broadband infrastructure to access online content. Without this, many of the opportunities for a new sort of public media would fall away. Quite simply, without such an architecture and regulatory protections, the number of people involved in public production of media would be inherently limited.

Thus, we recommend specifically:

- Requiring spectrum licensees for mobile broadband to adhere to non-discrimination

rules for Internet content, applications, and services.

Universal Service

No less important than access to audiences by public media producers is reasonably priced and widely available broadband at speeds that permit two-way engagement in media production and consumption. Unfortunately, the high price of spectrum at auction only furthers the incentive for commercial users of spectrum to often prioritize higher revenue customers and delay coverage to less densely populated areas.⁷¹

This was not case in the analog broadcasting; where often simply by increasing the power of their signals, broadcasters were able expand their service area. In fact, broadcasters consistently lobbied the FCC to increase their signal power to expand to service areas well beyond their communities of license. For mobile networks, given the more costly requirements of constructing additional infrastructure (i.e. towers.) to spread connectivity, providers that secure licenses that cover both urban/suburban and rural areas have significantly less incentive to cover their entire service areas. The FCC sought to address this issue in the AWS spectrum auctions, where it established a “substantial service” requirement (“defined as service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal”) where “any licensee that failed to meet the requirement will forfeit its license and the licensee will be ineligible to regain it.”⁷² However, the provision did little to discourage a consortium of the nation’s largest cable operators from purchasing spectrum in AWS-3 auction and then subsequently warehouse it, in no small part because of the weakness of the “substantial service” requirement and the fact that licenses were not up for renewal for another 10 – 15 years from issuance.⁷³

Section 309 of the Communications Act provides for spectrum auctions to resolve conflicting applications

for an available license, but in no way diminishes the FCC’s responsibility to ensure that the ultimate use of the public airwaves promotes the public interest. In the past, the FCC has demurred from imposing specific conditions on wireless licensees on the grounds of promoting flexibility for licensees and that the cellular service was a relatively nascent service. Certainly, the latter no longer is true, given the growing prominence of mobile broadband.

In the wired and telephone context, the Universal Service Fund (USF) has promoted universal service even in high cost rural areas through the subsidizing a carriers’ cost of providing service. Similarly, as part of the National Broadband Plan, the FCC established a \$300 million Mobility Fund to publically subsidize the deployment of 3G mobile broadband services in currently unserved areas.⁷⁴ And although, in some cases a federal subsidy may in fact be necessary to serve only the most remote areas (less than 2 percent of the nation), providing service even in currently underserved and unserved rural areas can be a profitable enterprise. But without appropriate requirement or incentives, providers will continue to ignore less profitable low-income or rural areas.

For all its benefits, the USF has proven to be inefficient and unsustainable. Thus, policymakers should consider a number of options to require or incent mobile providers to serve the entire area of their license. More strongly designed and enforced build-out requirements could ensure that all areas within a spectrum license are covered. Annual spectrum fees, as discussed above, could further provide an opportunity cost for mobile providers to sit on idle spectrum and incent them to either build-out across their entire license area or lease-out the spectrum to other entities that are willing to provide service. Another possibility that would leverage new technological advances, such as “smart” radios, would be to include a “use it or share it” condition on all spectrum licensees.⁷⁵ Under this proposal, any spectrum that a licensee is not using would be listed in a geo-location database currently be developed for

TV White Space technology (discussed below) and available to any provider or the public with FCC approved wireless devices and equipment.⁷⁶ By providing open access to the spectrum, the proposal would remove a significant upfront cost of buying spectrum at auction that would enable more local and community owned mobile networks.

Thus, we recommend specifically:

- Placing strongly enforced build-out requirements on mobile licensees.
- Utilizing annual spectrum fees to provide an opportunity cost for mobile licensees to leave spectrum unused.
- Placing a “use it or share it” condition on mobile licenses that would allow any provider and the public to use the spectrum.

The Importance of Spectrum Allocation Methods and Public Media: Supporting Diversity and Innovation

Establishing a well-funded, broad-based public media still overlooks the critical importance of addressing underlying structural issues with respect to spectrum access. Though provisions for open access and universal service can ensure the public's access to and the free flow of information, they will not facilitate multiple mediums for free speech and public media, while also creating networks that empower users to produce their own media.

There is a trap for advocates of public media in focusing solely on policies that maximize available funds for the U.S. Treasury, which could subsequently allocate them towards public media. For example, spectrum auctions driven by the goal of revenue maximization are likely to encourage the creation of monopolies, “which would create the highest profits before spectrum fees, and therefore would sustain the largest fees.”⁷⁷

Moreover, the history of maintaining and enforcing

regulatory obligations on monopolies or large commercial interests should give public media advocates pause. We need look no further than the history of the broadcasting industry to both understand the ability of powerful commercial interests to undermine regulations and the deleterious impact of consolidation on news reporting and journalism.

Decisions around which entities have access to the airwaves will determine whether the environment will sustain quality news and journalism. For example, the final passage of the Local Community Radio Act will increase the number of geographic locations where often underserved local audiences can be served.⁷⁸ Diversity of networks and models for communications networks can serve as a hedge against emerging monopoly providers while facilitating competition and innovation. As David Moss and Michel Fein argue, the driving concern behind the 1927 Radio Act was primarily technical, not economic; officials were less concerned about devising an economically efficient means of allocating scarce spectrum and more concerned with preventing monopoly markets and the concentration of political power.⁷⁹ By privileging democratic principles over economic priorities, a number of government officials involved in these early policy debates aimed to create a diversity of voices on the airwaves and maximize social welfare.

“Diversity of networks and models for communications networks can serve both as a hedge against emerging monopoly providers, while facilitating competition and innovation.”

Ensuring such diversity will require policymakers and public media advocates to support reforms of existing spectrum allocation processes, while also leveraging new communication technologies to transform policies managing access to the airwaves. Spectrum auctions can be designed to factor in policy goals such as facilitating competition or

increasing access in unserved or underserved areas.⁸⁰ Designs should reflect the market realities and allow for conditions that will move toward policy goals, even if they do not maximize short-term revenues for the U.S. Treasury or a newly established federal trust for public media.

In particular, to ensure that spectrum allocation decisions and assignments as a whole are fair and maximize the public benefit, it is critically important to look beyond the current focus on spectrum auctions as the sole solution. As is often the case, technology has outpaced regulation and new thinking is needed to take advantage of innovations that will reduce scarcity and dramatically increase spectrum access and efficient use.⁸¹ Advances in telecommunications and other digital technologies have enabled entirely new approaches for spectrum licensure and use. End-user wireless devices can be “smart,” capable of adapting to changing environments and maximizing efficient use of available spectrum to deliver mobile, affordable broadband connectivity. As these technologies continue to advance and more efficient and shared use of spectrum becomes possible, increasingly the historic scarcity rationale will no longer hold. As a consequence, traditional spectrum management strategies will soon become largely obsolete. This impending paradigm shift in spectrum use will require policymakers and public media supporters to support a broad set of spectrum allocation options to meet both increasing demand for spectrum access, promote continued innovation and support diversity.

We contend that the two approaches which both leverage these advances and will be the most beneficial and supportive of public media and diverse marketplace of ideas and information are unlicensed and opportunistic access. The key factor in both of these approaches is the considerable extent to which they level the playing field for both commercial and citizen access to spectrum and allow for a diversity of network models.

Thus, we recommend specifically:

- Ensuring that spectrum auctions are designed to not just maximize revenues, but factor in policy goals such as promoting competition, encouraging new entrants, or increasing access in unserved or underserved areas.
- Supporting alternative approaches to spectrum allocation that will allow for greater access and use of spectrum on an unlicensed basis by the public.

Unlicensed Spectrum: Citizen Access to the Airwaves

Typically, spectrum allocation policies have developed processes to choose what entities or uses are granted access to specific frequencies, and commensurately privilege the speech of some users over others. But rather than establishing a hierarchy of speech rights and limiting access, unlicensed access treats spectrum more as a public commons, open to all but with established norms or rules for use (i.e. equipment standards).

Despite pronouncements from private property advocates that such a model would result in a “tragedy of the commons” and undermine its usability, unlicensed spectrum access has spurred rampant innovation and communications. Unlicensed spectrum is widely used in a number of different products in countries around the globe. Everything from microwave ovens to garage door openers, baby monitors and Wi-Fi equipped laptops utilize unlicensed spectrum. Today, almost all new laptops, as well as smartphones, are sold with Wi-Fi radios. Many airports, cafes, libraries, and other public spaces provide wireless connectivity (either for free or for a fee). Unlicensed bands have become a critically important driver for new technologies and broadband connectivity; most rural and small Wireless Internet Service Providers (WISPs), which do not have access to the capital to purchase spectrum at auction, make widespread use of the unlicensed bands to serve their customers. In

addition, large mobile providers like AT&T and Verizon regularly use Wi-Fi to augment their own mobile broadband service offerings and offload smartphone traffic from their cellular network.

The benefits of unlicensed spectrum include more efficient use (i.e., more traffic can be carried) through spectrum sharing, reduced barriers to entry for new providers, and greater experimentation and innovation.⁸² Originally, unlicensed spectrum allocations such as the 2.4 GHz band were considered a "junk band" with limited value and few possibilities for viable use. As digital radio technologies developed and the importance of inter-device connectivity grew, unlicensed spectrum provided the essential open platform to support applications that had not been previously anticipated. With the advent of 802.11 standards, which first passed in 1997, the junk bands began to have a substantial and real social and economic value. As the technologies matured (in particular, with the passage of 802.11a and 802.11b in 1999 and 802.11g in 2003), the use of Wi-Fi increased dramatically.

Among the most important innovations that unlicensed spectrum provides for implementation of a reconceived and more participatory vision of public media is through mesh wireless networking. Rather than relying on a centralized build-out and hierarchical architecture, mesh networking allow users to literally build the network organically over time. Devices connect to other devices to create a web of connectivity that encourages and requires active participation from its users.⁸³ This in turn lays the groundwork for a network that prioritizes community and civic uses, including media and news production and sharing. Thus, a community developed mesh network not only provides an open medium for community and public media, but also promotes users to move beyond mere consumption and become active producers of content, news, and information.

Mesh networking makes this possible by creating a

community level intranet. Intranets are common to businesses, where computers connect to share Internet connectivity, printer and file server access via a Local Area Network (LAN). In a mesh, devices across the community can be connected to form a community wide-LAN or Intranet that allows users to communicate to other local users on the network, create and share content, and design local applications and services to run on the Intranet.⁸⁴ For example, the Athens Metropolitan Wireless Network in Greece "has created dozens of services and applications for its members. These include an auction site Wbay; a search engine Woogle; a channel for user-created content wTube... weather reports for each Greek island; and webcams that broadcast traffic, among other applications."⁸⁵

Using local Intranets, communities can set up forums for political debate or stream videos and audio from local events such as town council and PTA meetings.⁸⁶ In Urbana-Champaign, Illinois, the Chambana.net project created a community LAN that interconnects the local mesh wireless network with multi-media resources located at the Urbana-Champaign Independent Media Center (UCIMC) and the local low power FM radio station, WRFU 104.5 FM (Radio Free Urbana). This allowed for innovations such as the streaming of live shows from the performance venue, which are also simulcast through the radio station and the Internet.⁸⁷

"A community developed mesh network not only provides an open medium for community and public media, but also promotes users to become more than consumers but active producers of content, news, and information."

Although, mesh wireless networks offer enormous potential for connecting neighborhoods, cities, and expansive rural areas (for example, Guifi.net in the rural Catalonia region of Spain has over 19,000

miles of wireless links⁸⁸) their reliance on a few swaths of unlicensed spectrum will become increasingly a barrier for scaling up their capacity and coverage. The uptake of unlicensed band use has been so great that in many areas additional unlicensed spectrum is needed to further expand service offerings and relieve congestion. While the number of unlicensed wireless devices has increased by tens of thousands of percentages over the past decade, the amount of spectrum allocated for their use has remained static. Thus, a clear challenge for the future is to ensure that ample unlicensed spectrum is made available to meet growing consumer demand. Current trends project that the number of unlicensed wireless devices will continue to increase at double-digit yearly growth rates. Without additional spectrum space, urban centers may find that the overcrowding of unlicensed bands will reach unprecedented levels in the coming years, thus dramatically lowering the utility of these frequencies.

The 2010 U.S. National Broadband Plan proposed the allocation of a new nationwide contiguous unlicensed band, although it did not specify where or how much spectrum would be made available.⁸⁹ Unfortunately, the lure of revenues from spectrum auctions, particularly given the new focus in Congress on fiscal austerity, may make it considerably more difficult to see another allocation for unlicensed. Even so, in the past there has been a limited constituency pushing for greater unlicensed access to spectrum. Given the promise of unlicensed access for supporting the development of local and community networks that can prioritize civic uses such as locally produced news, journalism, and media, advocates of those efforts must increasingly weigh in on spectrum allocation decisions to ensure greater public access to the airwaves through expanding the amount of spectrum available on an unlicensed basis.

Thus, we recommend specifically:

- Increasing the amount of spectrum available

for citizen access through allocating a new nationwide unlicensed band by authorized devices.

Opportunistic (Re)use of Spectrum: Allowing Devices to Opportunistically Identify Unused Frequencies and Transmit⁹⁰

The biggest challenge for opening up new spectrum for unlicensed citizen access is the difficulty of reallocating current spectrum that has already been licensed and is either completely unused or only used on a sporadic basis. For example, throughout the spectrum allocated for over-the-air television broadcasting there are a significant number of unused channels, particularly in rural areas. Or in the case of spectrum allocated for Federal uses such as the Forest Service, the spectrum may only be utilized in times of emergency (i.e. a forest fire) but otherwise lay completely fallow.

Advances in smart or cognitive radio (CR) and software defined radio (SDR) technologies have fundamentally expanded the options available for to increase unlicensed access and allocation. Traditionally, the spectrum scarcity rationale has led to difficulties in finding frequencies to support wireless broadband Internet. However, technological advances have created opportunities for dynamic spectrum sharing, thus potentially ending the persistent problem of artificial scarcity of spectrum.⁹¹ This especially holds true for use within vacant or unused spectrum, often referred to as “white spaces,” where cognitive radios, could rapidly scan and process spectrum use in real time, identify unused frequencies, and utilize these frequencies rather than leaving them fallow.⁹² By opportunistically occupying unused frequencies within specific bands, these devices are far more efficient than traditional “dumb” technologies, which often broadcast on a single frequency regardless of other users or potential congestion.

In November 2008, the FCC opened vacant television channels to unlicensed white space devices.⁹³ These devices are required to employ spectrum-sensing technologies and a geo-locational database to automatically detect occupied television frequencies and other protected users in the band.⁹⁴ The technologies allow white space devices (WSDs) to identify and use the unassigned frequencies that exist between broadcast television channels and outside the coverage areas of licensed broadcasters for digital communications, including broadband networks. While civilian use of WSD technology and devices was only recently permitted, the military has been testing similar WSD technology for years and has run numerous tests demonstrating its feasibility as a part of the DARPA XG project.⁹⁵

“Opportunistic access to spectrum offers the potential to significantly expand unlicensed, citizen access and ensure that all sectors within a democratic society have access to the valuable public airwaves.”

Beyond the TV white spaces, the geo-locational databases that are expected for the TV white spaces could be expanded to include other underused licensed frequencies, including federal spectrum. Federal spectrum sharing through opportunistic access offers a more feasible approach to accessing valuable federal spectrum bands than clearing and auctioning. Through this approach, federal spectrum users could maintain access to frequencies when they need them, such as in times of emergency, while ensuring public access when these frequencies would otherwise be idle. Moreover, as previously discussed, mobile licensees could be subject to a “use it or share it” condition, enabling the public and other competitive providers to use spectrum in areas where the licensee has failed to build-out service. Such sharing could be accomplished through an active system like the aforementioned database or passively through sensing such as in 5470-5725 MHz (the so-called 5 GHz Wi-Fi band)

where devices must vacate frequencies if they detect military radar signals.⁹⁶

Opportunistic access could also potentially enable dynamic and real-time pricing for spectrum use. In particular, if congestion (i.e. too many users or devices are operating on the same frequencies and result in a substantial degradation in the speed and quality of communications) becomes an issue after widespread implementation of opportunistic access, dynamic pricing in the form of micropayments could act as a sort of congestion pricing.

However, it is worth noting that there are a number of considerable challenges to overcome in order to employ dynamic pricing. These include the development of an infrastructure that would allow mobile devices to communicate with a licensee or regulator, request the right to use the spectrum, and agree on a real-time price, including mechanisms for authentication, transferring payments, and monitoring use. Transaction costs remain a considerable obstacle for the implementation of the model and must be less than the value of the spectrum to lessors for this model to work.⁹⁷ It is equally important that the transactions need to be completed in a matter of milliseconds to limit latency on the network.

Furthermore, given that mobile carriers are increasingly using WiFi technologies to offload mobile broadband traffic in urban areas on the same “junk bands” that home routers, microwaves, and baby monitors use, it is unclear to what extent congestion will be a concern in the future.⁹⁸ Also, current and future technology advances (e.g. frequency hopping and cooperative networking) could make even more efficient use of spectrum on an opportunistic basis.⁹⁹

Opportunistic access to spectrum offers the potential to significantly expand unlicensed, citizen access and ensure that all sectors within a democratic society have access to the valuable public airwaves. This innovation will only be possible if policymakers

actively seek to create space for the technology to flourish and grow.

Thus, we recommend specifically:

- Ensuring the availability of TV white space on a nationwide basis, even if there is an auction of spectrum in the TV band.
- Expanding the geo-locational database and technology currently being developed for the TV White Spaces into other unused or underutilized spectrum bands including those currently allocated to Federal users.
- Supporting the development of other “smart” radio technologies, such as devices that can detect unused frequencies through sensing alone and allow for their use on unused or underutilized spectrum.

Conclusion

The nation is at a tenuous crossroads in its approach to communications, news, journalism, and free speech. Today, communications technologies are rapidly changing, allowing for expanded opportunities for media and journalism, innovative models for public media, and the great potential for the wide-scale participation of the public in the news gathering and production process. At the same time, the nation’s traditional journalism infrastructure is quickly crumbling, while the convergence of all forms of media onto broadband is coinciding with a rapid increase in demand for spectrum necessary to facilitate mobile broadband. Without substantial policy changes, there is a considerable risk of further cementing a small group of powerful commercial gatekeepers over the nation’s media and information infrastructure.

The outcome can be avoided, but only through expanding our thinking around spectrum policy, broadcasting, and public media. Today, many policies concerning media and communications still reflect mid-20th century technological reality and thinking. As demand for broadband grows and

spectrum continues to outpace current assignment methods, regulators must broaden their spectrum thinking, and maintain a focus on ensuring access to public interest content and supporting public discourse. This will require the FCC, the NTIA, and the nation’s elected policymakers to explore much-needed reforms to create a more dynamic spectrum ecosystem that is better tailored to meet the wireless needs of not just current large mobile providers and technologies, but also new competitors, business models, and public media.

As Nuechterlein and Weiser suggest, “Just as the First Amendment bars the government from limiting who can own a printing press...it might well bar the government from restricting access to the airwaves as a medium of communication in the hypothesized world of super-abundant spectrum.”¹⁰⁰ These arguments for expanded public access to the public’s airwaves will only continue to proliferate as arguments for maintaining an outdated status quo—to the benefit of a small group of incumbent users and to the detriment of innovation and the general public—become less and less tenable.¹⁰¹ The clear lesson to learn from the current environment is that an overreliance on behavioral regulations and/or traditionally used auction approaches will not suffice in maximizing the public benefit or meeting public policy goals.

In the United States, new approaches to spectrum access could contribute to the regeneration of public media in the 21st century. This will require a diverse set of policymakers to approach the establishment of a new bargain between broadcasters, mobile network providers and the public. The challenge of achieving such a multifaceted set of changes with respect to spectrum policy must not be underestimated. It will require a strong coalition of advocates in DC and around the country, policy experts, industry players and public broadcasters alongside significant public engagement of those who care about 21st century media. Without strong engagement from this this community, the nuanced

and complex tradeoffs outlined above will likely be lost in the multistep process of drafting of any bill or subsequent regulation. The forward looking policies we have outlined will not be easy to achieve.

“In the United States, new approaches to spectrum access could contribute to the regeneration of public media in the 21st Century.”

The benefits of the right bargain cannot be underestimated. It could allocate spectrum appropriately for those broadcasters who still need it, move beyond outmoded and ineffective public interest obligations to create substantial funding for an expanded and diverse public media, and support an array of rising news producers and creators on multiple communications platforms. Most importantly, the right bargain could provide open citizen and community access to the airwaves such that they will be not only be able to participate in the production of public media, but also create their own media infrastructure. Ultimately, this would leave the United States with a revitalized public space to meet the civil, information, and journalism needs of the 21st century.

References

- 1 Public Broadcasting Act of 1967, as amended Subpart D — Corporation for Public Broadcasting Sec. 396. [47 U.S.C. 396]
- 2 See Seymour Topping, “Pulitzer Biography,” <http://www.pulitzer.org/biography>, Accessed May 17, 2012.
- 3 Chairman Julius Genachowski, “Mobile Broadband: A 21st Century Plan for U.S. Competitiveness, Innovation and Job Creation,” Speech, New America Foundation, Washington, D.C., Feb. 24, 2010, http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296490A1.pdf.
- 4 *Id.*
- 5 See “Connecting America: The National Broadband Plan,” Washington, DC: Federal Communications Commission, Mar. 2010, <http://download.broadband.gov/plan/national-broadband-plan.pdf>, 81-82; see also Sanjay Talwani, “NAB 2010: Genachowski Emphasizes Spectrum Return Will Be Voluntary,” *Television Broadcast*, Apr. 14, 2010, <http://www.televisionbroadcast.com/article/99044>.
- 6 It is expected that broadcasters that remain on-the-air and are required to move to a new frequency will be reimbursed their transition costs also through proceeds from the auction.
- 7 “Connecting America: The National Broadband Plan,” Washington, DC: Federal Communications Commission, Mar. 2010, <http://download.broadband.gov/plan/national-broadband-plan.pdf>, 303 (citing Ellen P. Goodman Comments in re National Broadband Plan NOI, filed Nov. 7, 2009, at 4);
Ellen P. Goodman, “Public Service Media 2.0,” in *And Communications for All: A Public Policy Agenda for a New Administration*, 263 (Amit M. Schejter ed., Lexington Books 2009).
- 8 Ellen P. Goodman and Anne Chen, “Modeling Policy for New Public Media Networks,” Apr. 27, 2010, *Harvard Journal Law & Technology*, Vol. 24, Forthcoming 2010: 44 pages. Available at <http://ssrn.com/abstract=1569667>. Final paper available at <http://jolt.law.harvard.edu/articles/v24.php>.
- 9 See “Embracing Digital: A Review of Public Media Efforts Across the United States,” Gupta Consulting, LLC, on behalf of the Corporation for Public Broadcasting, June 2009, <http://www.cpb.org/publicmedia2.0/docs/EmbracingDigitalReviewPublicMediaEfforts2009.pdf>, Accessed May 17, 2012.
- 10 Paul Taylor and Norman Ornstein, “The Case for Free Air Time: A Broadcast Spectrum Fee For Campaign Finance Reform,” Washington, D.C.: New America Foundation Spectrum Series Working Paper #4, June 2002.
- 11 *Id.*
- 12 Henry Geller and Tim Watts, “The Five Percent Solution - A Spectrum Fee To Replace the ‘Public Interest Obligations’ of Broadcaster,” Washington, D.C.: New America Foundation Spectrum Series Working Paper #3, May 2002, 2 - 3. See also Paul Taylor and Norman Ornstein, “The Case for Free Air Time: A Broadcast Spectrum Fee For Campaign Finance Reform,” Washington, D.C.: New America Foundation Spectrum Series Working Paper #4, June 2002, 5.
- 13 *Id.*
- 14 *Id.*
- 15 *Id.*
- 16 *Schaeffer Radio Co.* (FRC 1930), quoted in John W. Willis, *The Federal Radio Commission and the Public Service Responsibility of Broadcast Licensees*, 11 Fed. Com. B.J. 5, 14 (1950). Cited in Henry Geller and Tim Watts, “The Five Percent Solution A Spectrum Fee To Replace the ‘Public Interest Obligations’ of Broadcaster,” Washington, D.C.: New America Foundation Spectrum Series Working Paper #3, May 2002, 3.
- 17 See Paul Taylor and Norman Ornstein, “The Case for Free Air Time: A Broadcast Spectrum Fee For Campaign Finance Reform,” Washington, D.C.: New America Foundation Spectrum Series Working Paper #4, June 2002, 6
- 18 See “The Public and Broadcasting: How to Get the Most Service from Your Local Station,” Washington, DC: The Media Bureau, Federal Communications Commission, July 2008, http://www.fcc.gov/mb/audio/decdoc/public_and_broadcasting.html, Accessed Nov. 1, 2010, 14.
- 19 See “Citizen’s Guide to the Public Interest Obligations of Digital Television Broadcasters,” Washington, DC: Benton Foundation, 2005, http://www.benton.org/public_interest_obligations_of_dtv_broadcasters_guide, Accessed Nov. 1, 2010, 4.
- 20 *Id.*
- 21 “The Public and Broadcasting: How to Get the Most Service from Your Local Station,” Washington, DC: The Media Bureau, Federal Communications Commission, July 2008, http://www.fcc.gov/mb/audio/decdoc/public_and_broadcasting.html, Accessed Nov. 1, 2010, 12.
- 22 For instance, see http://mediapolicy.newamerica.net/public_interest_obligations and compare issues lists component of the public files for WBRE (which produces no local news coverage of its own), whose file runs to 108 pages for 1st Qtr 2010, and WBRE (which provides coverage to WYOU for broadcast), whose issues list runs to 9 pages for the same period.
- 23 Henry Geller and Tim Watts, “The Five Percent Solution A Spectrum Fee To Replace the ‘Public Interest Obligations’ of Broadcaster,” Washington, D.C.: New America Foundation Spectrum Series Working Paper #3, May 2002, 7.
- 24 “The Public and Broadcasting: How to Get the Most Service from Your Local Station,” Washington, DC: The Media Bureau, Federal Communications Commission, July 2008, http://www.fcc.gov/mb/audio/decdoc/public_and_broadcasting.html, Accessed Nov. 1, 2010, 6.
- 25 See “Modernizing Broadcast Television Public File Availability,” Washington, DC: The Media Bureau, Federal Communications

-
- Commission, <http://www.fcc.gov/document/modernizing-broadcast-television-public-file-availability>, Accessed May 17, 2012.
- 26 Stations are required to maintain the following documents in their public file: current license, applications to the FCC or courts and related materials, citizen agreements, contour maps, materials related to FCC investigations or complaints, ownership reports, contracts filed with the FCC, political files on requests for candidates' purchase of broadcast time, equal employment opportunity materials, "The Public and Broadcasting" manual, letters and e-mails from the public, quarterly programming reports, children's television programming reports, records of children's programming commercial limits, time brokerage agreements, lists of donors, local public notice announcements, "must-carry" or "retransmission consent" election, and DTV transition consumer education activity reports. See "The Public and Broadcasting: How to Get the Most Service from Your Local Station," Washington, DC: The Media Bureau, Federal Communications Commission, July 2008, http://www.fcc.gov/mb/audio/decdoc/public_and_broadcasting.html, Accessed Nov. 1, 2010, 27-32.
- 27 "The Public and Broadcasting: How to Get the Most Service from Your Local Station," Washington, DC: The Media Bureau, Federal Communications Commission, July 2008, http://www.fcc.gov/mb/audio/decdoc/public_and_broadcasting.html, Accessed Nov. 1, 2010, 26.
- 28 "Citizen's Guide to the Public Interest Obligations of Digital Television Broadcasters," Washington, DC: Benton Foundation, 2005, http://www.benton.org/public_interest_obligations_of_dtv_broadcasters_guide, Accessed Nov. 1, 2010, 5.
- 29 "The Public and Broadcasting: How to Get the Most Service from Your Local Station," Washington, DC: The Media Bureau, Federal Communications Commission, July 2008, http://www.fcc.gov/mb/audio/decdoc/public_and_broadcasting.html, Accessed Nov. 1, 2010, 18.
- 30 Henry Geller and Tim Watts, "The Five Percent Solution A Spectrum Fee To Replace the 'Public Interest Obligations' of Broadcaster," Washington, D.C.: New America Foundation Spectrum Series Working Paper #3, May 2002, 5.
- 31 See declining ratios of journalists to population, corporate activity, economic activity, and government activity in Mark Cooper, "The Future of Journalism and Public Media: Toward a Comprehensive Theory of Market Failure and Public Policy Responses," Working Paper Series, New York, NY: The Donald McGannon Communication Research Center, Fordham University, Oct. 2010: 11-12. Updated version accessible at http://www.fordham.edu/academics/office_of_research/research_centers_in/donald_mcgannon_comm/research_33997.asp. Forthcoming in Robert McChesney and Victor Pickard (Eds.), *Will the Last Reporter Please Turn out the Lights: The Collapse of Journalism and What Can Be Done to Fix It* (New York: The New Press).
- 32 See Henry Geller and Tim Watts, "The Five Percent Solution A Spectrum Fee To Replace the 'Public Interest Obligations' of Broadcaster," Washington, D.C.: New America Foundation Spectrum Series Working Paper #3, May 2002, 9.
- 33 J.H. Snider, "The Myth of Free TV," Washington, D.C.: New America Foundation Spectrum Series Working Paper #5, June 2002, 15.
- 34 Parts of the section were adapted from a previous article by the author. See Victor W. Pickard and Sascha D. Meinrath, "Revitalizing the Public Airwaves: Opportunistic Unlicensed Reuse of Government Spectrum," *International Journal of Communications* 3 (2009): 1068, <http://ijoc.org/ojs/index.php/ijoc/article/viewFile/467/382>
- 35 See, e.g., Tom Streeter, *The Air*, Chicago, IL: The University of Chicago Press, 1996.
- 36 Ronald Coase, "The Federal Communications Commission," *Journal of Law and Economics* (Oct. 1959): 2.
- 37 For example, in the FCC's AWS-1 auction, the four biggest winners, T-Mobile, Spectrum Co., Verizon, and Cingular accounted for 71 percent of the total units of MHz-pop sold and 78 percent of total revenue. Similarly, in the 700 MHz auction, Verizon, AT&T, and Frontier accounted for 80 percent of the total units of MHz-pop sold. See Patrick Bajari and Jungwon Yeo, "Auction Design and Tacit Collusion in FCC Spectrum Auctions," Minneapolis, MN: University of Minnesota, Mar. 31, 2009, 9-11, http://www.mysmu.edu/faculty/jwyeo/research/Bajari_Yeo_FCC.pdf, Accessed May 17, 2012.
- 38 Stacey Higginbotham, "Verizon's Spectrum Deal With Cable is The End of Competition," Dec. 2, 2011, <http://gigaom.com/broadband/verizons-spectrum-deal-with-cable-is-the-end-of-broadband-competition>, Accessed May 17, 2012.
- 39 Parts of the section were adapted from a previous article by the author. See Victor W. Pickard and Sascha D. Meinrath, "Revitalizing the Public Airwaves: Opportunistic Unlicensed Reuse of Government Spectrum," *International Journal of Communications* 3 (2009): 1068, <http://ijoc.org/ojs/index.php/ijoc/article/viewFile/467/382><http://ijoc.org/ojs/index.php/ijoc/article/viewFile/467/382><http://ijoc.org/ojs/index.php/ijoc/article/viewFile/467/382>
- 40 See Jessica Clar, "Public Media 2.0: Dynamic, Engaged Publics," Washington, DC: The Center for Social Media at American University, Feb. 2009, <http://www.centerforsocialmedia.org/future-public-media/documents/white-papers/public-media-20-dynamic-engaged-publics>, Accessed May 17, 2012; Ellen P. Goodman & Anne H. Chen, Fall 2010 Issue, Vol 24, *Harvard Journal of Law and Technology*; "Future of Media FCC Comments," Washington, D.C.: The New America Foundation, May 10, 2010, http://mediapolicy.newamerica.net/publications/resources/2010/future_of_media_fcc_comments, Accessed May 17, 2012.
- 41 *Id.*, p. 108.
- 42 *Id.*, p. 115.
- 43 See http://www.digitalpromise.org/Files/Report/Final_Roadmap.pdf –NOTE: LINK DOESN'T GO TO ANY REPORT.
- 44 See Henry Geller and Tim Watts, "The Five Percent Solution A Spectrum Fee To Replace the 'Public Interest Obligations' of Broadcaster," Washington, D.C.: New America Foundation Spectrum Series Working Paper #3, May 2002, 12.
- 45 See James Barksdale, Reed Hundt, et al., "Digital Future Initiative: Challenges and Opportunities for Public Service Media in the Digital Age," Washington, DC: New America Foundation, Dec. 15, 2005, http://www.newamerica.net/files/nafmigration/archive/Doc_File_2766_1.pdf, Accessed 21 Jan. 2011.
-

46 *Id.*, 115.

47 See Benjamin Lennett, "The Lobby that Cried Wolf," Issue Brief, Washington, D.C.: New America Foundation, October 2008, http://www.newamerica.net/files/nafmigration/TheLobbythatCried_Wolf.pdf, Accessed 20 Jan. 2011.

48 *Id.*, 23

49 J.H. Snider, "The Myth of Free TV," Washington, D.C.: New America Foundation Spectrum Series Working Paper #5, June 2002, 22.

50 See Mark Lloyd, "Forget the Fairness Doctrine," Washington, DC: Center for American Progress, July 24, 2007, http://www.americanprogress.org/issues/2007/07/lloyd_fairness.html, Accessed May 17, 2012.

51 See Henry Geller, "Geller to FCC: Scrap the Rules, Try a Spectrum Fee," Oct. 30, 2000, <http://www.current.org/why/why002ogeller.shtml>, Accessed May 17, 2012.

52 Henry Geller and Tim Watts, "The Five Percent Solution A Spectrum Fee To Replace the 'Public Interest Obligations' of Broadcaster," Washington, D.C.: New America Foundation Spectrum Series Working Paper #3, May 2002, 12.

53 *Id.*

54 James Barksdale, Reed Hundt, et al., "Digital Future Initiative: Challenges and Opportunities for Public Service Media in The Digital Age," Washington, D.C.: New America Foundation, 15 Dec. 2005,

http://www.newamerica.net/files/nafmigration/archive/Doc_File_2766_1.pdf, Accessed 21 Jan. 2011, 120.

55 Josh Silver, Candace Clement, Craig Aaron and S. Derek Turner, "New Public Media: A Plan for Action," Washington, DC: Free Press, May 2010, http://www.freepress.net/files/New_Public_Media.doc.pdf, Accessed May 17, 2012, 21.

56 As Geller notes, "It is a basic microeconomic principle that when any input to production is freely available, business has no incentive to use it cost-effectively." *Supra* n. 47, p. 13.

57 This article builds upon one previously published by the New America Foundation Wireless Future Program: See Victor W. Pickard and Sascha D. Meinrath, "Revitalizing the Public Airwaves: Opportunistic Unlicensed Reuse of Government Spectrum," *International Journal of Communications* 3 (2009): 1052-1084. Accessed at <http://ijoc.org/ojs/index.php/ijoc/article/viewFile/467/382>.

58 James Barksdale, Reed Hundt, et al., "Digital Future Initiative: Challenges and Opportunities for Public Service Media in The Digital Age," Washington, D.C.: New America Foundation, 15 Dec. 2005,

http://www.newamerica.net/files/nafmigration/archive/Doc_File_2766_1.pdf, Accessed 21 Jan. 2011, 117.

59 Henry Geller and Tim Watts, "The Five Percent Solution A Spectrum Fee To Replace the 'Public Interest Obligations' of Broadcaster," Washington, D.C.: New America Foundation Spectrum Series Working Paper #3, May 2002, 15.

60 Jon M. Peha, "Spectrum Management Policy Options," *IEEE Communication Surveys* 1, no. 1 (Fourth Quarter 2008), 6, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.35.927&rep=rep1&type=pdf>,

61 As Peha acknowledges, "auction winners must still be required to make a non-refundable payment immediately. This discourages firms from bidding artificially high and using the threat of non-payment (or bankruptcy) to negotiate for lower payments, as occurred in the U.S. PCS auctions. This practice thoroughly undermines the advantages of auctions."

62 See Adele C. Morris, "The Taxation of Spectrum Rights: Tools for Efficiency and Distribution" (Aug. 31, 2006), 6, <http://web.si.umich.edu/tprc/papers/2006/570/Property%20taxation%20of%20spectrum%20v2.pdf>.

63 See Ellen P. Goodman and Anne Chen, Modeling Policy for New Public Media Networks (April 27, 2010). *Harvard Journal Law & Technology*, Vol. 24, Forthcoming 2010: 39. Available at <http://ssrn.com/abstract=1569667>. Final paper available at <http://jolt.law.harvard.edu/articles/v24.php>.

64 See Barbara Cochran "Rethinking Public Media: More Local, More Inclusive, More Interactive," Washington, DC: The Knight Commission on the Information Needs of Communities in a Democracy, Dec. 2010, <http://www.knightcomm.org/rethinking-public-media>, Accessed May 17 2012.

65 See Statement by Federal Radio Commission Relative to the Public Interest, Convenience or Necessity, 2 FRC Ann. Rep. 166 (1928).

66 See Ellen P. Goodman, "Spectrum Auctions and the Public Interest," *Journal of Telecommunications and High Technology Law*, Vol. 7, 2009, 354.

67 See, e.g., Nate Anderson, "Google attacks Verizon's attempt to water down 700MHz 'open access' rules," *Ars Technica*, Oct. 4, 2007, <http://arstechnica.com/tech-policy/news/2007/10/google-attacks-verizons-attempt-to-water-down-700mhz-open-access-rules.ars>.

68 See Paul Taylor and Norman Ornstein, "The Case for Free Air Time: A Broadcast Spectrum Fee For Campaign Finance Reform," Washington, D.C.: New America Foundation Spectrum Series Working Paper #4, June 2002, 19.

69 This paragraph is adapted from the Center for Social Media FCC comments related to the open internet: Jessica Clark and Pat Aufderheide, "Comments Submitted to the FCC's Open Internet Docket," Oct. 12, 2010, <http://www.centerforsocialmedia.org/future-public-media/documents/articles/comments-submitted-fccs-open-internet-docket>.

70 See Marvin Ammori, "First Amendment Architecture," March 11, 2011, *Wisconsin Law Review*, Vol. 2012, No. 1, <http://ssrn.com/abstract=1791125>, 40.

71 See Mahesh Uppal and Payal Malik, "An Evaluation of Different Models for the Issuance of Licenses for Service Provision and Frequencies," (paper prepared for LIRNEasia Project on Mobile 2.0 at the Bottom of the Pyramid in Asia, Aug. 2009) 3, http://www.lirneasia.net/wp-content/uploads/2009/08/Mobile2.0_Final_Hor_PM_03082009.pdf.

72 See "Auction 66: Advanced Wireless Services," Washington, D.C.: Federal Communications Commission, http://wireless.fcc.gov/auctions/default.htm?job=auction_factsheet&id=66#License%20Period%20and%20Construction%20Requirements.

73 The consortium of cable co.'s (known as Spectrum Co.) is currently selling the spectrum to Verizon Wireless for \$3.6 billion. Phil Goldstein, "Verizon to buy Spectrum Co.'s AWS spectrum for \$3.6B," Dec. 2, 2011, <http://www.fiercewireless.com/story/verizon-buy-spectrumcos-aws-spectrum-36b/2011-12-02>. Accessed May 17, 2012.

74 See e.g. http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db1014/DOC-302191A1.pdf. – NOTE: LINK BROKEN

75 See Michael Calabrese, "Use it or Share it: Unlocking Vast Wasteland of Fallow Spectrum," September 25, 2011.

76 See e.g. Michael Calabrese and Matthew F. Wood, "Comments of the Public Interest Spectrum Coalition, ET Docket No. 10-237," Feb. 28, 2011, http://oti.newamerica.net/sites/newamerica.net/files/profiles/attachments/PISC_Dynamic_Spectrum_Access_NOI%20comments_FINAL_022811.pdf, Accessed May 17, 2012.

77 See Peter Cramton, "Spectrum Auction Design," College Park, MD: University of Maryland, Department of Economics, Aug. 11, 2009, http://www.cramton.umd.edu/papers2005_2009/cramton-spectrum-auction-design.pdf, Accessed May 17, 2012, 2.

78 See <http://www.gpo.gov/fdsys/browse/collection.action?collectionCode=BILLS> for text.

79 David Moss and Michael Fein, "Radio Regulation Revisited: Coase, the FCC, and the Public Interest," *Journal of Policy History* (2003).

80 New entrants face two substantial hurdles: the fixed cost of building a network and the vested interest that incumbent providers have in preventing the entry of new players. Incumbents include in their valuation of spectrum at auction the benefit of preventing new entrants, which translate into increased willingness to pay for new licenses. See also Jehiel and Modavine, "License Auctions and Market Structure" 2, *supra* .20.

81 See, e.g., Pierre de Vries, "Populating the Vacant Channels: The Case for Allocating Unused Spectrum in the Digital TV Bands to Unlicensed Use for Broadband and Wireless Innovation," Washington, D.C.: New America Foundation, Working Paper No. 14, Aug. 2006, <http://www.newamerica.net/files/WorkingPaper14.DTVWhiteSpace.deVries.pdf>.

82 See Jon M. Peha, "Spectrum Management Policy Options," *IEEE Communication Surveys* 1, no. 1 (Fourth Quarter 2008), 6, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.35.927&rep=rep1&type=pdf>.

83 See Guifi.NET case study by Gwen Shaffer, published by New America Foundation Spring 2011, available at <http://oti.newamerica.net>. NOTE: I couldn't find this study on our site.

84 See Sascha D. Meinrath and Victor Pickard, "The Rise of the Intranet Era," Washington, D.C.: New America Foundation's Open Technology Initiative, Feb. 2009, http://www.newamerica.net/publications/policy/rise_intranet_era.

85 See Laura Forlano, Allison Powell, Gwen Shaffer and Benjamin Lennett, "From Digital Divide to Digital Excellence" Washington, DC: New America Foundation Open Technology Initiative, 2011, <http://www.newamerica.net/sites/newamerica.net/files/policydocs/NAF%20Municipal%20and%20Community%20Wireless%20Report.pdf>, 17.

86 See Meinrath and Pickard, "The Rise of the Intranet Era."

87 *Id.*

88 See <http://www.guifi.net/en>.

89 See "Connecting America: The National Broadband Plan," Federal Communications Commission, 94-95, *supra* .3.

90 This section was adapted from Pickard and Meinrath's, "Revitalizing the Public Airwaves: Opportunistic Unlicensed Reuse of Government Spectrum," *supra* n.11.

91 For one of the earliest statements on the potential of cognitive radios and the paradigm shift from static to dynamic spectrum use, see Kevin Werbach, "Radio Revolution: The Coming of Age of Unlicensed Wireless," Washington, DC: New America Foundation, Public Knowledge, 2002.

92 Some analysts suggest that at any given time the majority of the current spectrum could be technically considered a "white space." See Mark McHenry, "Dupont Circle Spectrum Utilization During Peak Hours, A Collaborative Effort of The New America Foundation and The Shared Spectrum Company," Washington, DC: New America Foundation, 2003, http://www.newamerica.net/files/archive/Doc_File_183_1.pdf, Accessed May 17, 2012. .

93 See Federal Communications Commission, Second Report and Order and Memorandum Opinion and Order, ET Docket No. 04-186, Nov. 14, 2008, http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-08-260A1.pdf, Accessed May 17, 2012.

94 Steven K. Jones and Thomas W. Phillips, Federal Communication Commission, Office of Engineering and Technology, "Initial Evaluation of the Performance of Prototype TV-Band White Spaces Devices," OET Report FCC/OET 07-TR-1006, July 31, 2007, http://fjallfoss.fcc.gov/edocs_public/attachmatch/DOC-275666A1.pdf.

95 See e.g. Shared Spectrum Company, "Darpa XG Program Information," SSC – Technology, <http://www.sharedspectrum.com/technology/darpaxg.html>; Shared Spectrum Company, "Shared Spectrum Company Successfully Demonstrated next Generation (XG) Wireless Communication System," Press Release, Sept. 18, 2006, http://www.sharedspectrum.com/inc/content/press/XG_Demo_News_Release_060918.pdf.

96 See Benjamin Lennett, "Good Enough for the Pentagon: The Feasibility of 'Smart Radio' Technology in the TV White Spaces" Washington, DC: New America Foundation, Oct. 2008, http://www.newamerica.net/files/nafmigration/Good_Enough_for_the_Pentagon.pdf, Accessed May 17, 2012.

97 Gerald R. Faulhaber and David J. Farber, "Spectrum Management: Property Rights, Markets, and The Commons," AEI-Brookings Joint Center for Regulatory Studies, Working Paper 02-12, Dec. 2002, <http://www.cs.cmu.edu/afs/cs.cmu.edu/user/dmaltz/100x100/WWW/papers/faulhaber-brookings2002.pdf>, 20.

98 See “AT&T Announces Launch of Free Wi-Fi in Several of New York City's Most Iconic Parks: Free Wi-Fi Now Available at Pier 1 at Brooklyn Bridge Park, Prospect Park Picnic House and Manhattan's Marcus Garvey Park,” New York, NY, Nov. 03, 2011, <http://www.att.com/gen/press-room?pid=21918&cdvn=news&newsarticleid=33200>, Accessed May 17, 2012.

99 See Benjamin Lennett and Sascha D. Meinrath, “Seven Key Option for Spectrum Allocation and Assignment,” *Journal of Internet Law*, Sept. 2010, 12.

100 Nuechterlein and Weiser, “Crossroads,” 230, *supra* n.10.

101 For example the share of the DTV band (channels 2-to-51) that will be vacant after the February 2009 end to analog transmission ranges from 30 percent in the most congested, coastal markets (*e.g.*, Trenton, NJ) to 80 percent or more in small town and rural markets. See, *e.g.*, Michael Calabrese and Matthew F. Wood, “Measuring the TV “White Space Available for Unlicensed Wireless Broadband,” Washington, DC: New America Foundation, Nov. 18, 2005, http://www.newamerica.net/publications/policy/measuring_tv_white_space_available_for_unlicensed_wireless_broadband, Accessed May 17, 2012, 3, 25-27, 49-51.



© 2012 New America Foundation

This report carries a Creative Commons license, which permits re-use of New America content when proper attribution is provided. This means you are free to copy, display and distribute New America’s work, or include our content in derivative works, under the following conditions:

Attribution. You must clearly attribute the work to the New America Foundation, and provide a link back to www.Newamerica.net.

Noncommercial. You may not use this work for commercial purposes without explicit prior permission from New America.

Share Alike. If you alter, transform, or build upon this work, you may distribute the resulting work only under a license identical to this one.

For the full legal code of this Creative Commons license, please visit www.creativecommons.org. If you have any questions about citing or reusing New America content, please contact us.

MAIN OFFICE

1899 L Street, NW
Suite 400
Washington, DC 20036
Phone 202 986 2700
Fax 202 986 3696

CALIFORNIA OFFICE

921 11th Street
Suite 901
Sacramento, CA 95814
Phone 916 448 5189



NEW
AMERICA
FOUNDATION

WWW.NEWAMERICA.NET



Corporation for Public Broadcasting

Building a Digital Democracy Through Public Media

By Lauren J. Strayer



This chapter is part of an online effort by the Center for American Progress Action Fund and New Democracy Project to offer expert advice to the new administration as part of its *Change for America* book project.

Summary

After forty years of struggling against constant political interference, pressure from commercial media, and a fatally flawed funding plan, American public broadcasting is in crisis. Timid programming and an outdated infrastructure fail to address the civic, cultural, and educational needs of the nation and its underserved communities. Since a strong public media system is essential to any modern democracy, the 44th president must reinvigorate the Public Broadcasting System and National Public Radio's public interest mandate.

The new president should immediately convene an independent commission of media experts and technology leaders to plan for an integrated online public media platform and the long-term implementation of emerging information and communications technologies to better serve all Americans. He must also provide full annual funding and advanced appropriations to the Corporation for Public Broadcasting until he can pursue the establishment of a Public Media Trust, which would finally provide an independent and stable funding stream for public media.

Current Challenges

In the days following the September 11 attacks, requests came into PBS from the Queen of England and Vice President Dick Cheney for copies of the "Frontline" production "Hunting bin Laden" and a special called "Islam: Empire of Faith."¹ When terrible circumstances required the best information available, world leaders went beyond their governmental resources for the excellence of PBS's in-depth reporting. Americans outside the halls of power similarly value public broadcasting: 2008 marked the fifth consecutive year in which Americans ranked PBS as the nation's most trustworthy institution, ahead of the judicial system, commercial broadcasters, newspapers, and the federal government. Americans also ranked PBS as the best use of federal tax dollars in 2008, second only to military defense spending, and ranked NPR fifth, after law enforcement and the space program.²

Despite such support, conservatives and commercial media consistently attack public broadcasting. The former have long complained that public programming slants to the left, even though 80 percent of Americans think PBS is “fair and balanced” and 55 percent believe the same of NPR.³ Commercial media, meanwhile, objects to competition from the highly regarded, government-funded networks, especially because they specialize in programs that challenge the political and industry status quos. Allied, these critics have chipped away at public broadcasting’s funding and independence, crippling its ability to fulfill its public interest mandate.

A landmark commission in 1967 from the Carnegie Foundation of New York described how public broadcasting provides a public service essential to a strong democracy. In practice, that public service is the production of civic, cultural, and educational programming of “human interest and importance” that is glaringly missing from commercial media. The commission understood that such programming would “enhance citizenship,” provide a “forum for debate and controversy,” and uniquely display “America whole, in all its diversity.”⁴ Congress agreed and chartered the non-profit, nongovernmental Corporation for Public Broadcasting to fund public television and radio programming while protecting producers and broadcasters from political interference. CPB does not directly produce or distribute content but instead acts as a “heat shield,” distributing government funds to member stations and to the television and radio networks we know as PBS, NPR, Public Radio International, and American Public Media among others. The private, non-profit nature of these CPB beneficiaries is meant, in part, to make them accountable to local audiences.

The fundamental flaw in this complex system is, according to Jerold Starr of Citizens for Independent Public Broadcasting, its lack of a “sufficient, stable, and independent” funding stream.⁵ Congressional appropriations to CPB generally provide about 15 percent of all public broadcasting funding. Producers and broadcasters—“pubcasters”—then leverage these funds to raise the remaining 85 percent of their budgets from viewers and listeners, foundations, and corporate sponsorships. The strong correlation between federal funding and these outside sources creates the kind of political influence over programming against which the Carnegie Commission warned. Conservatives and the commercial media lobby have had significant success in cutting CPB’s funding since its establishment and particularly since 2004, when they embraced a new strategy: the president’s proposed budget would zero-out CPB’s advanced appropriation and allow congressional conservatives to negotiate a restoration at a significantly reduced level. Over time, this volatile process forces pubcasters to adopt practices that further undermine the integrity of the entire system.

Most prominently, public broadcasting’s adherence to its noncommercial safe-space mandate tends to weaken when the overall financial outlook is uncertain. In 1995, at a moment when Republicans were particularly hostile to CPB funding, former PBS president Lawrence Grossman proposed PTV WEEKEND, a parallel commercial PBS network that would run traditional advertisements on public television stations on Friday and Saturday nights.⁶ PTV WEEKEND was never implemented, but PBS has used other

policies to entice further commercial support. Underwriter “announcements” were once limited to brief identification messages, but some have been expanded to 30-second spots with lengthy product descriptions that often border on the taboo “call to action.”⁷ Such market-driven revenue streams raise questions about public broadcasting’s editorial independence and threaten its main funding source: the idealistic viewers and listeners who become “members” of local stations.

A related consequence of inconsistent congressional support is a narrow program lineup that satisfies existing supporters. Public broadcasters have been forced to fund well-established programs such as PBS’s “Nova” and NPR’s “All Things Considered” to the exclusion of new, more diverse programming. Such iconic series come first not only because they have dedicated audiences but because they appeal to a stable of dependable donors, namely foundations and corporate underwriters which generally prefer to be linked to safe, uncontroversial programming. So PBS and NPR often forgo the creation of content for underserved communities that often lack political or buying power. For example, before several 2001 premiers—including that of the since-canceled “American Family,” the first broadcast drama featuring a Latino cast—PBS had not launched a new series in 15 years.⁸ The result of this stagnation is a PBS viewership with a median age of 46 years, even though the median age of the nation is 36, and the median ages of African Americans and Latinos are 30 and 26, respectively. The average income of an NPR listener is 30 percent higher than the national average, and listeners are twice as likely to hold a college degree.⁹

Further limiting the overall public broadcasting audience is the lack of funding to pursue a united agenda for digital and mobile technology. Without enough money to fulfill its existing programming and infrastructure budgets, PBS and NPR have been unable to implement many of the “new media” capabilities that are now basic standards in their respective industries. For the most part, the two networks have entirely disconnected websites, and each provides varying levels of public accessibility and information. Commercial media is meanwhile experimenting with emerging technology that could, if applied to public broadcasting, foster truly democratic debate in the public sphere and reach key minority communities, which consume more media products—from cell-phone minutes to pay-per-view services—than the general white population.¹⁰

Self-censorship is another damaging consequence of CPB’s problematic funding scheme. When elected officials, appointees, and interest groups threaten to pull funds because of a particular program’s content, CPB’s role as an editorial firewall breaks down. Consider the recent high-profile meddling with children’s programming on PBS: it pulled an episode of “Postcards from Buster” in 2005 that included a family with two moms after then-Secretary of Education Margaret Spellings called for PBS to return federal funds dedicated to the children’s show. PBS similarly promised to keep an HIV-positive Muppet off the American version of “Sesame Street” in 2002 after congressional conservatives wrote to PBS reminding the public network of its financial dependence.

Conservatives have also used the power of the purse to elevate sympathetic political operatives to the highest public broadcasting leadership positions. Former CPB chair Kenneth Tomlinson's attempts to expunge a perceived "liberal bias" from public broadcasting eventually forced his 2005 resignation and a rare year-long congressional investigation into his actions. He personally shepherded a program featuring the *Wall Street Journal* editorial board into the PBS lineup despite federal statutes that prohibit board members from influencing programming decisions, and he consulted the White House on how to nix a plan to install CPB board members with local broadcasting experience. Perhaps his most transparent transgression was the secret hiring of a conservative researcher to watch four highly-rated, award-winning news programs on PBS and NPR to try to detect liberal bias.

Finally, despite the increasing importance of public broadcasting's mandate to foster local content, poor funding forces many member stations to fill their schedules with national programming, which is cheaper than producing local content. Less than five percent of PBS member stations have a nightly local news broadcast, and many NPR stations, despite radio's lower production costs, struggle to create local content.¹¹ Colorado, a middle-sized state coming in with the 22nd-largest population, has a two-station public radio system. One station is devoted to classical music, and the other, KCFR, is devoted to news. KCFR airs 22 hours of national programming every weekday, leaving only two one-hour slots for "Colorado Matters," except on Mondays, when the one-hour "KCFR Presents" also airs.¹²

Each of these funding-related "failures" feeds an overarching critique that could most damage the long-term success and existence of public broadcasting: the possibility that the pursuit of funding and audience has driven public broadcasting too far from its "public interest" mandate, making it irrelevant, or worse yet, redundant in the huge media landscape.¹³ The 44th president must leverage public broadcasting's widespread public support to rebuild a flawed but vital democratic system and end the cycle of increasing political and commercial influence.

Short-Term Recommendations

Public broadcasting must shed its old media infrastructure and develop a unified technology agenda that would transform the public interest system into a multimedia, digital forum for civic, cultural, and educational affairs. PBS played a key role in building the nation's first satellite broadcasting system and was the first to use closed captioning and video description services,¹⁴ but the perpetual funding crisis has forced it to focus on maintaining existing infrastructure and programming rather than embrace a "new media" platform. According to media scholar and activist Robert McChesney, "in view of the new technologies, the very term public service *broadcasting* may be misleading; it is truly public service *media*."¹⁵ The new president's public broadcasting agenda must be built on this concept, and he should signal this shift by changing CPB's name, in the course of larger reforms, to the Corporation for Public Media.

The 44th president should immediately establish, by Executive Order, a National Commission on Public Media in the Digital Age to develop finally plans for the immediate creation of a unified, expansive public media web platform—an ecommons for all Americans—and for the ongoing implementation of new information and communications technologies, or ICT. Housed in the Department of Commerce, the new commission should: consult with experts at the Federal Communications Commission, the key pubcasting institutions, the Department of Education, and the new White House Office of Science and Technology; review the wide range of existing technology proposals put forth by pubcasting advocates in recent years; and deliver strategies to the president within his first year in office.

To create a visionary public media plan, the commission should comprise 10–15 distinguished members who collectively represent a wide range of expertise. The next president should appoint no less than four commissioners who are media scholars or activists from respected policy organizations such as the Center for Digital Democracy, Free Press, and American University’s Center for Social Media; no less than four ICT innovators, taking care to appoint innovators who will not be influenced by commercial media’s agenda; and no more than three former leaders of public broadcasting institutions such as CPB, PBS, NPR, and the Association of Public Television Stations. (Sitting pubcasting leaders should be genuinely consulted but not necessarily appointed full commissioners.)

Build a Public Media eCommons

Upon signing the Public Broadcasting Act of 1967, President Johnson presciently argued for the continued pursuit of “new ways to build a great network for knowledge—not just a broadcast system, but one that employs every means of sending and storing information that the individual can use.”¹⁶ Forty years later, the Internet is the natural medium for that “great network,” and pubcasters are still the natural architects and custodians. The goal of the new National Commission on Public Media in a Digital Age should be to create a democratic public media ecommons by centralizing and making universally accessible America’s civic, cultural, and educational resources.

The new public media hub must, first and foremost, integrate all of NPR’s and PBS’s programming onto one platform where items are tagged and cross-referenced so that the public can easily read, watch, and listen to all pubcasting content and see other related content, particularly any produced locally. Given the sheer breadth of PBS and NPR’s combined daily programming, a shared platform is the ideal way to take the “teletopian” values that necessitated traditional public broadcasting to the Internet. To that end, the new commission should study the web efforts of other public broadcasting systems, such as the British Broadcasting Corporation’s www.bbc.co.uk, which has long integrated TV, radio, and print content, and which recently launched the “iPlayer,” a free online database of every program aired on BBC radio or television during the previous week.

Similarly, the public media ecommons should build new partnerships with external, non-commercial sources of content to provide citizens with more information and editorial perspectives. A page dedicated to a particular “News Hour” broadcast or “Masterpiece Theater” production, for example, might provide further news or cultural content from independent and alternative media centers, which have been shut out of increasingly sanitized pubcasting lineups. Finally, the ecommons must provide a highly democratic space for discussion between producers and citizens and for networking among citizens. Public media should be the pre-eminent source of information on the issues of the day and on elections, offering space to all responsible opinions.

Though pbs.org is testing a new unified media player and curated database, npr.org is currently much closer to providing a seamless end-user experience. NPR offers a searchable database of nearly all its local and national programming—often with transcripts, podcasts, and comment boards. Many NPR hosts and producers have successfully integrated web content into broadcast programming by posting further information about guests and topics, making sure that web content is worthy of the Internet’s sophisticated media consumers, and teasing web content on air to encourage listeners to visit the site and create conversation. WNYC’s award-winning Brian Lehrer, for example, regularly uses his show’s site to gather questions and opinions from listeners instead of only taking the traditional callers.

Beyond the main goal of bringing pubcasting’s web presence into the 21st century, the president’s National Commission on Public Media in the Digital Age will need to make an important decision: should a renewed public media system keep its traditional focus on internally produced civic, cultural, and educational programming? Or should it be part of a greater network of public libraries, universities, and government resources? Ellen Miller and Neal Lane both discuss the importance of creating a highly accessible, transparent online government elsewhere in this book. Similarly, former FCC chairman Newton Minnow and former PBS president Lawrence K. Grossman have found congressional support for a Digital Opportunities Investment Trust, which would integrate public broadcasting with America’s schools, universities, museums, and libraries to digitize their resources and leverage them into a revolutionary online hub focused on innovative education.¹⁷

The second task of the president’s new commission reflects the fact that emerging ICT is profoundly transforming the entire media industry. No one yet knows exactly how technology, consumers, and business plans will evolve in the next 10 years. TV and radio executives, however, do know that “wait and see” isn’t a viable strategy for survival and are busy experimenting with different platforms. In this somewhat chaotic environment, public media could regain its technological leadership and claim a larger swath of the digital landscape than was ever possible in the television and radio markets.

ICT developers and commercial media are all asking the same questions: how can we integrate broadcast, mobile, and web technologies? And how does the audience want us to do it? Aside from ease of use, consumers already want and will shortly demand the ability to time-shift, place-shift, and consume media for free—or at least with limited commercial

interruption. Many media companies already offer web streaming in addition to traditional broadcasting, making their programs available live or through on-demand sites such as Hulu and Veoh. (PBS's decision to offer some programming on such commercial sites should be reconsidered.) Tech firms are also experimenting with Internet Protocol TV and Open Internet TV, which allow viewers to access the Internet through their televisions. Combined with the resources of the proposed public media hub, such technology offers public media yet another way to reach a wider range of Americans and contribute to the growth of a stronger democracy. The new commission's long-term ICT strategy will be vital to identifying which existing and emerging technologies should be pursued and how public media can stay on the cutting edge well into the future.¹⁸

Appoint Qualified Board Members and Secure Full Funding

During his first year, the 44th president can stabilize public broadcasting in two ways. First, the next president will inherit a CPB board that has too often been subject to politically strategic vacancies and patronage appointments. He will likely have to fill four of the nine seats within his first year and must appoint qualified individuals who clearly meet the "no more than five members from one party" rule, as well as the requirement that the board include a representative for each PBS and NPR. This return to form will signal the president's commitment to a public media system with integrity.

The new administration should also publicly commit to providing full annual and advanced CPB appropriations in each budget, beginning with fiscal year 2010. Political realities—namely the war in Iraq and the ongoing economic crisis—will likely prevent Washington from immediately addressing long-term funding for CPB, but the president can at least secure current funding. This step will allow pubcasters to plan for the future—a critical part of any sizable entity's success—and will start easing the internal tensions that have balkanized the pubcasting community as different groups fight for limited resources.

Long-Term Agenda

Congress essentially doomed pubcasting to its current state when it ignored the Carnegie Commission's 1967 recommendation to create a public broadcasting trust. Capitalized by a tax on factory sales of televisions, the fund would be nearly \$3 billion today.¹⁹ Instead, entrenched commercial interests and their congressional allies designed a thin and complicated funding plan that is, in short, insufficient, unstable, and dependent on the whims of Congress and K Street.

Such funding pitfalls might be common to all government agencies and programs, but they have a profound effect on public media's potential. Problematic funding surely produces isolated failures in other federal institutions, but those failures do not intrinsically endanger other programmatic opportunities. Since pubcasters are held to the ideal of

complete journalistic integrity, analogous individual failures—a biased news segment or a more-commercial underwriting policy—undermine everything else PBS and NPR do.

After contentious early years in which President Nixon vetoed all funding in retribution for a PBS production, “Banking and the Poor,” Congress did try to offer CPB more independence in 1975 by making it the only federal institution funded two years in advance.²⁰ Unfortunately, this arrangement has failed to insulate pubcasting because Washington regularly cuts previous appropriations. President Bush’s proposed budget in February 2008, for example, halved CPB’s FY2009 appropriation from \$400 million to \$200 million and made no appropriation for FY2011.²¹ Even if this type of reversal did not occur regularly, a two-year advance does not protect sufficiently against political reprisal, given the six- and four-year terms served by the president and senators and the 94 percent House incumbency rate.

Moreover, two of the world’s best public broadcasting systems are the BBC and Germany’s ARD and ZDF, whose respective governments spend more than \$80 per capita on the programs annually. Canada and Australia spend an average of \$28 per capita. In the United States, it’s \$1.70.

The new president should push for the legislative establishment of an independent Public Media Trust with an initial target of \$5 billion to \$10 billion. Assuming the standard five percent rate of return of similar trusts, a \$10-billion trust would immediately remove CPB from the federal budget and grow its budget, providing some \$500 million per year. The Public Media Trust proposal has been revisited many times since the Carnegie Commission first recommended it, and the 44th president should be able to rally a wide range of allies for a responsible trust proposal.

There is a precedent for conservative trust support set by two Republican representatives in the mid-1990s after they asked CPB to come up with a plan for privatization. PBS, NPR, PRI, and APTS submitted an updated trust proposal, which would have ended all congressional appropriations to CPB by 2000. The proposal became the Public Broadcasting Self-Sufficiency Act of 1996 but ultimately stalled when Congress offered only half of the endowment necessary to fund CPB annually and refused to supplement CPB’s budget while more capital funds were raised. The bill did suggest that the fund should be filled by FCC spectrum auctions such as the 2008 analog spectrum sale.²² Auction 73 raised more than \$19.5 billion by selling the analog spectrum freed up by the scheduled nationwide switch to a digital network in February 2009.

Auction 73’s sheer size represents a lost capitalization opportunity, and the larger economic concerns may delay the establishment of a trust, but the new president’s recommended legislation should allocate no less than \$5 billion from future FCC auctions. Furthermore, the short-term capital goal should be to reach \$10 billion within, perhaps, five years, and the long-term goal should reflect the start-up and maintenance costs of the new online public media hub, the ongoing technology implementation strategy, and a major investment in minority programming. The gap between auction proceeds

and the successive goals could be filled from three sources: the public, the commercial media industry, and corporate underwriters and foundations.

Many liberals and conservatives frown upon proposals that ask consumers to pay for public broadcasting, but most successful pubcasting systems around the world have at least one mechanism to draw funds directly from citizens. Politically, the establishment of a Public Media Trust may depend on the new president asking the public to support directly the service they value so highly. The proposal most often mentioned is a small tax or fee on cable services or television receivers. Seventy-five percent of funding for the BBC comes from an annual television license fee, which was about \$230 per television in 2004 and raised about \$5 billion. If each American household with a television had been charged \$1 per month in 2007, it would have raised \$1.3 billion—nearly the annual budget of the entire pubcasting community. If the fee were charged on every television in use in America, pubcasters would have raised more than \$3.5 billion.²³

With a direct public funding plan and public pressure, the next president will be able to bring commercial media to the bargaining table or at least to give Congress leverage to ignore media lobbyists when considering how big media will contribute directly to the new Public Media Trust. Commercial media will put up a strong fight, using dollars and airwaves, against funding direct competition. However, having failed to meet the spirit, if not the specifics, of its own public interest responsibilities, it is time commercial media contribute to public media as in other countries.

One common proposal is an annual spectrum usage fee. The upcoming switch to a digital platform will allow broadcasters and cable companies to multicast transmissions of 6–8 channels where there used to be one; the potential new revenue streams are enormous. The federal government could also leverage a transfer fee on broadcast license sales; if license sellers had paid a two percent tax on the proceeds of sales in 1997, it would have raised \$460 million in that year alone.²⁴ Yet another proposal is to levy a tax on broadcast advertising. Despite a two percent decrease from 2006, U.S. radio and television advertising totaled more than \$75 billion in 2007. A one-half percent tax would have raised \$375 million.²⁵ There may also be opportunities to gather commercial funds from the low-cost analog broadband network that Auction 73 is meant to foster.

The next president can also call on the corporate underwriters and foundations to give above and beyond their regular programmatic public media support to a capital trust campaign. Given the good will pubcasters still enjoy, the rise of the mega-philanthropists, and the fact that member stations already hold capital campaigns in addition to regular funding drives, it's not unrealistic to assume that a targeted campaign could raise at least \$1 billion in a relatively short period of time.

In addition to adequate funding, the new administration's legislation must ensure that the Public Media Trust has proper leadership. Plans by trust proponents over the years generally fall into two categories; they either place the trust under CPB or replace CPB with a

new “heat shield” corporation built around the trust. Since the former requires significant restructuring of the CPB, the plans essentially share the same goal: guaranteeing that the new trust is administered by a board of distinguished Americans with relevant experience and a dedication to editorial and financial independence.²⁶

The Public Broadcasting Act of 1967 calls for a board comprising individuals “eminent in such fields as education, cultural and civic affairs, or the arts, including radio and television,” and stipulates that board members represent “various professions and occupations, and various kinds of talent and experience appropriate to the functions and responsibilities” of public broadcasting. The current nomination and confirmation process has failed to achieve these ideals because it lacks proper political insulation and a more specific rubric articulating what a model board would actually look like.

The 44th president can address these appointment problems by establishing an independent nominating panel of, according to one existing proposal, “university presidents, leading writers, artists, scientists, and citizens of accomplishment.”²⁷ Established within the trust legislation or by Executive Order, this standing panel would have a concrete rubric for vetting new public media board members—checking for relevant experience, political balance, and dedication to public broadcasting’s mission—and providing the president with a group of candidates from which he would choose a nominee for Senate confirmation. The nominating panel should have a minimum of 10 members, and should exclude large political donors and members of the commercial media or the conglomerates that own them. Anyone would be able to submit possible candidates to the panel for consideration, but individuals from these three groups should not be members of the nominating panel since they would bring, at the very least, the perception of political biases or inherent agendas that would prevent them from making recommendations for the benefit of the whole public broadcasting system.

Internal Public Media Reform

With a new digital democracy plan and an effective Public Media Trust, the public broadcasting community will be better equipped to pursue difficult internal reforms, many of which are not appropriate for elected officials to implement, and all of which have been hindered by the territorial attitudes that the struggling system has produced. Debates about major infrastructure questions, such as whether some smaller markets should have more than one PBS or NPR station, will continue to be contentious, but they will likely be more productive in a digitally unified, financially stable system. Similarly, a secure public media system would naturally pursue policies that foster a more democratic media landscape, from supporting community broadband proposals and local public, educational, or governmental channels to retracting its opposition to recent low-power FM initiatives. In time, a renewed public media system could finally fulfill the Carnegie Commission’s goal as the pre-eminent “instrument for the free communication of ideas in a free society.”²⁸

The author would like to thank Pat Mitchell and Larry Irving for their time and advice.

About the author

Lauren Strayer, executive director of the New Democracy Project and editorial director for *Change for America*, is co-author of *Defend Yourself!* (Newmarket Press, 2006) and a producer at Air America Radio.

Endnotes

- 1 Pat Mitchell, "Real World or 'Reality' Shows?" *Washington Post*, October 16, 2001, p. A23.
- 2 GfK Roper Public Affairs & Media, "PBS is #1 in Public Trust" (2008), available at http://www.prairiepublic.org/support/images/2008_RoperSurvey.pdf (last accessed August 2008).
- 3 Corporation for Public Broadcasting, "CPB-Commissioned National Opinion Polls: Public Perceptions of Public Broadcasting, December 2003," available at <http://www.cpb.org/aboutcpb/goals/objectivity/pollsummary.html> (last accessed October 2008).
- 4 Jerold M. Starr, *Air Wars: The Fight to Reclaim Public Broadcasting* (Philadelphia: Temple University Press, 2001), pp. 21–22.
- 5 Ibid.
- 6 Lawrence K. Grossman, "Introducing PTV Weekend" (New York: Markle Foundation, 1997), available at <http://www.current.org/weekend/wkig597.html> (last accessed February 2008).
- 7 Public Broadcasting System, "PBS Editorial and Production Guidelines: Guidelines for On-Air Underwriting Credits, Rule 10," available at http://www.pbs.org/producers/guidelines/uwcredits_10.html (last accessed August 2008).
- 8 M.S. Mason, "PBS Faces Up to the Competition," *Christian Science Monitor*, May 4, 2001; PBS, "PBS to launch 'American Family,' First Latino Drama on Broadcast Television, in January 2002," available at http://www.pbs.org/aboutpbs/news/20010727_americanfamily.html (last accessed October 2008).
- 9 Larry Irving, "Keynote Speech to the 2008 Beyond Broadcast Conference," June 17, 2008; Paul Farhi, "Fairness in Balance; Public Broadcasting is Under Scrutiny. Neither Side Seems to Like What It Sees," *Washington Post*, July 17, 2005, p. N1.
- 10 Irving, "Keynote Speech."
- 11 Less than five percent: Starr, *Air Wars*, p. 277.
- 12 Colorado Public Radio example: David Barsamian, *The Decline and Fall of Public Broadcasting* (Massachusetts: South End Press, 2002), p.47. Updated information: Colorado Public Radio, "KCFR Schedule," available at <http://www.kcfr.org> (last accessed July 2008).
- 13 Robert W. McChesney, *Rich Media, Poor Democracy* (New York: The New Press, 1999), pp. 226–227.
- 14 Lawrence K. Grossman, *The Electronic Republic: Reshaping Democracy in the Information Age* (New York: Penguin, 1996), p. 212.
- 15 Robert W. McChesney, *The Problem of the Media* (New York: Monthly Review Press, 2004), p. 250.
- 16 Lyndon B. Johnson, "Remarks of President Lyndon B. Johnson Upon Signing the Public Broadcasting Act of 1967," November 7, 1967, available at www.cpb.org/aboutpb/act/remarks.html (last accessed February 2008).
- 17 "Digital Promise," available at <http://www.digitalpromise.org> (last accessed August 2008).
- 18 Advice on an online public media hub: Jeff Chester, *Digital Destiny* (New York: The New Press, 2007); Grossman, *The Electronic Republic*; Irving, "Keynote Speech."
- 19 McChesney, *Problem of the Media*, pp. 244–245.
- 20 Pat Mitchell, interview with author, New York, New York, March 2008.
- 21 "Federal Appropriation History," available at <http://www.cpb.org/aboutcpb/financials/appropriation/history.html> (last accessed October 2008).
- 22 Steve Behrens, "Fields Proposes Trust Fund, But Caps Its Size at \$1 billion," *Current*, March 11, 1996, available at <http://www.current.org/mo/mo605.html> (last accessed February 2008).
- 23 Calculations by author; Nielsen Media Research, "Projections of TV Households and Person in TV Household: 2008–2050" (February 7, 2008) available at http://www.nielsenmedia.com/nc/nmr_static/docs/Total_Projections_Jan07.xls (last accessed October 2008).
- 24 Free Press, "New policies for public media," available at <http://www.freepress.net/node/37321> (last accessed February 2008).
- 25 Calculations by author; TNS Media Intelligence, "Measured Advertising Spending by Media: Jan–Dec 2007 vs. Jan–Dec 2006" (March 25, 2008), available at www.businesswire.com/news/google/20080325005529/en (last accessed October 2008).
- 26 Advice on the Public Media Trust: Chester, *Digital Destiny*; Grossman, *The Electronic Republic*; McChesney, *Rich Media, Poor Democracy*; McChesney, *Problem of the Media*; and Starr, *Air Wars*; Michell, interview with author.
- 27 Grossman, *The Electronic Republic*, p. 216.
- 28 "Carnegie Commission on Educational Television, Summary, 1967," available at <http://www.current.org/pbpb/carnegie/CarnegieSummary.html> (last accessed February 2008).

2009 Media & Tech Priorities

A PUBLIC INTEREST AGENDA



During the presidential campaign, Barack Obama published a detailed agenda containing goals and proposed policies for media and telecommunications.¹ The Obama plan is a strong statement of the next president's commitment to technology and innovation — a theme reflected in his campaign's now-legendary online organizing and fundraising strategies. But beneath the surface, Obama's agenda represents a fundamental shift toward communications policy in the public interest.

The core of the Obama agenda aligns squarely with Free Press' central mission of creating a more democratic media system and promoting universal access to communications technologies. President-elect Obama has promised to preserve the Internet's openness, to promote access to high-speed Internet networks, to foster increased diversity of media ownership, and to reinvigorate and transform public media.

We greatly look forward to working together on our shared agenda — and holding accountable those who will be charged with delivering on its promises. We urge the incoming administration to act quickly to advance our common goals. To do so, President-elect Obama and the next Congress should implement the following concrete policies and strategies.

PROTECT AN OPEN INTERNET

Background

Network Neutrality is the fundamental principle that prevents Internet service providers from discriminating against Web content based on its source, ownership or destination. Net Neutrality has made the Internet an unrivaled environment for free speech, democratic participation and economic innovation.



OBAMA'S PLATFORM

"Barack Obama strongly supports the principle of network neutrality to preserve the benefits of open competition on the Internet. Users must be free to access content, to use applications, and to attach personal devices. They have a right to receive accurate and honest information about service plans. But these guarantees are not enough to prevent network providers from discriminating in ways that limit the freedom of expression on the Internet.

Because most Americans only have a choice of only one or two broadband carriers, carriers are tempted to impose a toll charge on content and services, discriminating against websites that are unwilling to pay for equal treatment. This could create a two tier Internet in which websites with the best relationships with network providers can get the fastest access to consumers, while all competing websites remain in a slower lane. Such a result would threaten innovation, the open tradition and architecture of the Internet, and competition among content and backbone providers. It would also threaten the equality of speech through which the Internet has begun to transform American political and cultural discourse.

Barack Obama supports the basic principle that network providers should not be allowed to charge fees to privilege the content or applications of some web sites and Internet applications over others. This principle will ensure that the new competitors, especially small or non-profit speakers, have the same opportunity as incumbents to innovate on the Internet and to reach large audiences. Obama will protect the Internet's traditional openness to innovation and creativity and ensure that it remains a platform for free speech and innovation that will benefit consumers and our democracy."

Obama's support for Net Neutrality has been on display throughout his campaign. In announcing his technology agenda last year, then-Senator Obama declared he would "take a backseat to no one in my commitment to net neutrality. Because once providers start to privilege some applications or Web sites over others, then the smaller voices get squeezed out, and we all lose."² In October 2007, Senator Obama stated he would appoint only FCC commissioners who support Net Neutrality.³ His spirit began to catch on. Every incoming freshman Democratic senator pledged, during their 2008 campaigns, to support Net Neutrality.⁴

The history of Net Neutrality is precisely the kind of business-as-usual in Washington that President-elect Obama has promised to change. Over the past decade, industry has relentlessly pressured the government to "deregulate" and remove all legal oversight and consumer protections.

Although the principles of open networks have successfully governed our communications systems for a century, they were severely weakened by the Federal Communications Commission in 2005. Emboldened, executives at major telecommunications companies began to promise Wall Street a new kind of Internet that dispensed with open networks in favor of a pay-for-play system in which they would decide which Web sites and services would enjoy the fastest speeds. In 2006, these phone and cable companies urged Congress to pass a bill that would have deleted meaningful Net Neutrality from the books altogether.

But to the great surprise of many in Washington, millions of consumers from throughout the country and across the political spectrum rallied behind tech-savvy legislators to protect the open Internet and managed to help defeat the bill. Since then, the debate has been in limbo — even as the biggest companies were caught interfering with Internet traffic and text messages. Incremental policy changes have favored openness, but the issue hasn't been settled once and for all by unequivocally establishing Net Neutrality in the law.

In the Senate, Obama was among those who recognized the critical importance of the issue — co-sponsoring the bipartisan legislation of Sens. Byron Dorgan (D-N.D.) and Olympia Snowe (R-Maine) backing Net Neutrality.⁵ These leaders well understood that after a decade of deregulating telephone and cable operators, it was time to draw a line in the sand for consumers to guarantee a free marketplace for speech and commerce online. Failure to do so courted disaster for the technology that has energized our economy for years.

Although they were unable to pass legislation, the need for it was proven when Comcast was caught secretly interfering with lawful Internet traffic. In late 2008, the FCC acted on a complaint brought by Free Press alleging that Comcast was secretly blocking peer-to-peer technologies like the open-source BitTorrent protocol used to watch high-definition online television. A bipartisan FCC majority declared that Comcast violated federal policy by impeding consumers' access to an online technology.⁶ But the FCC did not specifically outlaw pay-for-priority arrangements, and wireless providers claim the decision does not affect them. Moreover, Comcast has appealed the decision in federal court.⁷

Leadership on this issue will settle the question of the future of the open Internet, ending several years of rancorous fighting that pit consumer advocates and tech companies against network owners. The Obama administration should move swiftly to put Net Neutrality into the law as a cornerstone of 21st-century telecommunications policy.

Obama Administration in 2009

It is essential for the Obama administration to guide the establishment of Net Neutrality in the law during 2009. It is time for new leadership to shut the book on this debate and make policies that favor the public interest – vindicating the efforts of public interest advocates and forward-looking legislators and regulators. To accomplish this goal, President-elect Obama should urge Congress immediately to enact the Dorgan-Snowe bill, or similar legislation, forbidding discrimination on the Internet based on the source, destination or ownership of online content. The bill should also ensure that phone and cable companies cannot create a pay-to-play system of Internet tolls on any network, wired or wireless.

Obama's FCC should act quickly to adopt rules preserving Net Neutrality that mirror the legislative effort. These rules should pertain to all wired and wireless networks and should enshrine the FCC's established four openness principles alongside a necessary fifth principle that prohibits discrimination and pay-for-priority tolls. The FCC should establish an expedited complaint process for violations of the rules and stiff penalties for violators. Finally, the FCC should move to require extensive disclosure of Internet providers' network management techniques as well as specific information about the quality of the Internet service being purchased by consumers.

PROMOTE UNIVERSAL, AFFORDABLE BROADBAND

Background

After years of deregulation in telecommunications infrastructure, our nation faces three major challenges in broadband policy: limited availability, slow speeds and sluggish adoption, in both rural and urban areas. While we have seen substantial increases in broadband subscribers in recent years, we are not keeping pace with the rest of the developed world. During the Bush years, the United States has fallen from fifth in the world in broadband adoption to 22nd, according to the International Telecommunications Union.⁸ Every study shows the same trend lines. The United States trails other nations not only in broadband penetration, but also in speed, cost, availability, competition and openness in high-speed Internet services.



OBAMA'S PLATFORM

"Barack Obama believes that America should lead the world in broadband penetration and Internet access. As a country, we have ensured that every American has access to telephone service and electricity, regardless of economic status, and Obama will do likewise for broadband Internet access.

Full broadband penetration can enrich democratic discourse, enhance competition, provide economic growth, and bring significant consumer benefits. Moreover, improving our infrastructure will foster competitive markets for Internet access and services that ride on that infrastructure.

Obama believes we can get true broadband to every community in America through a combination of reform of the Universal Service Fund, better use of the nation's wireless spectrum, promotion of next-generation facilities, technologies and applications, and new tax and loan incentives."

Most Americans can purchase a true broadband connection from no more than two providers — the local phone or cable monopoly. The absence of strong competition has not yielded sufficient speed increases or price decreases. And those who do subscribe receive substantially less for their money than those in other nations. Moreover, millions of Americans still do not own computers or have access to technology training. Consequently, more than 40 percent of households nationwide are not online.⁹

By any relative measure, the United States is slipping behind the rest of the world in broadband, but the Bush administration has ignored the problem. The National Telecommunications and Information Administration (NTIA) and the FCC issue rose-colored reports declaring that all is well. Intermittent efforts to promote new broadband networks have fallen flat — and no comprehensive policy promoting competition has emerged or even been contemplated.

By contrast, Obama highlighted the need for universal broadband access in his innovation agenda, his speeches, and in presidential debates. Obama's focus on the American infrastructure as a starting point for economic recovery has included broadband deployment to rural communities and erasing the digital divide. His innovation policy agenda announces a commitment to policies that will help achieve these goals through legislative and regulatory action.

By contrast, Obama highlighted the need for universal broadband access in his innovation agenda, his speeches, and in presidential debates. Obama's focus on the American infrastructure as a starting point for economic recovery has included broadband deployment to rural communities and erasing the digital divide. His innovation policy agenda announces a commitment to policies that will help achieve these goals through legislative and regulatory action.

By contrast, Obama highlighted the need for universal broadband access in his innovation agenda, his speeches, and in presidential debates. Obama's focus on the American infrastructure as a starting point for economic recovery has included broadband deployment to rural communities and erasing the digital divide. His innovation policy agenda announces a commitment to policies that will help achieve these goals through legislative and regulatory action.

Obama Administration in 2009

The upcoming months and years present many opportunities to promote broadband deployment through policy at the FCC, NTIA and Federal Trade Commission. To begin, the FCC should redefine “broadband” starting with a standard of at least 5 megabits in both directions and evolving as new technologies emerge. The FCC must also collect meaningful, fine-grained data on nationwide broadband service deployment and availability to guide policymaking. In addition, the agency should seek data and analysis about the nature, quantity and patterns of traffic flow on the Internet.

In the past few months, the FCC has wrestled unsuccessfully with the issue of Universal Service reform. This \$7 billion a year subsidy program for telecommunications networks is fraught with waste and fraud and in desperate need of repair. Within the first year, Obama’s FCC should begin the transition of the Universal Service Fund into a program geared toward broadband infrastructure investment in unserved and underserved areas. The new FCC should also adopt broadband Lifeline/Linkup programs for broadband services to ensure that rural and low-income citizens are not left on the wrong side of the digital divide. Meanwhile, the agency will have to address the archaic system of intercarrier payments. Cost-based, transparent subsidies and rigorous oversight must be the new organizing principles of USF policy.

The agency should continue to look at innovative uses of spectrum (such as shared use of the “white spaces”), transitioning away from inefficient old limits. In the first year of the administration, the FCC and NTIA should reassess spectrum policy to support emerging technologies. Perhaps most importantly, the NTIA should inventory government spectrum use to assess and reallocate inefficiently used frequencies.

The FCC must open inquiries to promote broadband competition. New ideas about shared infrastructure, access to network interconnection points, and investigation into monopoly chokepoints should be pursued unabashedly. The Obama administration should also address the demand side of the broadband equation. Congress and federal agencies should develop educational programs and subsidies to provide training and computers to allow all citizens to receive the full benefits of broadband.

Finally, the first year of this administration should seek to lay the groundwork for major reform of telecommunications law. Existing statutes were designed for a bygone era — when different services and technologies had different regulatory frameworks. Now we are in the era of convergence, where virtually all media and communications move on the same digital networks. The law must catch up with technology and the market. This means a streamlined legal framework to govern our broadband infrastructure, promote competition, and maximize consumer welfare.

INCREASE DIVERSITY IN MEDIA OWNERSHIP

Background

For decades, the policies governing the broadcast industry have recognized the importance of limiting the consolidation of media ownership in local and national markets. Basic principles of fairness and competition guided rules to limit control over news production in a local community, to diversify ownership and content, and to control domination of national media markets by a handful of corporate titans.

Yet twice in the past eight years, the Bush administration's FCC attempted to do away with the limits on concentration of media ownership, following on mistakes of the 1990s that relaxed or removed public interest protections. In each case, the FCC encountered strong resistance from millions of Americans from across the political spectrum. And in each case, the FCC's changes were rejected by one or both houses of Congress as well as the federal courts.



OBAMA'S PLATFORM

"Barack Obama believes that the nation's rules ensuring diversity of media ownership are critical to the public interest. Unfortunately, over the past several years, the Federal Communications Commission has promoted the concept of consolidation over diversity. Barack Obama believes that providing opportunities for minority-owned businesses to own radio and television stations is fundamental to creating the diverse media environment that federal law requires and the country deserves and demands. As president, he will encourage diversity in the ownership of broadcast media, promote the development of new media outlets for expression of diverse viewpoints, and clarify the public interest obligations of broadcasters who occupy the nation's spectrum.

An Obama presidency will promote greater coverage of local issues and better responsiveness by broadcasters to the communities they serve."

The results of media consolidation are deeply troubling. In spite of mergers, business is not booming. Profits are down and downsizing is up. Fewer jobs mean fewer journalists — and the quality and diversity of news has declined. Cookie-cutter programming has replaced locally produced content. Yet rather than change business models, the industry pursues more mergers, sacrificing long-term community needs to reap short-term revenue gains. The virtues of localism and community service — while still a part of the job for many locally owned broadcasters — have been tossed aside by the corporate giants.

Worse yet, women and people of color aren't represented on the public airwaves. Communities of color make up more than a third of the population, yet own just over 3 percent of television stations. Women own just 5 percent.¹⁰ The numbers in radio are not much better. This level of inequality is in large part a result of the pressures of consolidation and the policies that facilitated them over the years.

President-elect Obama has consistently emphasized the importance of promoting diversity of ownership in media. In October 2007, Obama called the FCC's proposed changes to media ownership rules "irresponsible," and the commission's contemplated repeal of newspaper and television cross-ownership

rules “disturbing.”¹¹ Obama co-sponsored the Media Ownership Act of 2007, which aimed to promote openness and accountability in media ownership rules and to increase the number of women and minority media owners.¹² He also supported the bipartisan “resolution of disapproval” — which the Senate passed overwhelmingly — that sought to overturn the FCC’s latest rule changes.¹³

In line with this continued leadership, President-elect Obama’s technology innovation agenda naturally seeks to promote greater coverage of local issues and greater diversity in media ownership, and to “clarify” the public interest obligations that accompany broadcasters’ permission to use the public airwaves.

Obama Administration in 2009

The road to reform in media ownership begins at the FCC with a reversal of the Bush administration’s loosened limits on TV, radio and newspaper ownership. The path to better media and healthy markets is not further consolidation. The Obama administration’s FCC should investigate local market concentration in television and radio broadcasting to determine where rules should be modified to promote diversity of media ownership and responsiveness to local needs. The next FCC should carry out President-elect Obama’s pledge to promote minority ownership of media outlets as a prominent media policy priority; this effort should include an improved version of the “minority tax certificate” program discontinued by the Republican Congress in the mid-1990s.

Policies to promote media diversity should not be limited to the broadcasting industry. Obama’s FCC and the next Congress should examine existing cable television regulations, evaluating the impact of cable’s increasing vertical integration and market power on the diversity of ownership and the variety of content. The new administration should level the playing field for competition among all cable operators and content providers by applying nondiscriminatory principles and by promoting reasonable rates, terms and conditions.

As a result of rampant anti-competitive practices, cable rates are skyrocketing. Meanwhile, independent programmers, minority owners, and new kinds of content cannot get carried on cable systems. If the FCC cannot address the problem, the Department of Justice should explore ways to crack the foundation of the cartel of cable operators and Hollywood studios.

RENEW PUBLIC MEDIA

Background

Noncommercial, publicly funded and not-for-profit sources of media provide extensive coverage of public affairs, children's programming, educational fare and entertainment. In opinion surveys of the best use of tax dollars, public media rank below only national defense. They are also the most trusted news sources.¹⁴ Despite this, our public media are chronically underfunded.

Public media are forced to seek private corporate financing and yearly appropriations from Congress — both of which come with political pressures. Perennially short on resources, public and community broadcasters do not adequately reach

audiences starved for quality news and entertainment. Nor have public broadcasters been able to fully realize the potential of digital conversion and multimedia delivery over the Internet.

Meanwhile, other forms of community and noncommercial media have been strangled. Cable television providers have underfunded public, educational, and government (PEG) television channels and hidden them from viewers. Low Power FM (LPFM) radio licenses have been limited to all but the most rural markets at the

behest of the commercial broadcasting lobby. And new forms of independent media and journalism have struggled to get their footing.

The Obama campaign made public media a substantial component of its policy agenda. The campaign called for the creation of "Public Media 2.0," including an interactive, modernized version of educational and entertaining children's programming. With expanded support and visionary leadership, public media will realize their original mandate to serve all parts of our multicultural society.

Obama Administration in 2009

President-elect Obama should encourage the next Congress to significantly increase funding for public media at all levels — from the national networks of NPR and PBS to community outlets that provide much-needed local perspectives on issues. At the same time, the administration must make public media governance and funding less vulnerable to undue political influence and implement long-term funding solutions.

The next Congress should hold hearings to search for ways to use public media to solve the growing national problem of insufficient critical journalism. The Obama administration should strive to reinvigorate and modernize public media by using new funding to supplement traditional broadcasting with interactive,



OBAMA'S PLATFORM

"An Obama administration will encourage the creation of Public Media 2.0, the next generation of public media that will create the Sesame Street of the Digital Age and other video and interactive programming that educates and informs. Obama will support the transition of existing public broadcasting entities and help renew their founding vision in the digital world."

online components, making “Public Media 2.0” a distinct and valuable component of the modern media landscape. New appointees at the Corporation for Public Broadcasting should demonstrate visionary leadership about where public media should go in the 21st century.

Finally, Congress should be encouraged to protect and expand existing community media outlets. The law should be strengthened to guarantee PEG access channels the funding and channel capacity they need to operate successfully. And Congress should pass the bipartisan Local Community Radio Act, which would allow new, noncommercial Low Power FM radio stations in cities, towns and suburbs across the country, enabling new local voices to be heard on the public airwaves.

Endnotes

- ¹ Obama for America, "Barack Obama: Connecting and Empowering All Americans Through Technology and Innovation," November 2007, available at http://www.barackobama.com/pdf/issues/technology/Fact_Sheet_Innovation_and_Technology.pdf (accessed Dec. 1, 2008).
- ² Obama for America, "Obama Unveils Innovation Agenda at Google," Nov. 14, 2007, available at http://www.barackobama.com/2007/11/14/obama_unveils_innovation_agend.php (accessed Dec. 1, 2008).
- ³ MTV/MySpace Forum, "Maintaining Net Neutrality," Oct. 29, 2007, beginning at 2 min. and 50 sec., video available at <http://www.mtv.com/videos/news/185103/16-of-21-maintaining-net-neutrality.jhtml> (accessed Dec. 1, 2008).
- ⁴ Matt Stoller, "Every Major Senate Democratic Challenger Announces Support for Network Neutrality," OpenLeft, July 24, 2008, available at <http://www.openleft.com/showDiary.do?diaryId=7125> (accessed Dec. 1, 2008).
- ⁵ Internet Freedom Preservation Act, S. 215, 110th Congress (introduced January 9, 2007), available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:s215is.txt.pdf (accessed Dec. 1, 2008).
- ⁶ Federal Communications Commission, *Formal Complaint of Free Press & Pub. Knowledge Against Comcast Corp. for Secretly Degrading Peer-to-Peer Applications; Broadband Industry Practices; Petition of Free Press et al. for Declaratory Ruling That Degrading an Internet Application Violates the FCC's Internet Policy Statement & Does Not Meet an Exception for "Reasonable Network Management,"* WC Docket No. 07-52, Memorandum Opinion and Order, FCC 08-183, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-08-183A1.pdf.
- ⁷ Saul Hansell, "Comcast Appeals F.C.C. Sanction," *New York Times Bits Blog*, Sept. 4, 2008, available at <http://bits.blogs.nytimes.com/2008/09/04/comcast-appeals-fcc-sanction/> (accessed Dec. 1, 2008).
- ⁸ Data gathered from International Telecommunications Union, *ICT Statistics Database*, available at <http://www.itu.int/ITU-D/icteye/Indicators/Indicators.aspx#> (accessed Dec. 1, 2008).
- ⁹ U.S. Census Bureau, *2007 Current Population Survey*.
- ¹⁰ S. Derek Turner & Mark Cooper, *Out of the Picture 2007: Minority & Female TV Station Ownership in the United States*, October 2007, available at <http://www.freepress.net/files/otp2007.pdf>.
- ¹¹ Sen. Barack Obama, *Obama: FCC Policies Must Encourage Media Ownership Diversity*, Oct. 22, 2007, available at http://obama.senate.gov/press/071022-obama_fcc_polic/ (accessed Dec. 1, 2008).
- ¹² Media Ownership Act of 2007, S. 2332, 110th Congress (introduced Nov. 8, 2007), available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:s2332is.txt.pdf (accessed Dec. 1, 2008).
- ¹³ Resolution of Disapproval, S.J. Res. 28, 110th Congress (introduced March 5, 2008), available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:sj28is.txt.pdf (accessed Dec. 1, 2008).
- ¹⁴ PBS News, "PBS #1 In Public Trust For the Fifth Consecutive Year According to a National Roper Survey," June 10, 2008, available at http://www.pbs.org/aboutpbs/news/20080610_ropersurvey.html (accessed Dec. 1, 2008).

people
need

Civic Engagement and **COMMUNITY INFORMATION**

Five Strategies to Revive Civic Communication

A WHITE PAPER BY PETER LEVINE


THE ASPEN INSTITUTE
Communications and Society Program

 John S. and James L.
Knight Foundation
Informed and engaged communities.

A project of the Aspen Institute Communications and Society Program
and the John S. and James L. Knight Foundation.

Civic Engagement and Community Information: Five Strategies to Revive Civic Communication

A White Paper on the Civic Engagement Recommendations
of the Knight Commission on the Information Needs
of Communities in a Democracy

written by
Peter Levine



THE ASPEN INSTITUTE
Communications and Society Program
2011

The Aspen Institute and the John S. and James L. Knight Foundation invite you to join the public dialogue around the Knight Commission's recommendations at www.knightcomm.org or by using Twitter hashtag #knightcomm.

Copyright 2011 by The Aspen Institute

The Aspen Institute
One Dupont Circle, NW
Suite 700
Washington, D.C. 20036

Published in the United States of America in 2011 by The Aspen Institute
All rights reserved

Printed in the United States of America

ISBN: 0-89843-549-8
11/010

Individuals are encouraged to cite this paper and its contents.
In doing so, please include the following attribution:

Peter Levine, *Civic Engagement and Community Information: Five Strategies to Revive Civic Communication*, Washington, D.C.: The Aspen Institute, April 2011.

For more information, contact:

**The Aspen Institute
Communications and Society Program**

One Dupont Circle, NW
Suite 700
Washington, D.C. 20036
Phone: (202) 736-5818
Fax: (202) 467-0790
www.aspeninstitute.org/c&s

To purchase additional copies of this paper, please contact:

The Aspen Institute
Publications Office
P.O. Box 222
109 Houghton Lab Lane
Queenstown, MD 21658
Phone: (410) 820-5326
Fax: (410) 827-9174

Cover background graphic was created in part at www.wordle.net.



A project of the Aspen Institute Communications and Society Program
and the John S. and James L. Knight Foundation.

Contents

FROM REPORT TO ACTION.....	v
EXECUTIVE SUMMARY.....	vii
CIVIC ENGAGEMENT AND COMMUNITY INFORMATION:	
FIVE STRATEGIES TO REVIVE CIVIC COMMUNICATION, <i>Peter Levine</i>	
Introduction.....	13
Strategy 1: Create a Civic Information Corps using the nation’s “service” infrastructure to generate knowledge.....	16
Strategy 2: Engage universities as community information hubs.....	20
Strategy 3: Invest in face-to-face public deliberation.....	25
Strategy 4: Generate public “relational” knowledge.....	30
Strategy 5: Civic engagement for public information and knowledge	33
Who Should Do What	35
Relationship to the Knight Commission Report.....	37
References.....	39
APPENDIX	
About the Author.....	43
The Aspen Institute Communications and Society Program	45

From Report to Action

Implementing the Recommendations of the Knight Commission on the Information Needs of Communities in a Democracy

In October 2009, the Knight Commission on the Information Needs of Communities in a Democracy released its report, *Informing Communities: Sustaining Democracy in the Digital Age*, with 15 recommendations to better meet community information needs.

Immediately following the release of *Informing Communities*, the Aspen Institute Communications and Society Program and the John S. and James L. Knight Foundation partnered to explore ways to implement the Commission's recommendations.

As a result, the Aspen Institute commissioned a series of white papers with the purpose of moving the Knight Commission recommendations from report into action. The topics of the commissioned papers include:

- Universal Broadband
- Digital and Media Literacy
- Public Media
- Government Transparency
- Online Hubs
- Civic Engagement
- Local Journalism
- Assessing the Information Health of Communities

The following paper is one of those white papers.

This paper is written from the perspective of the author individually. The ideas and proposals herein are those of the author, and do not necessarily represent the views of the Aspen Institute, the John S. and James L. Knight Foundation, the members of the Knight Commission on the Information Needs of Communities in a Democracy, or any other institution. Unless attributed to a particular person, none of the comments or ideas contained in this report should be taken as embodying the views or carrying the endorsement of any person other than the author.

Civic Engagement and Community Information: Five Strategies to Revive Civic Communication

Executive Summary

Information by itself is inert. It begins to have value for a democracy when citizens turn it into knowledge and use it for public purposes. Unless citizens interpret, evaluate, and discuss the vast supply of data—everything from government spending to global temperatures—it cannot lead to civic action, let alone wise civic action. Thus, information developed and used by citizens creates public knowledge, which supports effective civic engagement.

To create and use knowledge, individuals must be organized. Formerly, many Americans were recruited to join a civil society of voluntary membership associations, newspapers, and face-to-face meetings that provided them with information, encouraged them to discuss and debate, and taught them skills of analysis, communication, and political or civic action. Many believe that traditional civil society is in deep decline.

Today, different institutions have the resources and motives to perform civic functions. There are also new tools and technologies available that may help, although it remains to be seen whether the new communications media by themselves are adequate to the task of civic renewal. One thing is clear: we must rebuild our public sphere with new materials, as our predecessors have done several times in the past.

In its landmark report, *Informing Communities: Sustaining Democracy in the Digital Age*, the Knight Commission on the Information Needs of Communities in a Democracy made five recommendations (recommendations 11–15) that specifically address the goal of a reinvigorated public sphere. Toward achieving this goal and implementing the Knight Commission’s recommendations, this paper offers the following five strategies to revive civic communication.

Strategy 1: Create a Civic Information Corps using the nation’s “service” infrastructure to generate knowledge. Take advantage of the large and growing infrastructure of national and community service programs by requiring all service participants to learn civic communications skills and by creating a new Civic Information Corps—mainly young people who will use digital media to create and disseminate knowledge and information and connect people and associations.

Strategy 2: Engage universities as community information hubs. Take advantage of the nation's vast higher education sector by changing policies and incentives so that colleges and universities create forums for public deliberation and produce information that is relevant, coherent, and accessible to their local communities.

Strategy 3: Invest in face-to-face public deliberation. Take advantage of the growing practice of community-wide deliberative summits to strengthen democracy at the municipal level by offering training, physical spaces, and neutral conveners and by passing local laws that require public officials to pay attention to the results of these summits.

Strategy 4: Generate public "relational" knowledge. Take advantage of new tools for mapping networks and relationships to make transparent the structures of our communities and to allow everyone to have the kind of relational knowledge traditionally monopolized by professional organizers.

Strategy 5: Civic engagement for public information and knowledge. Take advantage of the diverse organizations concerned with civic communications to build an advocacy network that debates and defends public information and knowledge.

The paper concludes with a list of specific recommendations for action by a variety of institutions and by citizens themselves. The following institutions are called upon to help revive the civic communications sphere and foster a more productive, more democratic culture of civic engagement.

The Corporation for National and Community Service, with congressional authorization and appropriations, should create a Civic Information Corps that provides training, grants, and meetings for service organizations that emphasize the creation and dissemination of knowledge. The Corporation should also include the development of civic communications skills in desired learning outcomes for its programs. Congress should fund the Corporation for National and Community Service to do this work.

Federal agencies that fund research and scholarship (National Institutes of Health, National Science Foundation, National Endowment for the Humanities, and National Endowment for the Arts) should fund and evaluate scholarship that benefits local communities as well as efforts to aggregate and disseminate such research. Agencies that address community-level problems, such as the Department of Housing and Urban Development and the Environmental Protection Agency, should support community-wide public deliberations about those problems through a mix of grants, training, and technical assistance.

State and local governments should provide physical spaces for public deliberations. Local governments should fund and/or promote online knowledge hubs in partnership with other local institutions. They should also convene deliberative forums and support ongoing training for deliberative democracy.

School systems should make civic education a priority and include within the curriculum media and communications skills and service learning opportunities that involve media.

Colleges and universities should reward research and engagement that are helpful to their immediate geographical communities and make such research easily accessible to the public. They should make civic learning opportunities available to non-students. *Journalism schools and departments* in particular should play leading roles in creating and maintaining public information portals and related resources. Programs in library and information sciences should help design, maintain and evaluate public online archives, networks and relationship maps.

Foundations should support pilot projects to build civic communications infrastructure and skills. Special attention should be given to funding community-based nonprofits that serve marginalized populations, including non-college bound youth and young adults. Foundations can also fund *processes* such as public deliberations at the local level.

Citizens should seek opportunities to create and share public knowledge and discuss public issues; expect their governments to be open, transparent, and collaborative; volunteer to the best of their ability; and create and share knowledge about the networks and relationships in their communities.

**CIVIC ENGAGEMENT AND
COMMUNITY INFORMATION:
FIVE STRATEGIES TO REVIVE
CIVIC COMMUNICATION**

Peter Levine

Civic Engagement and Community Information: Five Strategies to Revive Civic Communication

Skilled people, appropriate technologies, and reliable and relevant information are the building blocks of a successful communications environment. What generates news and information in that environment, however, is not just those building blocks. It is engagement—specifically, people’s engagement with information and with each other.

—*Informing Communities:
Sustaining Democracy in the Digital Age*

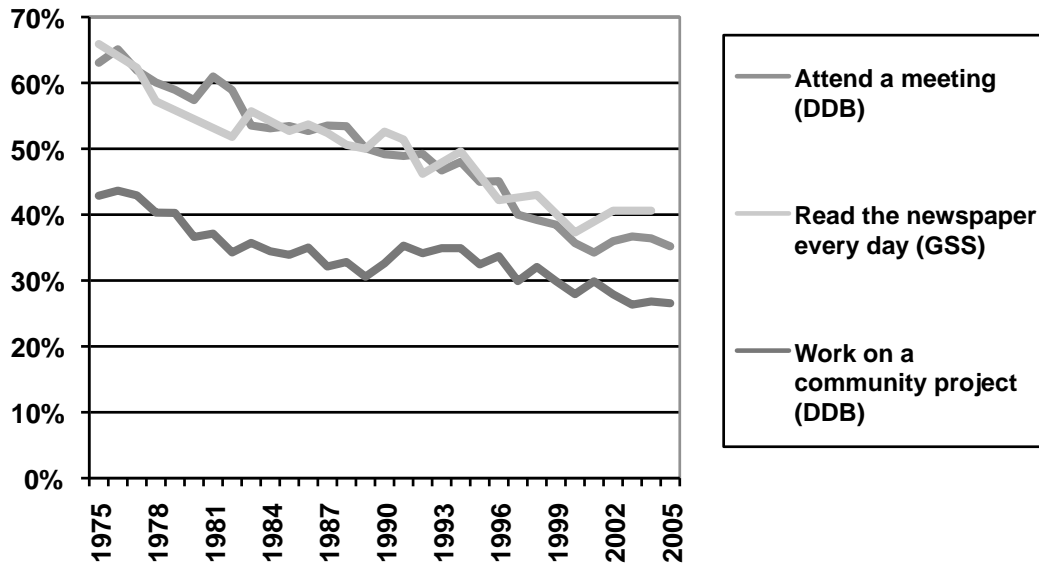
Introduction

By itself, information is inert. It needs interpretation, discussion, judgment, motivation, action, and production to become knowledge that is of any use in a democracy. The “public sphere” is the (metaphorical) space in which we make information into knowledge valuable for public purposes and connect it to action, production and power.

Traditionally, the American public sphere has been composed predominantly of various sorts of associations that promote discussion among their own members and between themselves and outsiders. When Alexis de Tocqueville visited America in the 1830s, the associations he observed were predominantly local, voluntary groups. They held regular face-to-face meetings. Their most important means for distributing knowledge and opinions were newspapers, which were carried by the U.S. mail. Associations needed newspapers to communicate and they arose in response to the news. Thus, Tocqueville wrote, “There is a necessary connection between public associations and newspapers: newspapers make associations and associations make newspapers. And if it has been correctly advanced that associations will increase in number as the conditions of men become more equal, it is not less certain that the number of newspapers increases in proportion to that of associations. Thus it is in America that we find at the same time the greatest number of associations and of newspapers” (Tocqueville, 1954).

The ecosystem that Tocqueville described flourished throughout the 19th century and much of the 20th century, but is now in steep decline, as shown by the trends in Exhibit 1:

Exhibit 1. Civic Participation and Newspaper Readership



Sources: GSS is General Social Survey. DDB is DDB Needham Life Style Survey. Analysis by the author.

In light of Tocqueville's observations, the parallel lines for newspaper readership and attendance at face-to-face meetings are especially striking. We should be concerned by those declines if we value public deliberation, which has traditionally occurred within associations, at meetings, informed by newspapers (Cohen, 1999).

The declines shown above began before the Internet was widely used for virtual discussions and news. Therefore, it cannot be the case that people deliberately renounced face-to-face meetings and newspapers because they had online alternatives. But perhaps *after* the old order described by Tocqueville had badly decayed, people began to find online substitutes not shown in Exhibit 1.

Internet users are quite likely to say that they have looked for political or government-related information online and that they have discussed policies and issues online. According to the Pew Internet & American Life Project, "48 percent of Internet users have looked for information about a public policy or issue online with their local, state or federal government," and "23 percent of Internet users participate in the online debate around government policies or issues, with much of this discussion occurring outside of official government channels" (Smith, 2010). People who use the Internet are more likely to vote, volunteer, and join groups than those who are not online (Corporation for National and Community Service, 2010). As a group, they are also wealthier and better educated. All of these demographic factors could explain their higher levels of civic engagement. Young people who use social media (such as Facebook and YouTube) are more likely to volunteer, whether they are college students or working-class youth who have never attended college (Kirby, Marcelo & Kawashima-Ginsberg, 2009).

If the Internet has helped to restore civic society, we should see increases in civic engagement since 2000. Unfortunately, the survey questions that generated Exhibit 1 have not been continued since 2005. But Exhibit 2 shows the long-term trends in two other measures—voter turnout and attention to the news (i.e., the proportion of respondents who say that they follow the news and public affairs “most of the time” or “some of the time”)—for Americans between the ages of 18 and 24. Young Americans have adopted the Internet more rapidly than their older counterparts.

Exhibit 2. Young People’s Attention to News and Voter Turnout



Sources: U.S. Census and the American National Election Studies (ANES).

Youth voter turnout rose in presidential elections after 2000; and news interest has increased a bit, even as the traditional news media has suffered. These are promising developments, but society has a long way to go to recover levels of news interest seen among young people in previous decades. Although the turnout increase may be traced in part to new online civic tools, 2004 and 2008 were high-intensity presidential election years, and there are few reasons to be confident that youth turnout will remain high.

In short, it remains to be seen whether the new communications media alone are adequate to the task of civic renewal. But certainly the old civil society is in deep decay, and we must rebuild our public sphere with new materials, as our predecessors have done several times in the past. For instance, Americans of the founding era invented Committees of Correspondence, and citizens of the Progressive Era launched most of the large national membership organizations. Today’s building blocks include digital technologies and networks, as well as new forms of face-to-face association.

The Knight Commission on the Information Needs of Communities in a Democracy (Knight Commission) makes the following recommendations that are related to civic engagement (I cite them using the numbers in the full report):

- Recommendation 11: Expand local media initiatives to reflect the entire reality of the communities they represent.
- Recommendation 12: Engage young people in developing the digital information and communication capacities of local communities.
- Recommendation 13: Empower all citizens to participate actively in community self-governance, including local “community summits” to address community affairs and pursue common goals.
- Recommendation 14: Emphasize community information flow in the design and enhancement of a local community’s public spaces.
- Recommendation 15: Ensure that every local community has at least one high-quality online hub.

This paper proposes five correlating strategies to advance these goals (for additional implementation strategies related to Recommendation 15, see also Adam Thierer’s white paper, *Creating Local Online Hubs: Three Models for Action*).

Strategy 1: Create a Civic Information Corps using the nation’s “service” infrastructure to generate knowledge

Community service and the combination of service with academic study (“service-learning”) have rapidly grown and now represent an important resource for communities’ information needs. This is a positive development that can be used to reconstruct the public sphere; but to do so will require reforming our service programs.

Since the 1980s, civilian service has been institutionalized with funded programs, paid professionals, and rewards. Most importantly, the federal government launched AmeriCorps and the Corporation for National Service (later, the Corporation for National and Community Service) in 1993. There is no single “corps” in AmeriCorps; instead, the Corporation funds intermediaries that include national nonprofits with diverse models and constituencies—City Year and Public Allies are two well-known examples—plus schools, universities, Native American nations, and local nonprofits. Other components of the national service movement that do not receive AmeriCorps funds include YouthBuild, the Peace Corps,

and the Corps Network. Meanwhile, some large school districts and universities and one state (Maryland) have enacted service requirements for all their students. Several states and major cities also have official service commissions. High school students perceive a need to volunteer in order to be competitive applicants to college (Friedland & Morimoto, 2005).

Probably as a result of these incentives, opportunities, and requirements, three quarters of high school seniors reported volunteering at least “sometimes” by the year 2003, up from 63 percent in 1975, according to data from the University of Michigan Institute for Social Research’s *Monitoring the Future* study. Eighty percent of incoming college freshmen surveyed by UCLA’s Higher Education Research Institute reported having volunteered in high school. The Corporation for National and Community Service reports that about 8 million Americans age 16–24 volunteered in 2008 (Corporation for National and Community Service, 2009). These trends received an extra boost in 2009, when Congress passed the Edward M. Kennedy Serve America Act, which authorizes tripling AmeriCorps to 250,000 annual full-time service positions.

“Service” activities range widely, and some have little connection to knowledge or information. It is not uncommon for the young people involved in service to be bused to a park or an urban street and simply asked to pick up bottles or paint walls. AmeriCorps as a whole does not specify learning outcomes or require intellectually challenging opportunities for youth. Much emphasis is placed on the work performed, e.g., the number of homes weatherized.

On the other hand, certain service projects generate public knowledge to an extraordinary extent. For example:

- **1,500 Bonner Scholars** at 24 colleges and universities are all involved in community service and other forms of civic engagement, such as community research. Using a grant from the Corporation for National and Community Service (the Learn and Serve America program), the Bonner Foundation promotes the use of social media tools—such as wikis and videos—by all of its scholars. Methods involve social-media trainings at all of its meetings and conferences, an elaborate online platform for shared work at each campus and nationally, and 10 competitive subgrants to Bonner campuses that do more intensive work with social media. At the heart of the online platform is a wiki site with hundreds of documents on social issues, student projects, tools, and best practices. After receiving the Learn and Serve America grant, Bonner began to plan PolicyOptions, an additional wiki platform for news and policy background information that will enable campuses to establish local, campus-based PolicyOptions Bureaus that are affiliated through a national network, sharing information and a common web platform.

- **Cabrini Connections:** With funds originally from the Cricket Island Foundation, The Center for Information and Research on Civic Learning and Engagement (CIRCLE) funded young people in the Cabrini-Green Housing Projects in Chicago to document the full story of their community, which is nationally famous for its murder rate but has many other dimensions. Cabrini Connections today is rich with documentary videos, research reports, and photo essays (www.cabriniconnections.net/mission).

These examples are meant to illustrate two large bodies of activity: one in colleges/universities and the other aimed at teenagers. Although independent evaluations are scarce, these examples (and many like them) seem to be strong on two dimensions: they provide valuable community service in the form of knowledge, and they educate their participants by developing advanced skills, including skills related to information. In essence, they have two functions: *creating* and *distributing* public knowledge.

Building a Corps of Civic Technology Coordinators: The Social Capital Inc. Model

Social Capital Inc. (SCI) is a Massachusetts-based nonprofit that seeks to increase local civic engagement and social capital through a variety of initiatives that connect diverse individuals and organizations in the community. Since its founding in 2002, SCI has incorporated information and communications technologies as essential components of its programs to connect people, foster civic engagement, and build healthier communities. SCI currently serves ten communities in the state.

With funding assistance from the Corporation for National and Community Service, SCI is now in its fourth year of placing a team of AmeriCorps members in four of its partner communities—Dorchester, Fall River, Lynn, and Woburn—to serve as Outreach and Technology Coordinators. These young adults are charged with using both digital technology and more traditional “offline” outreach in the community to connect residents to civic information and encourage them to participate by volunteering and attending public meetings and community events. Outreach and Technology Coordinators are placed at SCI community partner organizations, which include community health centers, YMCAs, Boys & Girls Clubs, and local community based organizations.

One central task of the Coordinators is maintaining and promoting community portals developed by SCI. Each portal includes a community calendar, listing of volunteer opportunities, searchable information on community resources, news of public meetings, community events, and other local happenings. Coordinators also publish a weekly electronic newsletter that highlights the latest community information and encourages readers to visit the website for more information. More recently, the Coordinators have been using social media (Facebook and Twitter) as additional channels for sharing this information and engaging with community residents.

The Outreach and Technology Coordinators also make frequent presentations to community members and organizations about the SCI community websites and other online community resources.

They conduct workshops on basic computer literacy topics and how to use social media. The Coordinators themselves start the year with training to help them develop the outreach and technical skills they need for their work with the community. While they typically arrive with good general technology skills, most Coordinators require training in how to apply these skills in a community-building context.

SCI measures the impact of its initiatives to build civic information resources through community surveys, and the results are promising. Over 10,000 individuals per month now use the SCI community portal tools; usage has climbed significantly since SCI has had the AmeriCorps team in this role. Seventy-five percent of respondents to one SCI survey indicated that they have been more civically active as a result of having the SCI online resources available.

The SCI team has been able to leverage technology to address a wide range of pressing needs in the communities it serves. Examples include organizing information about resources available to local Haitian families in the aftermath of the 2010 earthquake in Haiti; creating a computer class at the Codman Square Tech Center in Dorchester, where residents of this diverse community can learn Word and Excel skills and how to construct a resume; hosting an online discussion about needs of low-income Woburn students which led to a collection of back to school supplies for them; connecting an isolated elderly resident to a neighbor who volunteered to help with snow removal; and increasing participation at public meetings.

The Knight Commission report, *Informing Communities: Sustaining Democracy in the Digital Age*, calls for a “Geek Corps for Local Democracy,” consisting of college graduates who would “help local government officials, librarians, police, teachers, and other community leaders leverage networked technology.” Corps members would educate local partners and also form a national learning network.

That sounds like a good idea, but I would relax two implied limitations. First, I would broaden eligibility well beyond college graduates. Just over half of adults between the ages of 20 and 29 have any college experience at all, and a majority of those do not hold four-year college degrees (Kiesa & Marcelo, 2009). A domestic Geek Corps need not be limited to the quartile that is most successful (or privileged) in conventional ways. Many talented individuals who are not on the college track would benefit from service and might contribute more than college graduates in terms of local knowledge and cultural savvy.

Second, I would not limit their role to merely providing technical support for the nonprofit information technology (IT) infrastructure; I would involve them in *creating and disseminating knowledge and culture*. The best format might be a new corps. Alternatively, the federal government might provide incentives for various kinds of service groups and organizations to focus on community knowledge. These groups would not be required to focus narrowly on information or communications. If knowledge was an important byproduct of their work, they could join the national learning network, which would be separately funded and staffed.

In practical terms, if you organized after-school service activities for teenagers in, say, Chicago, and you emphasized community-based research, reporting, photo documentation, mapping, archiving local records online or IT support for nonprofits you could qualify as a “community knowledge producer.” You would then be able to send a designee to meetings, apply for training opportunities, log onto a virtual learning network, and apply for specialized grants.

Meanwhile, AmeriCorps as a whole should have learning objectives for all its quarter of a million projected members, and those objectives should include learning to use information for civic purposes.

There is a valid concern that broadening the mandate of the Civic Information Corps might weaken its focus and impact. Much depends on scale. Communication is such an important civic function—and youth have so much to learn and contribute by helping civil society to communicate—that there is a case for a truly ambitious Civic Information Corps that has substantial funding and a large core professional staff. The congressionally approved budget for the Corporation for National and Community Service in FY 2011 is \$1.366 billion. If 10 percent were ultimately spent on service projects with elements of communications and information-provision, the total funding would be more than \$100 million per year. With that kind of investment, there would be plenty of capacity to broaden the role of the Civic Information Corps as advocated here (i.e., to include all youth and to support cultural as well as technological activities). However, if communications work were actually funded at a much lower level—say, at less than \$10 million per year—it might be wise to focus it more narrowly. In that case, I would advocate a focus on non-college-attending 18- to 25-year-olds who are interested in careers in information technology.

A Civic Information Corps would be an experiment. It is impossible to predict its effects in advance, but the objectives would be (1) to raise the civic information skills of the participants themselves, (2) to raise their conventional civic engagement (voting, volunteering and attention to public issues) in a lasting way, and (3) to increase the civic information skills and conventional civic engagement of other Americans by providing communities with substantive, relevant, engaging knowledge.

Strategy 2: Engage universities as community information hubs

Colleges and universities can play a central role as neutral sponsors, brokers, curators, and disseminators of information for their local communities, replacing some of the traditional functions of the metropolitan daily newspaper.

Most people and organizations that produce, exchange, and interpret information have their own axes to grind. They have ideological or philosophical commitments as well as interests to promote—and that is perfectly appropriate. Yet

we have always been better off when a few institutions “declare neutrality.” They volunteer for the role of promoting high-quality discussion, debate, and analysis and they try not to drive everyone to a particular conclusion.

An example is the metropolitan daily newspaper as envisioned in the Progressive Era. I realize that no newspaper was ever fully neutral, nor was neutrality ever the highest criterion of excellence. But metropolitan dailies adopted rules and procedures that were influenced by the ideal of neutrality, such as the separation of their editorial pages from their news pages. Citizens could criticize them and even withhold their business if they failed to be fair, balanced, objective, and accurate. To varying but important degrees, they *did* enhance public dialogue with neutral information.

But the metropolitan daily newspaper is in grim condition today. Public broadcasting stations have a similar mission, and NPR’s audience is rising even as newspapers falter (Kaplan, 2010). But even if public media “can transform into hubs that bring communities together, facilitate dialogue and curate vital information,” as Barbara Cochran has written in her *Rethinking Public Media* white paper, most are not positioned to do so today and broadcasters cannot play this role alone (Cochran, 2010). Certain civic associations traditionally provided information, explanations, and balanced debates for communities. But membership in such organizations, like newspapers, is in steep decline (as shown above in Exhibit 1).

Colleges and universities must step up and help fill the knowledge and discussion gap created by the decline of newspapers and civic associations. Universities have self-interested reasons to be concerned about civic health. As Community Wealth notes, “Institutions of higher education have an obvious vested interest in building strong relationships with the communities that surround their campuses. They do not have the option of relocating and thus are of necessity place-based anchors. While corporations, businesses, and residents often flee from economically depressed low-income urban and suburban edge-city neighborhoods, universities remain” (The Democracy Collaborative, n.d.).

Moreover, higher education is not just any sector with \$136 billion in annual spending and \$100 billion in real estate holdings. The business of colleges and universities is the production and dissemination of knowledge and the promotion of dialogue and debate. They provide an impressive infrastructure for serving their communities’ information needs. And some are already excellent models.

Portland State University (PSU) in Oregon has chosen the motto “Let Knowledge Serve the City.” Since the early 1990s, the university has tried to align much of its teaching, research, and outreach to address specific issues in the city. A hallmark of its approach is lengthy, ambitious, multi-year projects that involve formal partnerships between several units within the university and several community-based organizations or networks and local governmental agencies.

Over a five-year period, as part of one coherent effort to protect a watershed (composed of urban streams), numerous classes of PSU students collected environmental and social data, educated local children and developed high school curricula, created videos, facilitated public discussions of the watershed, and directly cleaned up wetlands and constructed facilities. These classes did not work alone but in close cooperation with each other and with a large array of civic organizations (Williams & Bernstine, 2001, pp. 261-262).

PSU brings impressive resources to such work: 17,000 students, scholars and laboratories, purchasing power, and facilities—none of which can be picked up and moved to another location. The university and the city share a fate, and the university understands that. Its commitments extend well beyond watersheds: its partnership with city schools is equally ambitious, and there are other examples. The university has encouraged its faculty to deliberate issues that arise when an educational institution addresses a city's problems, using study circles as the format for these discussions.

Certain networks exist to promote such work nationally, notably Campus Compact (an association of 1,000 college presidents who have committed to “lead a national movement to reinvigorate the public purposes and civic mission of higher education”); the American Democracy Project of the American Association of State Colleges and Universities (AASCU); and The Democracy Imperative.

Three specific elements of higher education deserve mention because their missions and assets align well with the goal of producing, aggregating, and disseminating information of relevance to communities:

- Land-grant universities have an especially strong heritage of local public service and a remarkable resource in their extension offices, which exist in virtually every county in the United States.
- Journalism programs and schools have expertise essential for producing accessible, timely, online public media—a point recognized by the Civic and Citizen Journalism Interest Group of the Association for Education in Journalism and Mass Communication (<http://sustainablejournalism.org>).
- University libraries and librarians also have assets and expertise to contribute and a professional sense of obligation to do so.

Journalism School Serves Local Information Needs: USC Annenberg's Alhambra Project

When the University of Southern California's Annenberg School for Communication launched its *Alhambra Source* website (<http://www.alhambrasource.org>) in 2010, it was not merely the debut of a hyperlocal news site in one of many communities surrounding Los Angeles. It was an important milestone in a research project begun in 2008 by USC Annenberg researchers to create a multilingual local news site that responds to community information needs. It also represents a significant commitment by the journalism school and the staff of the news site to contribute their knowledge, technical expertise, and resources toward improving the level of civic engagement and the lives of non-student residents in the multiethnic city of Alhambra, located just east of Los Angeles.

USC Annenberg chose Alhambra because of its limited media coverage and ethnically and linguistically diverse population, which is 52% Asian, 36% Latino, and 11% Anglo. With the goal of embedding the news site into the fabric of the community, researchers first needed to learn more about the community and its information needs. "We're reaching out to where they are, not saying, 'Here we are. Come to us,'" said USC communications professor Sandra Ball-Rokeach at the time of the news site's launch.

Alhambra Source is becoming an important information portal for the city. Professional journalists, web developers, USC researchers and students, and Alhambra residents and organizations work collaboratively to develop the site and produce original reporting about the community. The Source is also an important forum for residents to post or learn about events, announcements, and other local matters. Content appears in English, Spanish and Chinese. The site includes sections on Schools, City Government, Police/Fire, Arts, Food, Business, History, and Youth Feed. The History section features articles about past and current residents and serves as an accessible civic archive on the history of Alhambra. Youth Feed is a high school journalism program run by *Alhambra Source* to train local youth in basic media and journalism skills and explore multimedia storytelling about Alhambra. Youth Feed engages young people in the process of creating public knowledge and fosters an ethic of civic engagement.

From the start of the project, Rokeach and her team monitored Chinese and Spanish-language media and conducted focus groups to identify the issues that are important to residents of the community. They studied maps and census data, visited local organizations, and interviewed local officials and businesses owners. Research in the community is ongoing via the USC Metamorphosis Project. Insights are shared every other week via posts on the site (e.g., "Why did the western San Gabriel Valley rank lowest in neighborhood belonging?") and residents can post comments. Getting to know the community better was integral to designing a news and information portal that serves the community well. Project leaders expect that continuing to share that knowledge with the community will boost civic engagement in Alhambra and yield new insights to inform the broader field of communication research.

But significant reforms must be achieved before colleges will provide community information hubs. Appendix II of the Knight Report suggests some action steps. Three of its recommendations involve various kinds of civics *courses*. They include courses open to people not enrolled in university, which is very important, because current college students represent only a small (and relatively privileged) slice of the population. The Appendix also calls for universities to reward “faculty research relevant to local issues that is shared through public outreach initiatives.”

I would recommend a somewhat broader agenda for making colleges and universities information hubs.

Universities must accept this as one of their important missions, not only in abstract statements, but as a matter of real investment. Providing timely information of local relevance and with input from neighbors trades off against other intellectual pursuits. Overwhelmingly, rewards and prestige flow to scholars whose work is original and generalizable. Communities need work that is true, relevant to them, and accessible to them. Universities can produce some of both, but they cannot add more local work without subtracting a bit of something else. Creating community information hubs within higher education requires at least a modest shift of priorities.

Universities must aggregate the scattered knowledge produced by their professors, students, and staff. One of the advantages of the traditional metro daily newspaper was its format—a manageable slice of information every day, with the top news on the front page, a few hundred words of debate in the letters column, and space for the occasional in-depth feature. In contrast, a great modern university produces a flood of material for an array of audiences. Universities need to think about common web portals that accumulate and organize all their work relevant to their physical locations.

Universities must adopt appropriate principles and safeguards. You can do good by going forth into a community to study it, to portray it, and to stir up discussion about it. Or you can do harm. Much depends on how you relate to your fellow citizens off campus. Relationships should be respectful and characterized by learning in both directions. In this context, “research ethics” means far more than the protection of human subjects from harm; ethical research is directed to genuine community interests and needs, and builds other people’s capacity for research and debate. Like faculty, students must be fully prepared to do community service well, and to be held accountable for their impact. One tool that has been proposed to uphold such principles is a community review board (composed of community leaders, faculty, and students), which would have to approve all projects funded as “community service.”

Most of the incentives that prevail in higher education work against becoming community information hubs. When the incentives in a free and competitive market undermine the common good, some outside force should reward the behavior that we need. In this case, the federal and state governments, and private foundations should channel some of their funds toward local information projects in higher education. They might start by endowing, or otherwise providing stable, lasting support for a few pilot or demonstration sites. In these communities, we should see increases in public deliberation, public knowledge of issues, and conventional forms of civic engagement—such as voting—as a result of the free information and venues that the universities provide. Other funders might imitate the National Centers for Minority Health and Health Disparities (NCMHD), which has made grants to universities to convene community members to discuss and choose their most important health priorities. Medical researchers then address those priorities through health interventions that they develop in collaboration with the same residents. In such cases, government grants to universities fund public deliberation.

Strategy 3: Invest in face-to-face public deliberation

Recommendation 13 in the Knight Commission's *Informing Communities* report is "Empower all citizens to participate actively in community self-governance, including local 'community summits' to address community affairs and pursue common goals."

Face-to-face discussions of community issues have been found to produce good policies and the political will to support these policies, to educate the participants, and to enhance solidarity and social networks. In the terms of the Knight Commission report, they turn mere information into public judgment and public will. I am still moved by the Australian participant in a planning meeting who said, "I just can't believe we did it; we finally achieved what we set out to do. It's the most important thing I've ever done in my whole life, I suppose" (Gastil & Levine, 2005, p. 81).

I would recommend investment in face-to-face deliberation, even though online forums (and hybrids of online and face-to-face media) have promise. Minnesota E-Democracy (<http://forums.e-democracy.org>), Front Porch Forum in Burlington, Vermont (<http://frontporchforum.com>), and other community-based online forums do seem to build social capital and civic capacity while promoting discussion of public issues. As the National League of Cities notes, online forums can "engage technologically savvy young people" and include "busy parents or elderly residents who might not be able to attend community meetings in person" (National League of Cities, 2011). But the successful online forums in the United States have not been *deliberations*. A deliberation yields formal input on policy or makes binding decisions. When deliberations have been conducted online and

open to all, they have frequently yielded disastrous results. Some have been deliberately flooded by people with shared policy objectives or disrupted by activists who simply want to embarrass the organizers. For example, the White House Open Government Forum on Transparency was established to collect formal input but was all but hijacked by proponents of legalizing marijuana (Trudeau, 2009).

I acknowledge that some examples of “e-consultations” from overseas have been successful (see, for example, Peters & Abud, 2009), but I believe that online forums are vulnerable to deliberate manipulation that could easily become routine if governments began to use them widely. In the United States, the most successful online deliberations have been limited to randomly selected participants who statistically represent the public as a whole. Because invitations are random, organized groups cannot flood these discussions with their own members (Lazer, Neblo, Esterling, & Goldschmidt, 2009). But it is problematic in a democracy to limit participation to a chosen few.

Fortunately, many *offline* deliberations have been successful (Gastil & Levine, 2005). The inconvenience of attending seems to discourage disruptive behavior, and the disclosure of real names and faces encourages civility. As the *Informing Communities* report notes, “As powerful as the Internet is for facilitating human connection, face-to-face contact remains the foundation of community building.”

The following case studies of New Orleans, Louisiana; Bridgeport, Connecticut; and Hampton, Virginia are three examples of successful community problem solving built around public engagement and deliberation.

New Orleans, Louisiana. After Hurricane Katrina, questions of how and where to rebuild became extraordinarily contentious and divisive by race and class. The city was deluged with “civic engagement” in the form of voluntary and charitable contributions, but there was no coherent or legitimate plan for how to allocate scarce resources from the government, businesses, and civil society. Mayor C. Ray Nagin, the New Orleans City Council, and the New Orleans City Planning Commission launched the Unified New Orleans Plan (UNOP) process to create such a framework. Built into the process were three Community Congresses that engaged 4,000 citizens, including dispersed residents of New Orleans who were living in more than 16 other cities nationwide. AmericaSpeaks, a national nonprofit that developed the 21st Century Town Meeting format for large, public deliberations, organized two out of the three congresses. At the end of the process, 92 percent of participants agreed that the plan they had helped to create should go forward. In June 2007, the New Orleans City Council and the Louisiana Recovery Authority approved the \$14.5 billion plan.

Bridgeport, Connecticut. This old port and manufacturing city of 139,000 people was an economic basket case in the 1980s. The schools were so troubled that 274 teachers were arrested during a strike in 1978. The town was hard hit by the loss of manufacturing jobs, rising crime, and the flight of middle-class residents to

the suburbs. The city filed for bankruptcy in 1991. The next mayor was sentenced to nine years in federal prison for corruption.

Bridgeport is now doing much better, to the point that its school system was one of five finalists for the national Broad Prize for Urban Education in both 2006 and 2007. Deliberation played a central role in Bridgeport's renaissance.

In 1996, a local nonprofit group called the Bridgeport Public Education Fund (BPEF, <http://bpef.org>) contacted organizers who specialize in convening diverse citizens to discuss issues, without promoting an ideology or a particular diagnosis. No one knows how many forums and discussions took place in Bridgeport, or how many citizens participated, because the 40 official "Community Conversations" were widely imitated in the city. But it is clear that at least hundreds of citizens participated, that many individuals moved from one public conversation to another, and that some developed advanced skills for organizing and facilitating such conversations. A community summit convened in 2006—fully 10 years after the initial discussion—drew 500 people. The mayor, the superintendent, the city council, and the board of education had agreed in advance to support the plan that participants developed (Friedman, Kadlec & Birnback, 2007; Fagotto & Fung, 2009).

So far, I have described talk, but the civic engagement process in Bridgeport involves work as well. For example, each school has a leadership team that includes parents, neighborhood residents, and students along with professional educators. The team has power over school budgets and strategic plans (Zarlengo & Betz, 2002). The professionals in leadership team meetings and other public forums take what they learn back into their daily work. People who are employed by other institutions, such as businesses and religious congregations, also take direction from the public discussions. Meanwhile, citizens are inspired to act as volunteers. The school district has a large supply of adult mentors, many of them participate in forums and discussions. In turn, their hands-on service provides information and insights that enrich community conversations and improve decisions.

Bridgeport's citizens have shown that they are capable of making tough choices: for instance, shifting limited resources from teen after-school programs to programs for younger children. There is much more collaboration today among businesses, non-profits, and government agencies. Everyone feels that they share responsibility; problems are not left to the school system and its officials. The school superintendent said, "I've never seen anything like this. The community stakeholders at the table were adamant about this. They said, 'We're up front with you. The school district can't do it by itself. We own it too'" (Friedman, et al, 2007).

Hampton, Virginia. This is another blue-collar port city of about 145,000 people. Like Bridgeport, Hampton has struggled with deindustrialization, although Hampton benefits from military and NASA facilities within the city.

When Hampton decided to create a new strategic plan for youth and families in the early 1990s, the city started by enlisting more than 5,000 citizens in discussions

that led to a citywide meeting and then the adoption of a formal plan. “Youth, parents, community groups, businesses, and youth workers and advocates...met separately for months, with extensive outreach and skilled facilitation” (Sirianni & Schor, 1999).

The planning process ultimately created an influential Hampton Youth Commission (<http://hampton.gov/youth>) whose 24 commissioners are adolescents, and a new city office to work with them. The Youth Commission sits on top of a pyramid of civic opportunities for young people. There are also community service programs that involve most of the city’s youth: empowered principals’ advisory groups in each school, a special youth advisory group for the school superintendent, paid adolescent planners in the planning department, and youth police advisory councils whom the police chief contacts whenever a violent incident involves teenagers. Young people are encouraged to climb the pyramid from service projects toward the citywide commission, gaining skills and knowledge along the way. The system for youth engagement won Hampton the Innovation in Government Award from Harvard University in 2007.

Engagement is not limited to young residents. When Hampton’s leaders decided that race relations and racial equity were significant concerns in their southern community—almost equally divided between whites and African Americans—they convened at least 250 citizens in small, mixed-race groups called Study Circles. The participants decided that there was a need to build better skills for working together across racial lines, so they created and began to teach a set of courses—collectively known as “Diversity College”—that trains local citizens to be speakers, board members, and organizers of discussions (Potapchuk, Carlson & Kennedy, 2005).

Hampton’s neighborhood planning process has broadened from determining the zoning map to addressing complex social issues. Planning groups include residents as well as city officials, and each may take more than a year to develop a comprehensive plan. Like the young people who helped write the youth sections of the City Plan, the residents who develop neighborhood plans emphasize their own assets and capabilities rather than their needs. There is an “attitude of ‘what the neighborhood can do with support from the city’ rather than ‘what the city should do with the neighborhood watching and waiting for it to happen’” (Potapchuk, et al, 2005).

Hampton has thoroughly reinvented its government and civic culture so that thousands of people are directly involved in city planning, educational policy, police work, and economic development. Residents and officials use a whole range of practical techniques for engaging citizens—from “youth philanthropy” (the Youth Commission makes \$40,000 in small grants each year for youth-led projects) to “charrettes” (intensive, hands-on, architectural planning sessions that yield actual designs for buildings and sites). The prevailing culture of the city is deliberative; people truly listen, share ideas, and develop consensus, despite differences of interest and ideology. Young people hold positions of responsibility and leadership. Youth have made believers out of initially suspicious police offi-

cers, planners, and school administrators. These officials testify that the policies proposed by youth and other citizens are better than alternatives floated by their colleagues alone. The outcomes are impressive, as well. For example, the students in the school system now perform well on standardized tests.

I would draw the conclusion that is also implicit in the title of Carmen Sirianni's recent book, *Investing in Democracy*: you cannot get "community summits" and other forms of excellent engagement on the cheap. They take a long-term effort and resources that are normally a mixture of money, policies, and people's volunteered or paid time. To yield sustainable results, a summit should be embedded in a deeper and more lasting deliberative infrastructure. Hampton's system, for example, depended on an initial federal grant and then consistent in-kind and cash investments from the city.

In order to make real-world deliberations work, several conditions must be met:

1. There must be some kind of organizer or convening organization that is trusted as neutral and fair and that has the skills and resources to pull off a genuine public deliberation. Several national non-profits have reputations for playing that role: Everyday Democracy, Public Conversations Project, the Center for Deliberative Polling, the Jefferson Center, the National Issues Forum Institute, and *AmericaSpeaks*, among others. At this time, there is no independent way of assessing their quality and reliability. A formal process of assessing and certifying deliberation-organizers may be valuable.
2. People must be able to convene in spaces that are safe, comfortable, dignified, and regarded as neutral ground. If large community summits are contemplated, there must be physical spaces capacious and affordable enough in every community to accommodate an *AmericaSpeaks* 21st Century Town Meeting or its equivalent. Because the construction of entirely new spaces for public meetings seems overly expensive and ambitious, a more practical strategy would be to expand proposals to serve other functions. For instance, new convention centers should be built so that they can handle public meetings as well as regular conventions.
3. There must be some reason for participants to believe that powerful institutions will listen to the results of their discussions. It may take a formal agreement among power centers, or even a law that requires public engagement, to give other participants hope that they can effect change. Or they may simply believe that their numbers will be large enough—and their commitment intense enough—that authorities will be unable to ignore them.
4. There must be recruitment and training programs: not just brief orientations before a session, but more intensive efforts to build skills and commitments. Ideally, moments of discussion will be embedded in ongoing

civic work (volunteering, participation in associations, and the day jobs of paid professionals), so that participants can draw on their work experience and take direction and inspiration from the discussions. There must be pathways for adolescents and other newcomers to enter the deliberations.

If all four preconditions are met, we should see measurable increases across whole communities (not just among the participants themselves) in civic knowledge, trust in other citizens, and civic action such as voting, volunteering, and advocacy.

Strategy 4: Generate public “relational” knowledge

Citizens need facts about organizations, leaders, and issues. They need rival interpretations of those facts, and deliberative public judgments based on such interpretations. Citizens also need to understand the *relationships* among people, organizations, and issues.

Competent civic and political actors have always held in their heads implicit “network maps” that link ideas, organizations, and individuals in their community. They know, for example, that if they want to talk to the leader of the town, they should go through an accessible individual whom the leader regularly consults, if not the leader himself. If someone raises a local issue, they can link it to relevant organizations and to related issues.

In recent years, three developments have underlined the importance of relational thinking. One is “The New Science of Networks,” as Albert-László Barabási subtitles his book *Linked*. This science is the mathematical exploration of nodes and network ties as they arise under various conditions, and it has yielded powerful insights, such as the value of “weak ties” and the importance of individuals who connect disparate communities.

The second development is the enormous popularity of social networking sites like Facebook, which are driven by webs of relationships. These sites have popularized the concept of network ties and underlined their importance. But Facebook and other corporate social networks keep the relational data—the “network map”—to themselves. They do so to protect users’ privacy and also to give themselves a valuable asset. For example, to reach everyone at Tufts who has a Facebook account, we must pay Facebook to advertise. We cannot see a list of users who have Tufts connections.

The third development is the art of relational organizing. Relational organization groups such as the Industrial Areas Foundation, the Pacific Institute for Community Organization, and the Gamaliel Foundation do not begin with clear and fixed goals. They decide what their causes should be by means of long periods

of listening and discussing within diverse networks that they carefully nurture. They are highly skilled at mapping networks to identify power relationships, excluded groups, and key hubs (Warren, 2001).

The next step is to democratize the possession of effective network maps, so that they do not exist only in the brains of skilled organizers or on the servers of Facebook and MySpace. Informed communities should not merely have access to discrete facts and lists of organizations, nor should they be satisfied with geographical maps that show the physical location of organizations. They should be able to build and consult public network maps that allow them to identify power, influence, exclusion, division, and other attributes of relationships, not of individuals.

The *Informing Communities* report states, “Just as communities depend on maps of physical space, they should create maps of information flow that enable members to connect to the data and information they want.... The best of these hubs would go beyond the mere aggregation of links and act as an online guidebook.” That is correct, but I would emphasize the importance of revealing relationships among both offline and online organizations within any community. After all, Google is extremely effective at producing lists of local groups, and such lists can also be displayed geospatially. But relationships are often opaque, especially when they involve power. Making them transparent takes civic work.

By tracking changes in the relationships among civil society actors over time, we can also help realize the Knight Commission’s Recommendation 5: “Develop systematic quality measures of community information ecologies, and study how they affect social outcomes.” When measuring a community’s civic ecology, most experts today would assess “social capital.” In the canonical definition of Robert Putnam, social capital means norms or attitudes of cooperation (such as trust) plus network ties that help people get things done (Putnam, 2000). The standard way to measure network ties is to ask proxy questions on surveys, such as how many groups individuals belong to. But the most direct, accurate, and informative method would be to map actual civic networks and compare their extent and density over time. Network mapping is a technical matter, but laypeople can examine a graphical representation of a civic network, assess whether it is fractured or cohesive, and decide how to address its weaknesses.

In collaboration with Lewis A. Friedland and his colleagues at Community Knowledgebase, LLC (<http://ckbsoftware.com>), CIRCLE has been experimenting with public network maps in two contexts:

- We have begun to create computer-based games in which classes of high school or middle school students quickly generate network maps of local issues, organizations, and people. Students pool their knowledge to produce a sophisticated understanding.

- We are also in the midst of creating an open network for the Boston metro area in which nodes will be organizations or issues, and anyone will be able to add to the map, use it to recruit volunteers, or navigate it to explore the structure of this region's civil society. It is not ready for a public launch, but one can explore the map at <http://MyBlink.org>.

Mapping Civic Networks: Community Knowledgebase's Youth Map

Youth Map is a social networking platform that helps students visualize connections between people, resources, and issues in order to address issues and problems in their local communities. Youth Map was developed by Community Knowledgebase, LLC, in partnership with the Center for Information and Research on Civic Learning and Engagement (CIRCLE), for service-learning in American schools and youth programs. Youth Map uses information gathered through interviews with key members of the community to create multilayered maps of civic networks. Such civic mapping can help to identify power, influence, divisions, and other features of relationships that help to influence information flows and shape the culture of the community.

Youth Map integrates three kinds of mapping activities: *concept maps*, *social network maps*, and *geographic information systems*. *Concept maps* build an initial picture of how the local community functions. *Social network maps* illustrate connections among specific local institutions and organizations, such as businesses, government, nonprofits, and other community organizations. *Geographic information systems* map these onto geographic space, where users may then add demographic, environmental, and other data sets related to the problems or issues under investigation.

Youth Map is also integrated into the Legislative Aide computer game, in which students working in small groups play legislative aides to a simulated elected official. Players conduct one-on-one interviews with real-life members of their community then use Youth Map in order to see how resources and information are linked within the community.

Since its initial testing in Baltimore in 2007, Legislative Aide has also been used in Tampa as a tool to increase students' content-area knowledge and promote civic engagement through interaction with teachers, peers, and community members. That experiment was supported by funding from the U.S. Department of Education's Institute of Education Sciences. Similar network mapping technology is also embedded in an open web tool called B-Link, intended for college students and others in the Boston metropolitan area, that is funded by the Corporation for National and Community Service (<http://MyBlink.org>).

These are just preliminary experiments. They do not yet harness the full potential of network analysis and visualization, nor the power of computers to harvest network data automatically from websites. My basic recommendation is that citizens should collect and publicize relational data. The local online information hubs recommended by the Knight Commission (see Recommendation 15) would be excellent places to present the data in interactive formats. Adam Thierer of George Mason University's Mercatus Center has written a separate white paper,

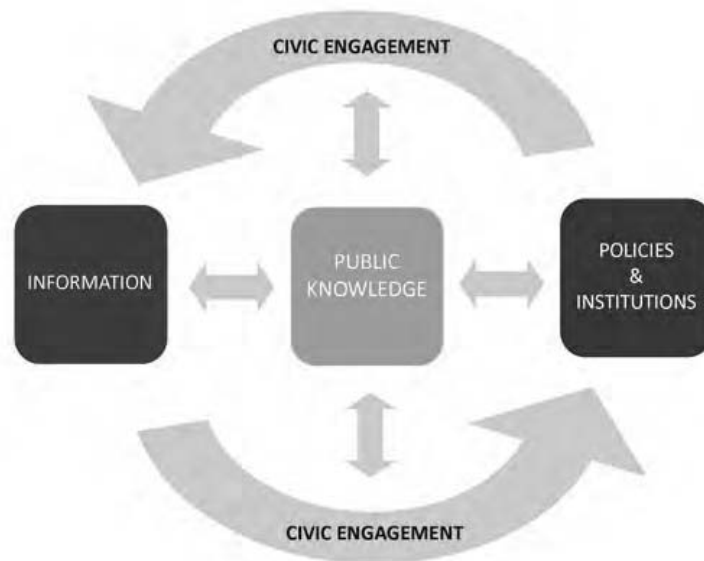
Creating Local Online Hubs: Three Models for Action, that describes three models for creating local online hubs with public information at the center (Thierer, 2011). Governments and foundations can help by investing in citizens' efforts. The results should include more frequent and more effective collaborative action by citizens.

Strategy 5: Civic engagement for public information and knowledge

Civic engagement has at least two important links to information and knowledge. First, information that people create and use enables them to be more effective as citizens. Second, citizens must ensure that they and their descendants have access to good information and knowledge and the means to use it effectively. Institutions affect public knowledge, and citizens can affect the policies of institutions. Seen this second way, civic engagement is a *cause*, and public knowledge is an *outcome*. Both of the following models are important.

1. **Information** developed and used by citizens creates **Public Knowledge**, which supports effective **Civic Engagement**
2. **Civic Engagement** influences **Policies** and **Institutions**, which create or protect **Information** and **Knowledge**

Exhibit 3. The Cycle of Civic Engagement



In this section, I concentrate on the second model. Such policies as the funding of public media, information networks, archives, libraries, and other facilities; freedom of information, freedom of speech, copyright, and other intellectual property rights; and transparency of government, and industry—all these matter

for the quality, relevance, and distribution of knowledge. Most of these issues are controversial, and I will not argue in this paper for particular policies. For our purposes here, the key point is that communications policies in the public and private sectors are important and they are matters of debate, contention, and pressure.

Active citizens must be involved in the debate and must exercise influence. By “citizens,” I mean all members of the community—not just experts, organized interests, and stakeholders. By “citizens,” I also mean something different from “consumers.” Individuals in their role as citizens approach issues of public policy with at least some concern for the polity; in their role as consumers, people tend to make decisions based on what is most desirable or convenient for themselves. Discussions, surveys, and political processes can be designed to elicit responses from people as consumers or as citizens (Elster, 1986). For example, people make different choices when they are asked to discuss an issue in public, give reasons, and then vote, than when they are given individual choices to make in a marketplace.

It is crucial that people discuss and act on media and communications policy in ways that elicit their thinking as citizens. After all, producing reliable and relevant public information and informative discussions of public issues are fraught with potential market failures. There may, for example, be inadequate incentives to produce and distribute worthwhile public information, unless the government subsidizes such efforts. Firms that do produce valuable information and discussion may charge fees or erect barriers that are incompatible with democratic values. As citizens, people must constantly evaluate the supply and availability of information and knowledge, and advocate appropriate reforms.

Once civic knowledge has been created, it must be protected against a wide range of threats, from malicious behavior to sheer neglect. Traditional forms of knowledge, such as the documents in a town archive, the reporting that filled a traditional town newspaper, and the artifacts in a local museum, all took money and training to catalog, manage, and conserve. Modern digital media also requires archiving, maintenance, and conservation. Digital conversations require moderation and protections against spammers, flammers, and viruses.

The overall risk is that policies will be decided by interest-group pressure and negotiation with minimal concern for public interests. To be sure, there is no consensus about what the “public interest” requires: libertarians, social conservatives, egalitarians, and others will (and should) disagree. But there should be a robust debate about the public interest in which citizens offer diverse arguments and principles that influence public policy. Policy should not simply satisfy powerful and self-interested stakeholders.

Once again, voluntary associations play an essential role. They recruit, educate, and motivate people to act as citizens. To ensure that the public interest is debated and the debate influences public policy, we need voluntary associations that perform the following functions:

Advocacy. Beneficial policies are public goods that often lose out to private interests that profit more tangibly from selfish policies. Thus we need independent, nonprofit associations that have incentives to recruit voters, activists, and donors to promote the public interest in relation to knowledge and information. The American Library Association, for example, has been a strong advocate for fair use and public access to knowledge.

Alliances. Communities across the country have information needs and valuable, accumulated public knowledge. Attacks on free information anywhere are threats to free information everywhere. “We are caught in an inescapable network of mutuality, tied in a single garment of destiny. Whatever affects one directly, affects all indirectly.” That is what Dr. Martin Luther King, Jr., wrote as he and his colleagues built a civil rights movement. As a result of their work, when civil rights were viciously repressed in one location, people got on buses from other places to come and protest. We may not need bus trips, but we do need people in each community to feel that the information needs of other places matter to them as well. In practical terms, that requires networks of associations that have working ties.

Education, broadly defined. People do not automatically acquire an understanding and appreciation of valuable civic knowledge, nor the skills necessary to produce and conserve such knowledge. Each generation must transmit to the next the skills, motivations, and understanding necessary to create and preserve public knowledge. Not only public schools but also private, nonprofit associations must play roles in this process. Associations must recruit and train the next generation of community historians, archivists, naturalists, artists, and documentary filmmakers (among other roles).

Who Should Do What

One way to summarize the recommendations of this white paper is to identify the actions that have been proposed for various institutions.

Congress and Federal Agencies

The Corporation for National and Community Service, with congressional authorization and appropriations, should create a Civic Information Corps that provides training, grants, and meetings for service organizations that emphasize the creation and dissemination of knowledge. Participants should include non-college-bound youth and young adults. The Corporation should also designate learning outcomes for all of its programs, and those outcomes should include civic communications skills.

Agencies that fund research and scholarship (National Institutes of Health, National Science Foundation, National Endowment for the Humanities, and

National Endowment for the Arts, among others), should fund and evaluate scholarship that benefits local communities as well as efforts to aggregate and disseminate such scholarship.

The Department of Housing and Urban Development, the Environmental Protection Agency (EPA), and other federal agencies that address community-level problems should support communitywide public deliberations about those problems. Hampton's infrastructure for civic engagement and deliberation was seeded with a federal grant. EPA has supported community collaborations to address environmental problems with grants, toolkits, meetings, training, and technical assistance through a program called Community Action for a Renewed Environment (CARE) (Sirianni, 2009, pp. 270-274). These are rare models in a system that still favors command-and-control regulation. To promote civic engagement, a mix of grants and other incentives, plus training and technical assistance, seems essential.

The federal civil service should provide opportunities and incentives (e.g., credit courses) for government employees to learn how to collaborate with citizens to create and disseminate public knowledge.

State and Local Governments

Cities, counties, and other jurisdictions should provide physical spaces for public deliberation. These need not be single-purpose sites; convention centers, central libraries, and other multipurpose facilities can be designed to work for public meetings.

Local governments should fund and recognize or promote online knowledge hubs, often in partnerships with local colleges and universities.

Local governments should convene deliberative forums to address public issues and should promote ongoing training for deliberative democracy.

School systems should make civic education a priority and include within civic education media and communication skills and service-learning opportunities that involve media.

Colleges and Universities

Colleges and universities should reward high-quality, rigorous research that is helpful to their immediate geographical communities. They should create websites that aggregate such research and make it publicly accessible. They should create oversight boards with community representation that review community-based research to ensure that it is genuinely valuable.

Journalism schools and departments should play leading roles in creating and maintaining public information portals, and their classes should work on those projects as a form of service-learning. Programs in library and information sci-

ence have important roles in designing, maintaining, and evaluating public online archives, networks, and relationship maps. Extension agents should help maintain and disseminate public information.

Colleges and universities should make civic learning opportunities (including courses and less formal learning opportunities) available to non-students. They should also strive to improve K–12 civic education and media literacy through relevant research and teacher training.

Foundations

Foundations should generally fund the work described above, with special attention to funding community-based nonprofits that serve marginalized populations, of which an important example is non-college-bound youth and young adults. Funds should be available for knowledge creation and dissemination, e.g., community-based research projects, trainings, and access to computers. Foundations can also fund *processes*, such as public deliberations at the local level.

The most important role of philanthropy is to support pilot projects, such as exemplary colleges and universities that (in partnership with community organizations) build experimental online knowledge portals. Once pilot projects are successful, governments and higher education should take them to scale.

Citizens

Citizens should seek opportunities to create and share public knowledge and discuss public issues. They should learn to do so in formal and informal educational settings. They should expect governments to be open, transparent, and collaborative and demand reform when they are not. They should volunteer to the best of their ability, and their volunteering should include elements of research, media creation, and communications. In their regular paid work, they should also look for opportunities to contribute to public knowledge. Citizens should, in particular, create and share knowledge about the networks and relationships in their communities.

Relationship to the Knight Commission Report

In the preceding paper, I have recommended the steps that I consider most important and that I feel most qualified to discuss. I have omitted other promising strategies, such as working with community foundations and changing federal policies, because I am less informed about them. Overall, I have offered five strategies that are connected to, but not perfectly in line with, the civic engagement recommendations (11–15) of the Knight Commission report, *Informing Communities: Sustaining Democracy in the Digital Age*. The following chart is intended to show how they relate.

Proposed Strategies	Knight Commission Recommendations				
	11. Reflect entire diversity of communities	12. Engage young people	13. Community summits	14. Enhance public spaces for deliberation	15. Local online hubs
1. Civic Information Corps	Because the Corps would recruit non-college-track youth, it would be diverse. It would also produce culturally diverse content.	The Corps would enlist young people.	The Corps could help organize such summits.	Corps members would learn to support such spaces.	The Corps could manage a hub in each community, providing individuals with formal roles as webmaster, content editor, outreach coordinator, etc.
2. Universities as information hubs	Universities must not only educate their own students but form genuine partnerships with communities.	University students are predominantly young. Higher ed also has a role in enhancing K-12 civic education.	Universities can be the sites for such summits, and their faculty, staff and students can support them.	Universities can provide sites for deliberation.	Websites that aggregate universities' research on local issues would be hubs.
3. Invest in deliberation	Discussions are not equitable or diverse unless investments are made in training, moderation, and recruitment.	The best examples include separate pathways for young people to enter deliberation.	Summits would be the apex of a deliberative culture.	Spaces are one important aspect of investment (but so is training).	The online hubs should promote discussion.
4. Generate public "relational" knowledge	By displaying the network structure of communities, we make it possible to identify excluded groups and address inequitable power relationships.	High school students have been engaged in creating such knowledge with educational benefits.	Understanding the community's network structure would help prepare for a representative summit.	A public map of relational information is an important topic of conversation, and online deliberative spaces can be attached to the map itself.	The hubs should present relationships as well as data and opinions.
5. Organize to defend the knowledge commons	The tragedy of the knowledge commons most seriously affects marginalized people, who have the biggest stake in defending free and high-quality information.	Part of an adequate defense is educating the next generation to value public knowledge. We can also tap their enthusiasm for digital culture.	Policies related to information are appropriate topics for deliberation.	Spaces need to be public in the sense that associations can afford them and free speech is protected. (Unlike, say, shopping malls)	A hub supported by a university would benefit from its resources, including its legal and political power.

References

Cochran, B. (2010). *Rethinking public media: More local, more inclusive, more interactive*. Washington, D.C.: The Aspen Institute. Retrieved from <http://www.knightcomm.org/rethinking-public-media>

Cohen, J.L. (1999). American civil society talk. In R.M. Fullinwider (Ed.), *Civil society, democracy, and civic renewal*. Lanham, Md.: Rowman & Littlefield, p. 64.

Corporation for National and Community Service (2009). *Volunteering in America research highlights*. Retrieved from <http://www.volunteeringinamerica.gov/assets/resources/VolunteeringInAmericaResearchHighlights.pdf>

Corporation for National and Community Service (2010). National Conference on Citizenship. *Issue brief: Civic life in America: Key findings on the civic health of the nation*. Washington, D.C., p. 22. Retrieved from <http://www.ncoc.net/CHAExecutiveSummary2010>

The Democracy Collaborative at the University of Maryland (n.d.). *Strategies & models: The C-W access panel: University & community partnerships*. Retrieved from <http://www.community-wealth.org/strategies/panel/universities/index.html>

Elster, J. (1986). *The market and the forum: Three varieties of political theory*. In E. Hyland & A Hyland (Eds.), *Foundations of social choice theory*. Cambridge, England: Cambridge University Press, p. 103–132.

Fagotto, E., & Fung, A. (2009). *Sustaining public engagement: Embedded deliberation in local communities*. Retrieved from <http://www.everyday-democracy.org/en/Resource.136.aspx>

Friedland, L.A., & Morimoto, S. (2005). *Working paper 40: The changing lifeworld of young people: Risk, resume-padding, and civic engagement*. The Center for Information & Research on Civic Learning & Engagement. Retrieved from <http://www.civicyouth.org/circle-working-paper-40-the-changing-lifeworld-of-young-people-risk-resume-padding-and-civic-engagement>

Friedman, W., Kadlec, A., & Birnback, L. (2007). *Transforming public life: A decade of citizen engagement in Bridgeport, CT* (Case Studies in Public Engagement, No.1). Retrieved from http://www.publicagenda.org/files/pdf/cape_bridgeport.pdf

Gastil, J., & Levine, P. (Eds.). (2005). *The deliberative democracy handbook: Strategies for effective civic engagement in the twenty-first century*. San Francisco, CA: Jossey-Bass.

Kaplan, L. (2010, April 12). Where did you get those numbers? National Public Radio, blog post. Retrieved from <http://www.npr.org/blogs/gofigure/2010/04/12/125885973/where-did-you-get-those-numbers>

Kiesa, A. & Marcelo, K. B. (2009). *Fact sheet: Youth Demographics—Youth with No College Experience*. The Center for Information & Research on Civic Learning & Engagement. Retrieved from <http://www.civicyouth.org/quick-facts/non-college-youth>

Kirby, E. H., Marcelo, K. B., & Kawashima-Ginsberg, K. (2009). *Fact sheet: Volunteering and college experience*. The Center for Information & Research on Civic Learning & Engagement (CIRCLE), p. 7–8. Retrieved from http://www.civicyouth.org/PopUps/FactSheets/College_Volunteering.pdf

Knight Commission on the Information Needs of Communities in a Democracy (2009). *Informing communities: Sustaining democracy in the digital age*. The Aspen Institute: Washington, D.C. Retrieved from <http://www.knightcomm.org/read-the-report-and-comment/>

Lazer, D., Neblo, M., Esterling, K., & Goldschmidt, K. (2009). *Online town meetings: Exploring democracy in the 21st century*, Washington, DC: Congressional Management Foundation. Retrieved from http://docs.google.com/viewer?a=v&q=cache:LrCNfTW7J2AJ:nposoapbox.s3.amazonaws.com/cmfwef/Online-Town-Hall-Meetings-Report.pdf+Online+Town+meetings+Lazer+Neblo+congressional+management+foundation&hl=en&gl=us&id=bl&srcid=ADGEEShrDvRp4LR462uLGBG4IcYJj9Rp8aeqH2V0GkNTOHthSTOKs9npCfG17tJfZ65yvPX3Jy-FHhHluLSOZTSYTSsc-Vb-H9hpe__hHhi5TvSpGz_hOFo4P5XYkVBLCVzyWQbqmPD3b&sig=AHIEtbQIfOkIIQRGiEESpDPBxA8I-h7oYA&pli=1

- National League of Cities (2011, January). Beyond civility: From public engagement to problem solving. Washington, DC: National League of Cities. Retrieved from http://www.nlc.org/ASSETS/B5FAD9F7F4B84A2E93D8DB388FA8C700/RI_CivilityGuide2010_FINAL.pdf
- Peters, J., and Abud, M. (2009). "E-Consultation: Enabling Democracy Between Elections" *IRPP Choices*, 15(1). Institute for Research on Public Policy. Retrieved from <http://www.irpp.org/choices/archive/vol15no1.pdf>
- Potapchuk, W. R., Carlson, C., & Kennedy, J. (2005). Growing governance deliberatively: Lessons and inspiration from Hampton, Virginia. In J. Gastil & P. Levine (Eds.). *The deliberative democracy handbook: Strategies for effective civic engagement in the twenty-first century*. San Francisco, CA: Jossey-Bass.
- Putnam, R.D. (2000). *Bowling alone: The collapse and revival of American community*. New York, NY: Simon & Schuster.
- Sirianni, C. (2009). *Investing in democracy: Engaging citizens in collaborative governance*. Washington, DC: Brookings Institution Press.
- Sirianni, C., & Schor, D. M. (1999). *City government as an enabler of youth civic engagement: Policy design and implications*. In J. Youniss & P. Levine (Eds.), *Engaging young people in civic life*. Nashville, TN: Vanderbilt University Press.
- Smith, A. (2010). Government online: The Internet gives citizens new paths to government services and information. Washington, D.C.: Pew Internet & American Life Project. Retrieved from http://pewinternet.org/~media/Files/Reports/2010/PIP_Government_Online_2010.pdf
- Thierer, A. (2011). *Creating local online hubs: Three models for action*, Washington, D.C.: The Aspen Institute. Retrieved from <http://www.knightcomm.org/creating-local-online-hubs-three-models-for-action>
- Tocqueville, A. de. (1954). *Democracy in America*. (H. Reeve & P. Bradley, Trans.). New York, NY: Vintage Books. (Original work published 1835)
- Trudeau, L. (2009, June 1). Memorandum from Lena Trudeau, National Academy of Public Administration, to Beth Noveck, Deputy Chief Technology Officer for Open Government, Office of Science and Technology Policy, The White House. Retrieved from http://www.whitehouse.gov/files/documents/ostp/opengov_inbox/NAPA_analysis.pdf
- Warren, M. R. (2001). *Dry bones rattling: Community building to revitalize American democracy*. Princeton, NJ: Princeton University Press.
- Williams, D. R., & Bernstine, D. O. (2001). Building capacity for civic engagement at Portland State University: A comprehensive approach. In M. Kenny, L.K. Simon, K. Kiley-Brabeck, & R.M. Lerner (Eds.), *Learning to serve: Promoting civil society through service learning* (Kluwer International Series in Outreach Scholarship Vol.7). Norwell, MA: Kluwer.
- Zarlengo, P. & Betz, J. (2002, June). The Bridgeport Story: What Urban School Districts Need to Know About School Leadership Teams. The Education Alliance, Brown University. Retrieved from http://www.alliance.brown.edu/pubs/pln/brdgprt_pln.pdf

APPENDIX



About the Author

Peter Levine (<http://peterlevine.ws>) is director of CIRCLE, The Center for Information and Research on Civic Learning and Engagement, and research director of Tufts University's Jonathan Tisch College of Citizenship and Public Service. Levine graduated from Yale in 1989 with a degree in philosophy. He studied philosophy at Oxford on a Rhodes Scholarship, receiving his doctorate in 1992. From 1991 until 1993, he was a research associate at Common Cause. In the late 1990s, he was deputy director of the National Commission on Civic Renewal.

Levine is the author of *Reforming the Humanities: Literature and Ethics from Dante through Modern Times* (2009), *The Future of Democracy: Developing the Next Generation of American Citizens* (2007), three other scholarly books on philosophy and politics, and a novel. He also co-edited *The Deliberative Democracy Handbook* (2006) with John Gastil and *Engaging Young People in Civic Life* (2009) with Jim Youniss and co-organized the writing of *The Civic Mission of Schools*, a report released by Carnegie Corporation of New York and CIRCLE in 2003 (<http://civic-missionofschools.org>).

He has served on the boards or steering committees of AmericaSpeaks, Street Law, the Newspaper Association of America Foundation, the Campaign for the Civic Mission of Schools, the Kettering Foundation, the American Bar Association Committee's for Public Education, the Paul J. Aicher Foundation, and the Deliberative Democracy Consortium.

The Aspen Institute Communications and Society Program

www.aspeninstitute.org/c&s

The Communications and Society Program is an active venue for global leaders and experts to exchange new insights on the societal impact of digital technology and network communications. The Program also creates a multi-disciplinary space in the communications policy making world where veteran and emerging decision makers can explore new concepts, find personal growth, and develop new networks for the betterment of society.

The Program's projects fall into one or more of three categories: communications and media policy, digital technologies and democratic values, and network technology and social change. Ongoing activities of the Communications and Society Program include annual roundtables on journalism and society (e.g., journalism and national security), communications policy in a converged world (e.g., the future of international digital economy), the impact of advances in information technology (e.g., "when push comes to pull"), and serving the information needs of communities. The Program has taken a deeper look at community information needs through the work of the Knight Commission on the Information Needs of Communities in a Democracy, a project of the Aspen Institute and the John S. and James L. Knight Foundation. The Program also convenes the Aspen Institute Forum on Communications and Society, in which chief executive-level leaders of business, government and the non-profit sector examine issues relating to the changing media and technology environment.

Most conferences utilize the signature Aspen Institute seminar format: approximately 25 leaders from a variety of disciplines and perspectives engage in roundtable dialogue, moderated with the objective of driving the agenda to specific conclusions and recommendations.

Conference reports and other materials are distributed to key policymakers and opinion leaders within the United States and around the world. They are also available to the public at large through the World Wide Web, <http://www.aspeninstitute.org/c&s>.

The Program's executive director is Charles M. Firestone, who has served in that capacity since 1989, and has also served as executive vice president of the Aspen Institute. He is a communications attorney and law professor, formerly director of the UCLA Communications Law Program, first president of the Los Angeles Board of Telecommunications Commissioners, and an appellate attorney for the U.S. Federal Communications Commission.

Public Radio 2010

Challenge and Opportunity in a Time of Radical Change

By Thomas J. Thomas & Theresa R. Clifford

FEDERAL FUNDING

It would be difficult to survey the landscape of public radio without some thoughts about federal funding. In mid-2005 it's been much on the minds of all in public broadcasting and it will be for some time to come.

First, it is important to acknowledge what an important victory we achieved an up or down vote on CPB funding in the House of Representatives. It's very rare in one's life that there is a direct referendum by the House of Representatives of the United States of America on your work, and it doesn't always go your way. But we know the reason it did go our way on that day is the extraordinary work that our stations, our networks, and our producers do and have done for years to serve our communities in ways that make a genuine difference in the lives of millions of Americans. That's why we won that vote.

But it is not over yet. In the short term, the Senate and the House came up with more than a hundred million dollars of difference between them that needs to get wrestled to the ground. We believe that when the dust settles there will be some dollars missing from the portfolio compared to what we've had to invest in serving America this past year. But even more so, it's not over for the long term because there are some fundamental, underlying issues that remain in the context of federal funding for public broadcasting.

One, of course, is that the government is broke. Despite what some consider the encouraging news that the exploding deficits of the past few years may be abating, the numbers are still enormous, and there is no sign that that is going to change in a significant way over the long haul. We have vast commitments abroad, deep commitments to domestic security, a growing claim of entitlement funding on the budget, and for all the rest of us, public broadcasting included, the pressure in the coming years will only become more intense, not less.

Thomas J. Thomas and Theresa R. Clifford are co-CEOs of the Station Resource Group. This essay was presented as a Keynote Address by Tom Thomas to the Public Radio Development and Marketing Conference, July 14, 2005, Los Angeles, CA.

Secondly, we have an administration that is going to be with us for some years whose view of the appropriate level of funding for public broadcasting is that about one in four dollars that we currently receive probably should go someplace else, and we have to continue to struggle with that.

In Congress the support for forward funding is clearly eroding. As important a principle as that has been to the independence of public broadcasting, to our capacity to plan for our future, and particularly for program development, the appropriators who are the first line that we deal with on these issues seem increasingly to view forward funding as not a very important factor.

And finally, as was clear in the House debate and public discussions, there are many on Capitol Hill who actually do not share and, in fact, have some hostility to the core values and principles of our service.

So these are important fights that will be with us for a while. It's tempting to say we won, we're going to come away with something far better than what we feared, and to move on. But that would be at our peril. We think there are some lessons that we need to take for the years ahead, one of which is that there is and remains a vulnerability in a very significant source of support for our field, and that that vulnerability can manifest itself on an extraordinarily short timeline.

A second lesson is that in a polarized political environment, which we believe will continue in this country for some time to come, we can anticipate heightened scrutiny of everything that we do – our programming, our finances, our operations – and we need a transparency and accountability in all of our work.

And third, a very important lesson, we need to tell our own story to our communities on these kinds of issues. If we had waited for others to come to our defense, waited for the editorials or waited for someone else to pick up the banner and proclaim the cause of continued support for public broadcasting, we believe the outcome would have been far different in that vote in the House. It was our own swift, direct action in an organized and disciplined way – but also one that was truly respectful of the different messages that different broadcasters wanted to tell to different communities – that made the difference.

A POLITICIZED CPB

And then there is a very important matter that will be very difficult for us to deal with as a field, but that we should not shrink from in the least, and that is the damage to audience trust that has been engendered by a politicized CPB. To many of our listeners who have spoken to the managers we talk with, the concerns over the perceived politicization of public broadcasting is as important, if not more so, as the threats that came from the proposed cuts in the budget. People love and respect what we do and trust what we do as public broadcasters because of their confidence in our integrity, our independence, and our non-partisan nature, and to have that put at risk or called into question is a very

serious challenge to the character of the service and the relationship we have with our audiences. We need to commit ourselves, all of us, in every aspect of our stations, to a number of key steps to take this issue head-on.

One, of course, is that we need to demand of ourselves and everyone with whom we work the absolute highest standards in our work. We must be beyond reproach and then some in all of what we do. That is within our capacity, that is our heritage, and it is ever more important that we meet that challenge.

Second, we need to work together and work with CPB to assure a true integrity in program funding at the national level. That has been called into question; we need to put those questions aside. It will happen by a commitment to insulation, through consultation with the system, as required by law, and with a transparency in the character of the decisions that are made, why they're made, and where the money flows.

And again, we need to communicate with our audience. One of the things we learned in the fight over proposed federal funding cuts is that many people, including many of our dearest and closest supporters, don't really get how the funding of public broadcasting works. That is a point of vulnerability. People should understand not only who we are and what we do, but how we make it happen. It is our responsibility as communicators not only to give the news of the day or the latest release of an artist that's important to our listeners, but also to help people understand who and what we are and how we bring this to our communities. As our communities and our listeners understand that, it strengthens our position.

But as we look further ahead, the uncertainties of federal funding, significant as they are, worrisome as they can be, and as much as they're front and center at a given moment, are not our greatest challenge, and addressing them successfully is not our greatest opportunity.

A NEW ARCHITECTURE

The challenge rather, is that there is a continuing, powerful change in the social and economic architecture of information, culture, entertainment, and education in our society. Electronic media are both the drivers of that change and themselves transformed by it. That is the powerful turning point that, more than anything else that surrounds us, is both the challenge and the opportunity to which we must respond.

Increasing capacity and declining cost in spectrum bandwidth, computer storage, and computer processing power are enabling extensive personal control over all kinds of electronic content. The future that is ahead of us in radio, in video, and in other media that will probably have names we don't even think about today, is one of time shifting, of pausing and resuming, of editing at a personal level, of searchability, of personal archives, of forwardability and integration of content

that comes from multiple sources. We're in a truly new delivery context in the field in which we work, one in which there are multiplying pathways to reach our listeners: satellites, streaming, on-demand access, digital band width. There are multiple channels that are leading to erosion of each of our own single channel's share and increasing the focus on niche applications in serving our communities and our listeners. And content creators of all kinds, both familiar and new, are rushing to exploit these capacities.

This means a changing role for us as broadcasters, a decline in the traditional local radio broadcast functions as a primary audio delivery channel, a scheduler of the listening experience, and a gatekeeper to content. But there is something more than that, an emotional disconnect. It's a reduced margin for error that we have as alternative media choices explode, that that initial, elemental responsive chord of radio that many of us grew up with is being replaced by a chorus of sound coming from many different places that only increase in number.

We are in a time of redefinition for public media that is every bit as important and profound as the very earliest years of our field. If one thinks back to the late 1960's and early 1970's when public broadcasting first put its footprint on the American media landscape, what a different time that was. It was an environment in which television was three networks and maybe an independent channel, radio was Top Forty, most Americans read a daily newspaper, and we had yet to go to the moon. It was a very different America in which the heritage of public broadcasting was formed – that great legacy that has sustained and informed and guided what we've done in the intervening years.

A similar task of defining who and what we are on today's landscape is what is now before us. We, ourselves, must create and implement a new framework for a next generation of our work, a renewed vision of meaningful public service and a shared strategy for growth.

The broad outlines are clear.

We know that we will be anchored in our broadcasting legacy, our most powerful delivery tool, for years to come. But our broadcast operations will be built out to a multiple platform delivery architecture using the same technologies that today challenge us.

We will extend and enrich the service to our current audiences; we'll dance with who we came with. Those are our closest allies, our greatest friends, and those for whom today we are indeed a lifeline. But we must also commit ourselves to bring new users to our fold, to introduce what we do to people who today do not listen at all but whose curiosity, thirst for knowledge, and desire to be engaged in a community is every bit as great.

THE ASSETS WE TAKE FORWARD

As we begin to flesh this out and set about this work, we have significant assets to bring to the task. There are about a half dozen that we believe are at the core of what we do.

We have amazing, strong, high-quality programming that sets us apart on the media landscape.

We stand for things in public broadcasting, and we have a clear sense of what our core values are. We know them, our producers know them, and our audiences know them.

We have a significant and growing share of listening. Every moment of every day, one out of twenty Americans who have their radios turned on is listening to a public radio station. That's an amazing penetration into the radio marketplace, and it's a share that is growing and will continue to grow year by year.

We have a sound economic foundation that we've built, in part through our development efforts, in part through our supporters in the public sector, through our commitments from philanthropy, through the personal checkbooks of our listeners. It's a diversified economic foundation, dependent on no one source but with a multiple platform of funding that goes with our multiple platforms of delivery that gives us insulation, protection, and security.

We increasingly have a high brand recognition that transcends just those who use us. When we began working in public radio, most people didn't even know what public radio was. Our parents didn't know what public radio was. Today most everyone knows what public radio is, listener or not – a terrifically high brand recognition that we can leverage into new opportunities.

And finally we have an enormously skilled, talented, and highly motivated work force, people for whom what we do is not just a job. It's a commitment to something of high principle and high calling to which they bring great experience, hard work, and dedication. In many ways, the richness of those who work within our field is one of our greatest enduring assets.

OUR STRATEGIC POSITION

We also have a principled strategic position: what we do and where we stand as we look towards the media marketplace in which we compete. We are trusted and sophisticated producers, selectors, and context setters for content of high quality and depth. That statement alone sets us apart from so many of those with whom we compete for the public's attention: trusted and sophisticated producers, selectors, and context setters for content of quality and depth. And we present that content with genuine respect for our audience: respect for their intelligence, for their curiosity, for their values and their sensibilities.

We help our listeners connect the dots in a very complex world so that they can work toward solutions in their lives and their communities. And the listeners that we reach in public radio want to make that difference. They are the people who engage, who work in our communities, who serve on PTAs, who vote in elections, who make a difference in what America is all about.

We celebrate America's diverse culture with integrity and authenticity and joy. On our stations you hear the real culture, unfiltered, in the voices in which it originated, in the sounds that speak in a true way to the heartbeat of our nation. We provide a shelter from the storm of a difficult and fast-moving time. Our stations, for all that we engage our listeners in the world, also provide important moments of reflection and refuge.

Our task is to leverage these genuine assets to positions of strength in a changing context and to preserve this very important and distinctive strategic position in new settings and on new platforms. If we do that, the reward is enormous opportunities for growth in both the service that we deliver and the support from our communities that will enable us to sustain it. Both of those are available to most of us as stations and to all of us as a system.

STEPS TO THE FUTURE

How do we get there? In the end, each of us in each of our stations will need to devise our own strategies and our own pathway, but there are some common steps that most all of us would benefit from taking.

We would start with the notion of active engagement of civic leadership. We simply cannot do this by ourselves. However talented, skilled, and dedicated we may be, we need others with and behind us to make this important change in who and what we are and what we do. We need business leaders, we need technologists, we need people who understand the fabric of community life, we need people who can take an arm's length distance from the day-in, day-out work of what we do and help guide and shape and critique and challenge and provoke us to work harder, to do better, and to go further.

We need to strengthen our own professional management. Many of our senior leaders in the field today entered public radio when it was a very different business, smaller and simpler. We need management at our stations that rises to the occasion, to the challenges and complexity of this new landscape, and that can capture and advance the vision that we're creating. We need to resolve to strengthen ourselves . . . or get out of the way.

We need a strategic vision to inform all of this, and we don't use the word strategic lightly. It is very fashionable these days that everything is strategic: strategic this, strategic that, strategic handshakes. Real strategy is ultimately about making choices. Strategy begins by saying we will do these things and we

will not do those things. We will not do those things so we can do these things better. Why are we deciding to do these things as opposed to not doing those things? Because we think this will make a greater difference, this has a greater opportunity, or some other informed reason, but ultimately it means making a choice. That's hard for us. We're the folks, after all, whose first signature program was called "All Things Considered." And there is a sensibility in us that says all strategies and all choices somehow ought to be in the mix. But we can't afford that; we need a focus and the discipline of strategy to make choices.

We need to continue, relentlessly, to build our financial capacity. We need more resources to do these things that lie ahead of us, but we also need, beyond just the extra dollars, a sense of our financial destiny. The building of our financial capacity should not be an incremental burden. That's what drives so many of our development folks crazy – the sense that, somehow, next year more money comes in, less money gets spent raising it, and the year after the same, and the year after the same. That's not the best way to grow a company; it's not the best way to grow a development enterprise. We need a sense of financial destiny, of where we're headed, a sense of the rich resources that can and should come to our stations and support it that may be far beyond where we are today. That helps us plan from where we are today to a "there" that's possibly far beyond our current resources.

We need new configurations and collaborations in our work, and we encourage all of us to think broadly in doing so. We are not talking about an occasional little partnership with a station down the road or a deal with the local newspaper in which you do a forum once a year. We're thinking about configurations of our service that are bold and move well beyond the easy and comfortable ways in which we have come to bring content to our airwaves and increasingly to our web sites. We need to reach out in a genuine way to all manner of organizations in our communities to build our editorial agenda, to look at ways in which we can disseminate our content through pathways other than our own stations and capitalize on the huge investment that's gone into creating that content, helping it reach cascading circles of people who can benefit from it. We need to find editorial partners to work with us in generating ideas and information and knowledge that we, then, as professional communicators can effectively bring to our airwaves. New configurations, new collaborations, and thinking broadly as we go in search of them.

We can't forget the mantra that has brought us the success we enjoy in public radio today: wider reach and deeper connection. We understand that the reason we have grown as a field, why today we have over 600 million dollars with which to work where in the past we had 200 million dollars, is because we reach more people and we build a deeper connection with them. It is the combination of more use by the public and greater importance and significance to those doing the using that drives the growing support from our communities, that sustains our

work. We need to be relentless in the pursuit of both of those objectives: a wider reach in whom we talk to, a deeper connection with those whom we reach.

Then, skating above use and connection, at some meta-level, is the notion of greater significance in the role and impact we have in our communities as a whole, a significance in which we are making a genuine difference on the cultural and civic issues of our day, of our communities, and our nation. And that, again, has a payoff in the financial support needed to sustain it, because that kind of significance is the gateway to philanthropy, which remains a significantly underdeveloped area in our financial portfolio.

Another step: we need to keep telling our story. There is a sense among so many in the public sector, in the non-profit sector, in public broadcasting who feel that doing good work is enough. If we just do a good job every day, people will just get it, and to some degree that's true, especially when you work in a field such as ours where our good work is broadcast on high-powered transmitters 24 hours a day. But even that is not enough. We need to patiently explain and then explain again who we are, what we do, what we stand for, and where we're going. Some of us are resistant to that. Some of our managers are resistant to putting that on our air. The good work should stand for itself. That's a luxury we believe we cannot afford, particularly if we are changing as an institution, if we are trying to get to a different place. If we are trying to reposition ourselves on an evolving media landscape, it is imperative that we bring our communities and our listeners along with us and we need to tell them what we're doing, and we need to be the ones who tell that story.

Finally on this list, we need to focus our most valuable resource, which is the people who are engaged with our organization – our staff, our volunteers, and our civic leaders – on the activities that are most closely aligned with our service vision. This is an echo of our point about strategic choices, but it brings it down to the tactical level. We are a people-intensive business. We spend most of our money on people. We spend much of our time managing other people within our organizations. Yet the discipline and rigor with which we manage both our own personal time and our collective time as the staff of our stations has huge room for improvement. We need to focus our time and our energies, our most precious resource, on our strategic vision of public service, to ask ourselves: "What am I doing today, what are all of us as a group doing this week that advances our mission, that achieves our vision, that is getting to results that make a difference in the lives of those that we are committed to serve?"

THE OPPORTUNITY FOR GROWTH

So where will all this get us if we're successful in doing these and other things that each station could add to the list?

Let's make some assumptions, starting with where we are going with our audience growth. Five years out is about as far as anybody can genuinely say

where they think things might be going, so we are looking at the year 2010 and where we might be by then in our audience service. We've had a marvelous run-up in our listening in the past five years, principally driven by our news and information services, by our news and information stations, in a time of ferocious news cycles. Public radio's news and information stations have experienced a 55 percent increase in listening over the past five years, a huge increase. But even our purely music stations, our all-classical and our all-jazz stations, have held their own. Now, in both groups there are some who are up more and some who are up less, some who are down, but overall we are looking at a very high level of performance. We don't think we're going to match the huge growth we've had as a field in the past five years. We do, however, believe we can sustain the growth we have seen over a longer period of time, such as that of the past decade, which has had a few flat years along with the great ones.

So looking to something between our five-year and ten-year trailing averages, we believe it is within our reach, if we do it right, if we apply ourselves well, if we're disciplined and do all those things that we have suggested, to anticipate by the year 2010 a 25 percent increase in listening to public radio on our broadcast channels on a system-wide basis across all our formats taken together.

That won't automatically happen. It doesn't just fall into place. But a 25 percent increase in listening at a time when listening to radio has been eroding steadily quarter by quarter would be a huge accomplishment for our field. It would transform our share of listening to a greater and more significant place.

Second, if we're successful, as we believe we must and can be, in migrating our services to new platforms, developing new pathways with which to reach our audiences, where might that go? Now this truly gets to be tricky, because we aren't even sure we know the platforms that are going to be available by the year 2010. But if we put together where we stand right now as our own audiences stream audio and video on the Internet, at the podcasting that's starting to take off at stations that are putting that programming out, like KCRW and WGBH and WNYC and more that will join them in the weeks and months ahead, if we think of the advent of secondary audio channels in digital broadcasting, not today – where how many people can listen to that, that would be none – but how many people might be listening five years from now and add that into the mix, here's what our assumption would be: that five years from now we can anticipate that about one-third of our weekly cume will use one or more of these additional platforms beyond our broadcast service for an average of two hours per week.

So think about that. Make your own assumption about it, but that would be ours, that our cumulative broadcast audience grows, that one out of three of this larger audience is making use of these new platforms, and that the average amongst those who do, the adopters of these platforms, would be about two hours of use per week.

Now, how do you put that together, the new technology platform use and what we're delivering on the broadcast channels? It's not going to be purely additive. If the new platforms really take off, that's going to have some cannibalization and erosion of what we're doing in broadcasting. On the other hand, if the new platforms develop a little bit slower than some suggest or hope, then the growth on the broadcast side might be more vigorous. The way we put it together is to take about half of what we suggest would be the increase on new platforms and assume that that's simply replacing broadcast use.

What I wind up with, then, is that five years from today our overall level of audience service on broadcast and new platforms should be about thirty percent greater than it is today. No small accomplishment to do.

Now, how do we translate that to revenue? We know that listening leads to giving. We've assumed that we can maintain the same ratio of gross revenue coming into our stations per listener hour of use that we're doing today, not that we're going to improve it, but not that it's going to decline, either. That is, given an amount of listening that translates to an amount of giving today, we can sustain that into the future. But where we do think we can and should improve is in shaving off a little bit of our cost of raising those dollars. Right now it's costing us about 36 percent or 36 cents to raise a dollar in member support. We believe we should move that downward and can aim towards a figure of about 33 cents on the dollar. We've been there before. In the late 1990's, that's what we were doing; we think we can return to that level of productivity in our member fundraising. We believe we can do the same thing on the underwriting side. Right now we're spending about 32 cents to raise a dollar; we think we can move that down to about thirty percent with some organization and efficiency in what we do. That's shaving; that's not radical transformation. Now, taking those assumptions and assuming everything stays in today's dollars, to what does that translate? Our math says that brings 50 million net new dollars from members, 26 million net new dollars from underwriting. That's pretty good.

But wait, there's more! What about major gifts, one of our favorite subjects these days? Major gifts remains largely underdeveloped throughout our field. Most of us are in the very earliest stages of doing major gifts work, and even our strongest and most mature station organizations still have a long ways to go. So what can we do in the intervening five years? Right now we have about 2.6 million people, or households, who are giving to public radio. We assume that if we can achieve the level of growth in audience service that we described and maintain our productivity in converting listening to giving, that we'll be easing up on about three million givers by the year 2010. We also assume we can get to a place where one percent of those givers are giving at least \$1,000 to our stations, and an average gift among that one percent would be about \$1,500. How do these numbers compare to current performance? That would be on a par with reasonably successful public television and reasonably successful public radio stations today, but it's saying we need to bring all of our field close to that

level, and that our very best performers need to go beyond that. But we can do that; that's within our reach. One percent of our givers giving us at least a thousand dollars, an average among that one percent of \$1,500.

So what's that bring to us in new resources?

Well again, just like putting the broadcast service and the new delivery platforms together, we need to think about these things entwined? Our assumption would be half of that money that we would be getting would be coming from people who are already major givers or who are already giving to us at lower levels. But the gross increase nonetheless would be about thirty million dollars. But that's gross; what about the net? One of the reasons we're enamored of major giving is that most everyone who does it experiences a significantly lower cost of fundraising over the long haul for major gifts than in other forms of fundraising. And if we can achieve on a par with our colleagues elsewhere in the non-profit sector, we should be experiencing about a twenty percent cost of fundraising for major gifts, not the 30, 33, 36 percent that we're experiencing in other areas. So if you apply that twenty percent figure, where you get to is a new net income for major gifts of 24 million dollars.

So if we look at 2005 compared to 2010, how does all this add up? We're talking about fifty million dollars or so more from members, 26 million or more from underwriting, 24 million or more from major gifts; that's 100 million more in net revenue for public service for our field. That's after paying all the fundraising expenses. That's in current dollars making no assumptions for inflation. \$100 million in new capacity for public service.

So what's \$100 million? Well, that's the amount that was just so recently at risk with the House of Representatives and the appropriation for the Corporation for Public Broadcasting. That's twice the total that stations invest in National Public Radio. That's more than everything that stations invest in all national programming from all sources. It's more than one-third of what we are spending today on all of the programming from all sources, national and local, that we're doing. One hundred million dollars is serious money by any calculation. And it's within our reach without extravagant steps, without radical restructuring, but with important changes in what we do to capture that. It is within our reach.

TO MAKE A GREATER DIFFERENCE

So where's this leave us? We've built a really sound foundation of public service in what we've done that's brought us here today and that will likely endure for a generation to come. But we must envision a larger and enduring success that builds on that foundation. We must re-imagine public media with the daring and the passion of those who have gone before us. We must assume the risk of embracing change in order to make a greater difference for those that we serve.

If we do these things, if we take the steps that we've outlined, if we leverage the assets that we have, if we preserve our strategic position, if we apply ourselves rigorously, if we make the strategic choices that are ahead of us, if we do these things, then we believe that together we can grow, endow, and sustain a very powerful place of truth, an anchor of our democracy, a celebration of our rich cultures, and a trusted companion for the soul.

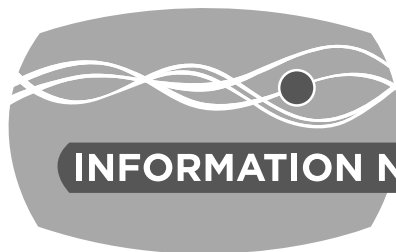
That's the task before us, that's the challenge that makes the work worthwhile, and we're up to it.



Informing COMMUNITIES

Sustaining Democracy in the Digital Age

T H E R E P O R T O F



THE KNIGHT
COMMISSION ON THE

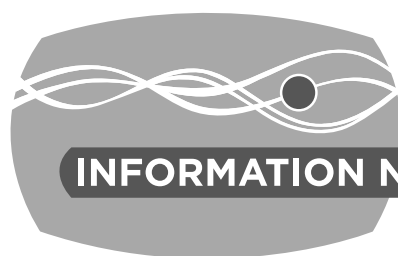
INFORMATION NEEDS OF COMMUNITIES

IN A DEMOCRACY

Informing COMMUNITIES

Sustaining Democracy in the Digital Age

T H E R E P O R T O F



THE KNIGHT
COMMISSION ON THE

INFORMATION NEEDS OF COMMUNITIES

IN A DEMOCRACY

The Knight Commission invites you to join the public dialogue on this report beginning October 2, 2009 at www.knightcomm.org or by using the Twitter hashtag #knightcomm.

Copyright © 2009 by The Aspen Institute

The Aspen Institute

One Dupont Circle, NW
Suite 700
Washington, DC 20036

Published in the United States of America in 2009 by The Aspen Institute
All rights reserved
Printed in the United States of America

ISBN: 0-89843-511-0



This work is licensed under the Creative Commons Attribution-Noncommercial 3.0 United States License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc/3.0/us/> or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.

Individuals are encouraged to cite this report and its contents. In doing so, please include the following attribution:

Knight Commission on the Information Needs of Communities in a Democracy, *Informing Communities: Sustaining Democracy in the Digital Age*, Washington, D.C.: The Aspen Institute, October 2009.

For more information, contact:
The Aspen Institute
Communications and Society Program
One Dupont Circle, NW
Suite 700
Washington, DC 20036
Phone: (202) 736-5818
Fax: (202) 467-0790
www.aspeninstitute.org/c&s

To purchase additional copies of this report, please contact:
The Aspen Institute
Publications Office
P.O. Box 222
109 Houghton Lab Lane
Queenstown, Maryland 21658
Phone: (410) 820-5326
Fax: (410) 827-9174

Publication and Website design by Collaborative Communications Group

Cover background graphic was created in part at www.wordle.net.



A project of the Aspen Institute Communications and Society Program and the John S. and James L. Knight Foundation.

TABLE OF CONTENTS

Foreword, <i>Alberto Ibargüen and Walter Isaacson</i>	I
Statement by the Co-Chairs, <i>Marissa Mayer and Theodore B. Olson</i>	V
Executive Summary	XI
Informing Communities: Sustaining Democracy in the Digital Age <i>The Report of the Knight Commission on the Information Needs of Communities in a Democracy</i>	
Introduction	1
Part I: What are the Information Needs of Communities in a Democracy?	9
Part II: Commission Findings and Recommended Strategies	
A. Maximizing the Availability of Relevant and Credible Information	23
B. Enhancing the Information Capacity of Individuals	40
C. Promoting Public Engagement	52
Conclusion and a Call to Action	62
Endnotes	65
Appendices	
Taking Stock: Are You a Healthy Information Community?	73
Executive Director's Memo: Potential Action Items	77
Speakers at Meetings of the Knight Commission	85
Speakers at Knight Commission Community Forums	87
Informal Advisors	93
Members of the Commission	101

The Report of the Knight Commission on the Information Needs of Communities in a Democracy

MEMBERS

Marissa Mayer, *Co-Chair*

Theodore B. Olson, *Co-Chair*

danah boyd

John Carroll

Robert Decherd

Reed Hundt

Alberto Ibargüen, *ex officio*

Walter Isaacson, *ex officio*

Benjamin Todd Jealous

Mary Junck

Monica Lozano

Lisa MacCallum

Andrew Mooney

Donna Nicely

Michael Powell

Rey Ramsey

Paul Sagan

EXECUTIVE DIRECTOR

Peter M. Shane

Foreword

The idea of a high-level commission to examine the information needs of 21st Century American citizens and communities originated at an Aspen Institute forum in the summer of 2007.

Participants in that discussion noted both the spread of digital technology and that, in a democracy, information is a core community need. There was also a sense that people with digital tools and skills have distinct political, social and economic advantage over those without them, as do the roughly 60 percent of Americans who have broadband access over those in rural areas or the poor who do not.

Finally, we were beginning to realize that people with digital access have a new attitude toward information. Instead of passively receiving it, digital users expect to own the information, actively engaging with it, responding, connecting. In sum, they expect to be able to act on and with it in an instant.

The thesis evolved that technology was changing attitudes toward information in basic, critically important ways, but that free flow of all sorts of information continued to be as critical as ever to the core of democracy. We proposed a commission to inquire into the nature of this change and suggest a way, or ways, forward.

In April of 2008, the John S. and James L. Knight Foundation and the Aspen Institute announced the formation of the Knight Commission on the Information Needs of Communities in a Democracy. Rather than on media, the Knight Commission would focus on communities, in the places where people live and work. The Commission was given a deceptively simple charge:

1. Articulate the information needs of a community in a democracy,
 2. Describe the state of things in the United States, and
 3. Propose public policy directions that would help lead us from where we are today to where we ought to be.
-

The result is not standard fare and we are delighted. This report focuses on the information people actually need, and works back from there, suggesting ways that the flow of information and its uses may be enhanced. That is a fundamentally different approach from traditional media policy that sought to promote or regulate existing media. Since the current pace of information technology change is rapid to the point of defying regularization or regulation, the Commission's approach is to steer to the true north of what is constant, the need for the free flow of information in a democracy.

Nothing in this report is meant to be prescriptive. Everything in this report is meant to propose and encourage debate.

Nevertheless, vision emanates from core values and it seems to us axiomatic that access to information is essential, while definition of what is valuable information is open to debate. Therefore, if there is no access to information, there is a denial to citizens of an element required for participation in the life of the community. That is as real politically (in denying voters information about candidates and issues) as it is socially (consider digital social networks) and economically (in a world where entry level job applications at MacDonald's or Wal-Mart must be made online, denial of digital access equals denial of opportunity).

What is a government to do? We think there is a lesson in the administrations of Dwight D. Eisenhower and Abraham Lincoln. They understood the need to connect the nation and did it, using the latest, popular technology. In the middle of the Civil War, the nation embarked on the construction of the transcontinental railroad, linking east and west for commerce and development. Post-World War II, Eisenhower caused to be built the United States Interstate Highway System, allowing the connection of the entire nation by car and truck.

Lincoln did not ask if people travelled for pleasure or commerce. Eisenhower did not care whether you drove a Cadillac or Ford. They cared that the nation be connected and that is our lesson. In the area of communications today, there is no greater role for public bodies, whether White House, Congress or state and local legislatures, than to invest in the creation of universal broadband access for all Americans, regardless of wealth or age, no matter that they live in rural or urban communities. Enabling the building of a national, digital broadband infrastructure and ensuring universal access is a great and proper role for government.

The Knight Commission further proposes that we take as national policy the strengthening of the capacity of individuals to engage with that information. Access is the beginning; education and training, public engagement and government transparency logically follow. Many variations on these themes are suggested here as the beginning of a national debate.

A final note: journalism matters. While the Knight Commission did not set out to “save” journalism, and its focus is on communications more generally, there is a clear understanding that we must find sustainable models that will support the kind of journalism that has informed Americans. The fair, accurate, contextual search for truth is a value worth preserving.

In constructing the Knight Commission, we purposely did not choose a panel of “experts.” While we sought diversity of views, the size of the group meant that we would not have full representation from every corner, though we tried to correct for that through a wide range of witnesses at hearings. We are grateful to them and to the staff because what we got is what we wanted: an insightful report by a panel of 15 thoughtful Americans that we hope will generate healthy debate for the benefit of our democracy.

Alberto Ibargüen
President and CEO
John S. and James L. Knight Foundation

Walter Isaacson
President and CEO
The Aspen Institute

Statement by the Co-Chairs

The Knight Commission on the Information Needs of Communities in a Democracy was assembled in 2008 to recommend policy reforms and other public initiatives to help American communities better meet their information needs. This project would not have been possible without support and generous funding from the John S. and James L. Knight Foundation, headed by President and CEO Alberto Ibarguen, and the organizational talent and assistance of the Aspen Institute, headed by President and CEO Walter Isaacson. We are deeply grateful to Alberto and Walter, as well as to Charles M. Firestone, who directs the Aspen Institute Communications and Society Program, which provided the Commission with its institutional home.

The current Knight Commission report represents months of intense study and debate among the Commissioners, all of whom contributed to this effort with wonderful insight, candor, and goodwill. While this report conveys the sense of the center of gravity of the Commissioners' deliberations, understandably, not every Commissioner agrees with every sentence or point in the report.

We could not have succeeded without the help of a great many others. Peter M. Shane, the Jacob E. Davis and Jacob E. Davis II Chair in Law at the Ohio State University, served as our Executive Director. He bore chief responsibility for programming the Commission's meetings and community forums, and served as the Commission's lead drafter, working in collaboration with Charlie Firestone and with Michael Fancher, the recently retired, 20-year Executive Editor of the *Seattle Times*, under whose leadership the *Times* won four Pulitzer Prizes.

Other key staff and consultants from the Aspen Institute included Erin Silliman, who served as project manager; research associate Musetta Durkee; and Jessica Schwartz Hahn of Peitho Communications, who advised us on our outreach efforts. The Aspen team was assisted throughout the process by their Knight Foundation colleagues Eric Newton, Vice President for Journalism; Gary Keibel, Journalism Program Director; Marc Fest, Vice President for Communications; and Mayur Patel, Director of Strategic Assessment and Impact.

During April and May 2009, the Commission launched a period of public outreach that garnered over 1,100 responses to a series of online questions, plus reactions to a draft introduction to our report. That process was facilitated by the team of PBS Engage, including Angela Morgenstern, Senior Director, PBS Interactive; Jayme Swain, Director, PBS Engage; Amy Baroch, Senior Project Manager, PBS Engage; Betty Alvarez, Content Manager, PBS Interactive; and Kevin Dando, Director, Digital and Education Communications.

Of course, the Commission also learned a very great deal from the many experts and community members who shared their insights with us at our Commission meetings and forums around the country. Appendices to this report identify all of our witnesses, as well as a roster of experts and leaders from a variety of fields who graciously acted as informal advisors throughout the process to the Aspen Institute Communications and Society Program. We are thankful to all of them.

In pursuing our work, we have been well aware that we are following in the path of other distinguished Commissions. These include the Hutchins Commission of the late 1940s, whose report, *A Free and Responsible Press*, still speaks in significant ways to the social responsibilities of the media; the Carnegie Commission on Educational Television, whose 1967 report lent significant impetus to the funding of public broadcasting in the United States; and the National Advisory Commission on Civil Disorders (better known as the “Kerner Commission”), which, in 1968, criticized the media for incomplete and often inaccurate reporting of African American affairs throughout American communities.

In a sense, the Knight Commission's purview has been even broader than the focus of our predecessors because we have sought to look comprehensively at the circulation of news and information in local communities. This mandate required us to inquire not only as to the state of the press, but also as to the role of other key institutions as well. These include government, technology firms, libraries, schools, foundations, community development organizations, and other private organizations that make up the institutions of civil society.

Nonetheless, there is a thread that plainly ties together all of these efforts over the decades: a desire to protect and enhance American democracy through information. It is in that spirit that we are pleased to forward this report to the American people. We believe that the Commission has accurately identified a series of profound challenges if America is to achieve the ideal of truly informed communities. We are also excited and energized by all we have learned about the creative and dedicated people of all ages and walks of life throughout the United States who are trying to help meet those challenges for the benefit of all of us. We look forward to the dialogue on these issues in the days and years ahead.

Marissa Mayer

Theodore B. Olson

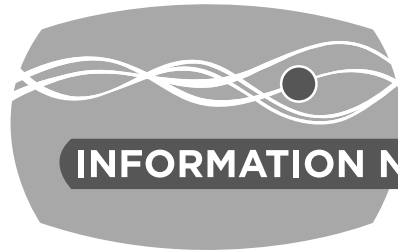
Co-Chairs

October 2, 2009

The background is a grayscale word cloud. The most prominent words are 'Commission', 'Journalism', 'democrat', 'individuals', 'government', 'opportunity', 'lives', 'flow', 'use', 'Recommendation', 'many', 'also', 'capacity', 'CIVIC', 'work', 'knowledge', 'skills', 'digital', 'Internet', 'business', 'Citizen', 'personal', and 'people'. The text is centered in a white serif font.

There need be no
second-class citizens in the
democratic communities
of the digital age.

T H E R E P O R T O F



THE KNIGHT
COMMISSION ON THE

INFORMATION NEEDS OF COMMUNITIES

IN A DEMOCRACY

Executive Summary

Executive Summary

The time has come for new thinking and aggressive action to dramatically improve the information opportunities available to the American people, the information health of the country's communities, and the information vitality of our democracy.

The Knight Commission on the Information Needs of Communities in a Democracy believes America is at a critical juncture in the history of communications. Information technology is changing our lives in ways that we cannot easily foresee. As dramatic as the impacts have been already, they are just beginning.

The digital age is creating an information and communications renaissance. But it is not serving all Americans and their local communities equally. It is not yet serving democracy fully. How we react, individually and collectively, to this democratic shortfall will affect the quality of our lives and the very nature of our communities.

America needs "informed communities," places where the information ecology meets people's personal and civic information needs. This means people have the news and information they need to take advantage of life's opportunities for themselves and their families. They need information to participate fully in our system of self-government, to stand up and be heard. Driving this vision are the critical democratic values of openness, inclusion, participation, empowerment, and the common pursuit of truth and the public interest.

To achieve this, the Commission urges that the nation and its local communities pursue three ambitious objectives:

- Maximize the availability of relevant and credible *information* to all Americans and their communities;
- Strengthen the *capacity* of individuals to engage with information; and
- Promote individual *engagement* with information and the public life of the community.

Public testimony before the Commission showed that America's communities have vast information needs. Those needs are being met unequally, community by community. Some populations have access to local news and other relevant information through daily newspapers, radio and television broadcasts, local cable news channels, hyper-local Web sites, services that connect to police reports and other sources of local information, blogs, and mobile alerts. Others are unserved or are woefully underserved.

Information is as vital to the healthy functioning of communities as clean air, safe streets, good schools and public health.

Local journalistic institutions that have traditionally served democracy by promoting values of openness, accountability, and public engagement are themselves in crisis from financial, technological, and behavioral changes taking place in our society. Even before the 2008 recession, many news organizations faced shrinking audiences and declining advertising revenue. With the recession, they are struggling even more. There is plainly reason to be anxious about the consequences for local journalism, and therefore for local democratic governance.

Technologies for acquiring and disseminating news and information are changing rapidly. Emerging media have become amazing forces for enabling people to connect. But their full potential is not yet realized in the service of geographic communities, the physical places where people live and work.

America's information needs are yet more urgent because of the economic recession of 2008. But such crises often create opportunity, and the Commission believes the current moment marks a time of great possibility.

It is a moment of technological opportunity. Experiments in social communication abound. The advent of the Internet and the proliferation of mobile media are unleashing a torrent of innovation in the creation and distribution of information. Those who possess and know how to use sophisticated computing devices interact ever more seamlessly with a global information network both at home and in public.

It is also a moment of journalistic and political opportunity. Information organizations, including many traditional journalistic enterprises, are embracing new media in unique and powerful ways, developing new structures for information dissemination and access. Political leaders and many government agencies are staking out ambitious agendas for openness. The potential for using technology to create a more transparent and connected democracy has never seemed brighter.

At this juncture, muddled strategies and bad choices will result in missed opportunities for society. Mistakes can reinforce existing inequalities and worsen second-class status for people who lack the resources, skills or understanding required in the digital age. Clear strategies and smart choices can produce a revolution in civic engagement, government openness and accountability, and economic prosperity.

The Commission believes that achieving its vision of informed communities requires pursuing three fundamental objectives:

- **Maximizing the availability of relevant and credible *information* to communities.** The availability of relevant and credible information implies creation, distribution, and preservation. Information flow improves when people have not only direct access to information, but the benefit also of credible intermediaries to help discover, gather, compare, contextualize, and share information.
- **Strengthening the *capacity* of individuals to engage with information.** This includes the ability to communicate one's information, creations and views to others. Attending to *capacity* means that people have access to the tools they need and opportunities to develop their skills to use those tools effectively as both producers and consumers of information.
- **Promoting individual *engagement* with information and the public life of the community.** Promoting engagement means generating opportunities and motivation for involvement. Citizens should have the capacity, both individually and in groups, to help shoulder responsibility for community self-governance.

Information is as vital to the healthy functioning of communities as clean air, safe streets, good schools, and public health. People have not typically thought of information in this way, but they should. Just as the United States has built other sectors of its vital infrastructure through a combination of private enterprise and social investment, Americans should look to a similar combination of strategies in developing its information infrastructure as well.

Information is essential to community vitality. Informed communities can effectively coordinate activities, achieve public accountability, solve problems, and create connections. Local information systems should support widespread knowledge of and participation in the community's day-to-day life by all segments of the community. To achieve the promise of democracy, it is necessary that the creation, organization, analysis, and transmission of information include the whole community.

In addition to the information necessary to participate in elections and civic affairs, people need access to information to better their lives. Where families struggle to make ends meet and many men and women work multiple jobs, free time is limited. Indeed, the path to active civic engagement may begin with fulfillment of basic information needs, including information about jobs, housing, taxes, safety, education, transportation, recreation, entertainment, food, shopping, utilities, child care, health care, religious resources, and local news.

A community is a healthy democratic community—it is an “informed community”—when:

- **People have convenient access to both civic and life-enhancing information, without regard to income or social status.**
- **Journalism is abundant in many forms and accessible through many convenient platforms.**
- **Government is open and transparent.**
- **People have affordable high-speed Internet service wherever and whenever they want and need it.**
- **Digital and media literacy are widely taught in schools, public libraries and other community centers.**
- **Technological and civic expertise is shared across the generations.**
- **Local media—including print, broadcast, and online media—reflect the issues, events, experiences and ideas of the entire community.**
- **People have a deep understanding of the role of free speech and free press rights in maintaining a democratic community.**
- **Citizens are active in acquiring and sharing knowledge both within and across social networks.**
- **People can assess and track changes in the information health of their communities.**

Another insight that emerged from the Commission's study: journalistic institutions do not need saving so much as they need creating. Both private and public investments are needed to exploit this moment of journalistic opportunity fully.

Original and verified reporting is critical to community information flow. The challenge is not to preserve any particular medium or any individual business, but to promote the traditional public-service functions of journalism. Rather than ask how to save newspapers, a better question is, "How can we advance quality, skilled journalism that contributes to healthy information environments in local communities?"

The Commission applauds efforts throughout the country to find new solutions and business models to preserve valued journalistic institutions and create new ones. There is a transition underway requiring fresh thinking and new approaches to the gathering and sharing of news and information.

The Commission has formulated 15 strategies for pursuing the three fundamental objectives of information availability, citizen capacity, and public engagement. The recommendations propose action by government, communities, the media, and citizens. The following are condensed versions of those recommendations.

Conclusions and Recommendations

A. Maximizing the Availability of Relevant and Credible Information

People need relevant and credible information to be free and self-governing.

THE COMMISSION CONCLUDES:

- **The current financial challenges facing private news media could pose a crisis for democracy.**
- **Public media should provide better local news and information.**
- **Not-for-profit and non-traditional media can be important sources of journalism.**
- **Public information belongs to the public. Government must be more open.**
- **Informed communities can measure their information health.**

THE COMMISSION RECOMMENDS:

1

Recommendation 1: Direct media policy toward innovation, competition, and support for business models that provide marketplace incentives for quality journalism.

2

Recommendation 2: Increase support for public service media aimed at meeting community information needs.

3

Recommendation 3: Increase the role of higher education, community and nonprofit institutions as hubs of journalistic activity and other information-sharing for local communities.

4

Recommendation 4: Require government at all levels to operate transparently, facilitate easy and low-cost access to public records, and make civic and social data available in standardized formats that support the productive public use of such data.

5

Recommendation 5: Develop systematic quality measures of community information ecologies, and study how they affect social outcomes.

B. Enhancing the Information Capacity of Individuals

People need tools, skills, and understanding to use information effectively.

THE COMMISSION CONCLUDES:

- **All people have a right to be fully informed.**
- **There need be no second-class citizens in informed communities.**
- **Funding to meet this goal is an investment in the nation's future.**
- **Americans cannot compete globally without new public policies and investment in technology.**

THE COMMISSION RECOMMENDS:

6

Recommendation 6: Integrate digital and media literacy as critical elements for education at all levels through collaboration among federal, state, and local education officials.

7

Recommendation 7: Fund and support public libraries and other community institutions as centers of digital and media training, especially for adults.

8

Recommendation 8: Set ambitious standards for nationwide broadband availability and adopt public policies encouraging consumer demand for broadband services.

9

Recommendation 9: Maintain the national commitment to open networks as a core objective of Internet policy.

10

Recommendation 10: Support the activities of information providers to reach local audiences with quality content through all appropriate media, such as mobile phones, radio, public access cable, and new platforms.

C. Promoting Public Engagement

To pursue their true interests, people need to be engaged with information and with each other.

THE COMMISSION CONCLUDES:

- **Creating informed communities is a task for everyone.**
- **Young people have a special role in times of great change.**
- **Technology can help everyone be part of the community.**
- **Everyone should feel a responsibility to participate.**

THE COMMISSION RECOMMENDS:

11

Recommendation 11: Expand local media initiatives to reflect the full reality of the communities they represent.

12

Recommendation 12: Engage young people in developing the digital information and communication capacities of local communities.

13

Recommendation 13: Empower all citizens to participate actively in community self-governance, including local “community summits” to address community affairs and pursue common goals.

14

Recommendation 14: Emphasize community information flow in the design and enhancement of a local community’s public spaces.

15

Recommendation 15: Ensure that every local community has at least one high-quality online hub.


The United States stands at what could be the beginning of a democratic renaissance, nurtured by innovative social practices and powerful technologies. With tools of communication (both old and new), dynamic institutions for promoting knowledge and the exchange of ideas, and a renewed commitment to engage in public life, Americans could find themselves in a brilliant new age.

The Knight Commission has recommended a series of strategies that, in various ways, exhort our major public and nonprofit institutions to give new priority to values of openness, inclusion, and engagement. The values questions posed are equally profound, however, for individual citizens and for media institutions. Creating informed communities is a task for everyone.

Communities throughout America need for their members to re-examine their individual roles as citizens in the digital age. More than ever, technology enables each citizen, as well as every business firm and every nonprofit organization, to be a productive part of the community. Those opportunities, however, and the social benefits they offer, imply a reciprocal responsibility to participate.

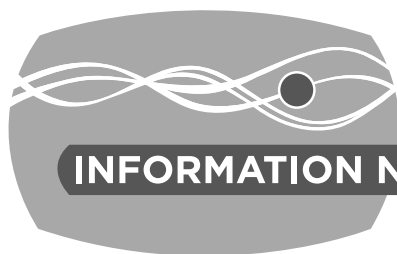
Likewise, communities can call upon their media institutions to confront how new technological capacities and social practices are challenging core values. The evolving relationship among journalists, media firms, and the public should engender a deep discussion about how these changes affect such values as objectivity, privacy, and accountability.

This report is intended to help America maintain its commitment to enduring information ideals, even as individuals and communities create information ecologies more relevant, participatory, and inclusive than ever. There need be no second-class citizens in the democratic communities of the digital age. Whether America fulfills this vision will require individual and collective initiative at every level of society.



America needs a vision for
“informed communities.” Paramount
in this vision are the critical democratic
values of openness, inclusion,
participation, empowerment, and the
common pursuit of truth and
the public interest.

T H E R E P O R T O F



THE KNIGHT
COMMISSION ON THE

INFORMATION NEEDS OF COMMUNITIES

IN A DEMOCRACY

Informing Communities: Sustaining Democracy in the Digital Age

Introduction

The time has come for new thinking and aggressive action to ensure the information opportunities of America's people, the information health of its communities, and the information vitality of our democracy. Every advance in communications technology expands the possibilities for American democracy, but every information system also creates potential winners and losers.

The information revolution is benefitting those in the middle class and up and, in a different way, many young residents of urban and suburban communities. They have never had greater access to more relevant information. But many Americans are in danger of remaining or becoming second-class citizens in the digital age, whether because of low income, language barriers, lack of access to technology, limited skills and training, community norms, or lack of personal motivation. The poor, the elderly, rural and small town residents, and some young people are most at risk. Those who belong to more than one of these groups are especially vulnerable. To take perhaps the most dramatic example of an enduring divide: "Only sixty-eight percent of households on Tribal lands have a telephone; only eight Tribes own and operate telephone companies; and broadband penetration on Indian lands is estimated at less than ten percent."¹

If the problem were simply "not keeping up" with the latest information technologies and capabilities, the situation would be bad enough. But many people are now losing the information sources they have relied on, as newspapers, TV, and radio reduce news coverage to survive financially. In a democracy, the very idea of second-class citizenship is unacceptable; yet, for many, second-class information citizenship is looming.

The inability of some to participate fully in community life through a loss of information harms not only those directly affected. It also harms the entire community. Democratic communities thrive when all sectors are active participants.

The Knight Commission on the Information Needs of Communities in a Democracy believes America is at a critical juncture. Information technology is changing our lives in ways that we cannot easily foresee. Critical intermediating practices—journalism perhaps most obviously—are facing challenges of economics, organization, and values. As dramatic as the impacts have been already, they are just beginning. How we react, individually and collectively, to the information challenges and opportunities now presented to us will affect the quality of our lives and the very nature of our communities.

Informed Communities

As the Knight Commission’s full name attests, its fundamental charge has been to identify and articulate the information needs of communities in a democracy. The Commission has addressed that mandate by reviewing academic and industry research across a wide range of disciplines; hearing directly from experts on media, community and public policy; staging public hearings across the United States;

and drawing on its own collective expertise.² Through this process, the Commission has come to understand “information needs” in a particularly expansive way. The question “What are a community’s information needs?” is more than a question about the categories of knowledge that people require. It is best understood as a question about the kind of information ecology—that is, the kind of environment for information and communications—that a community ought to become.

America needs
“informed
communities,”
places where
the information
ecology meets
people’s personal
and civic
information needs.

In short, America needs a vision for “informed communities,” places where the information ecology meets the personal and

civic information needs of people. This means people have the information they need to take advantage of life’s opportunities for themselves and their families. It also means they can participate fully in our system of self-government, to stand up and be heard. Paramount in this vision are the critical democratic values of openness, inclusion, participation, empowerment, and the common pursuit of truth and the public interest.

To achieve this vision, the Commission believes that the nation and its local communities need to pursue three ambitious objectives:

- Maximize the availability of relevant and credible *information* to all Americans and their communities;
- Strengthen the *capacity* of individuals to engage with information; and
- Promote individual *engagement* with information and the public life of the community.

The Commission might well have reached these conclusions even without the economic downturn of 2008. Public testimony before the Commission showed the nation's vast information needs are being met unequally, community by community. Some populations have access to local news and other relevant information through daily newspapers, radio and television broadcasts, local cable news channels, hyper-local Web sites, blogs, mobile alerts, and services that connect to police reports and other sources of local information. Others are woefully underserved.

Key democratic institutions are under obvious stress—public service journalism perhaps most of all. Access to news and information is critical to democracy. Journalists serve as watchdogs over public officials and institutions, as well as over the private and corporate sector. They provide information for citizens to run their lives, their communities, and their country. News organizations also foster civic understanding, engagement, and cohesion. When they work well, they help make communities open, officials accountable and publics engaged.

For over a decade, many local news institutions have been in crisis from financial, technological and behavioral changes taking place in our society. Before the recession, many newspapers were facing falling subscriptions and declining advertising revenue. With the crash of 2008, they are struggling even more.

Some observers worry that many newspapers may not recover or will become only a shadow of their former selves.³ Some local broadcast news programs are losing audiences and revenues.⁴ In many communities, news organizations are increasingly less able to meet the needs of citizens. For example, a 2009 *American Journalism Review* survey found 355 newspaper staff reporters covering their respective statehouses full time—a decrease of more than 30 percent over the last six years.⁵ Nearly three-quarters of the respondents to a 2009 Associated Press Managing Editors survey expressed their belief that shrinking staffs were hurting their capacity to keep readers informed.⁶ There is plainly reason to be concerned for local journalism, and, therefore, for local democratic governance.

New technologies are rapidly changing the processes for acquiring and disseminating news and information. Emerging media have become amazing forces for enabling people to connect. But their full potential is not yet realized in the service of geographic communities, the places where people live, work, and vote.

A Moment of Opportunity

The economic downturn of 2008 added urgency to all of these concerns. It was like an earthquake shaking the global economy to its core, and the aftershocks of uncertainty are rattling families, communities, institutions, and the nation. But such crises often create opportunity, and the Commission believes the current moment is a time of great possibility.

It is a moment of technological opportunity. Experiments in social communication abound. The advent of the Internet and the proliferation of mobile media are unleashing innovation in the creation and distribution of information. Those who possess and can use sophisticated devices interact ever more seamlessly with a global information network both at home and in public.

Wireless devices may bring new services to the consumer at gigabit speeds within the next three-to-five years.⁷ Even now, mobile devices are increasingly popular as a way to connect to the Internet. They represent a chance for Americans who cannot afford a personal computer to connect to the communication revolution, just as millions of people do around the world.

African Americans and English-speaking Latinos currently represent especially active populations of mobile Web users. Between the end of 2007 and early 2009, roughly 48 percent of African Americans and 47 percent of English-speaking Latinos accessed the Internet via a mobile device as opposed to 32 percent of the general population. As reported in 2009 by the Pew Internet and American Life Project, African Americans on any given day are 70 percent more likely to access the Internet on a handheld than white Americans.⁸

It is also a moment of journalistic and political opportunity. Media firms are searching for economically sustainable models to make their reinvention viable. Many news organizations, old and new, are embracing new technologies to create innovative processes for connecting the public to the information it needs and wants. Political leaders and many government agencies are staking out ambitious agendas for openness. The potential for using technology to create a more transparent and connected democracy has never seemed brighter.

The Commission has created what it hopes will be a helpful framework for seizing these opportunities. The following is the Commission's articulation of community information needs and the critical steps necessary to meet them.



People need relevant and
credible information in order to
be free and self-governing.

PART I

What are the Information
Needs of Communities
in a Democracy?

What are the Information Needs of Communities in a Democracy?

Community Functions Depend on Information and Exchange

American democracy is organized largely by geography, which is why the Commission has focused primarily on the needs of geographically defined communities.⁹ Local communities need to accomplish at least four things that depend on information.

- Communities need to *coordinate*. Activities like elections, emergency responses, and even community celebrations succeed only if everyone knows where to be at what time and what role to play. This requires a system of information and exchange. Information is also the central resource in enabling the creation of economic and social connections that build a community's capacity for action.
- Communities need to *solve problems*. They have to identify goals, challenges, and options for response on everything from building the local economy, to improving the performance of community schools, to protecting health and safety and combating local hunger. They have to estimate the consequences of alternative approaches. They have to weigh those consequences in light of community values. All of this requires information, interpretation, analysis, and debate.
- Communities need to establish systems of *public accountability*. Public officials answer to voters for their performance in office. Voters need information and analysis to assess how officials are doing their jobs.
- Finally, communities need to develop *a sense of connectedness*. They need to circulate ideas, symbols, facts, and perspectives in a way that lets people know how they fit into a shared narrative. A community's system of meaning evolves as new voices and new experiences enter the information flow. People need access to that information to avoid feeling alienated and excluded.

Communal and Personal Needs Intersect

Communities can fulfill their key functions only through the individuals who live there. This means that the information needs of any local community are inevitably connected to the personal information needs of its people.

To begin with, people have to be able to meet their personal and family needs in ways that leave time and energy available for community issues. Then, for community processes to work, people require information that relates directly to participating in public life.

Moreover, the streams of personal and civic information shape each other. In many cases, news about the larger community may be essential to helping people fulfill their personal objectives. Conversely, as people work on their individual goals, they see the links between their personal lives and the public life of their communities. The civic and the personal are inescapably intertwined.

The citizen's
information
needs are
both civic
and personal.

The Commission's emphasis on democracy reinforces this insight. At a minimum, democracy means self-governance in a political system protective of liberty and equality. In its deepest version, however, democracy means something more. It connotes a commitment to individual freedom in daily life. It means opportunity to pursue one's personal goals and objectives, within the law, however one chooses. The citizen's information needs are both civic and personal.

Envisioning and Measuring Success and Failure

In a perfect world, citizens could reliably measure their information needs and gauge their satisfaction. Community members could quantify the assets of their local information ecology. Researchers could correlate information assets with positive social outcomes. Citizens and their representatives could formulate recommendations to improve social outcomes by making specific, measurable improvements in information handling.

However, information researchers have not developed the tools to perform these tasks with precision. The Commission has viewed international efforts at such indexing with interest.¹⁰ It has looked at efforts to create tools that would be useful locally to assess a community's information ecology.¹¹ Such efforts do not yet enable us to measure information flow successfully or relate that flow to other community outcomes.

Millions of Americans meet their information needs through broadband service and home computers or Web-enabled mobile phones. At their desks or just walking their neighborhoods, they have access to more information than many nations hold in all the books in their national libraries. Today's information consumers can pull together the news they want to follow in a convenient Web page. They can apply online for a job, a loan, or college admission. They can check their children's school lunch options and keep track of homework assignments. Before they go to the doctor, they can arm themselves with information from health Web sites or online support groups. They do not overdraw their bank accounts because they can check balances online and move funds from one account to another. They pay bills efficiently without ever using a postage stamp.

Against this baseline, it is easy to describe what failure looks like. For individuals, failure is the inability to apply for jobs online. Failure is the inability to get relevant health information. Failure is not being able to take advantage of online educational opportunities or use online tools to track the education of one's children. Millions of Americans lack the tools or the skills to match their information-rich contemporaries in pursuing personal goals. The freedom they enjoy to shape their own lives and destiny is stunted. These people are falling into second-class citizenship. This is true even putting aside the actual civic activities that online connectedness makes possible. Even if they want to engage in the public affairs of their communities, the navigation of life's daily mundane tasks requires disproportionate time and energy. This is not democracy at work.

In terms of community coordination, failure looks like the aftermath of Hurricane Katrina. People know of dangers but do not organize in response to them. When emergencies strike, information systems break down. People do not know where to find food, shelter, health care and basic safety.

In terms of community problem-solving, failure is the proliferation of problems unaddressed. Downtowns dry up. Pollution spreads. Employers leave. Unemployment climbs. Dropout rates increase. Public health problems intensify.

A community without public accountability suffers from unresponsive government. Neglect is common, corruption all too plausible. Money is wasted as government officials are slow and awkward at doing what other governments do quickly and nimbly. Voter turnout is low, not because people are satisfied, but because people are resigned.

A community without a sense of connectedness is a group of people who know too little about one another. Social distrust abounds. Alienation is common. Everyone assumes that somebody else is getting "a better shake." The community loses out on the talents of people who lack either the opportunity or motivation to share

their skills. When problems arise, there is little common ground to solve them. People feel excluded, that they are not “part of the action,” and they disconnect from one another.

Engagement Involves Both Information and Information Intermediaries

Part of what is missing in these sketches of individual and community failure is information. But the problem is not the lack of information; it is an absence of engagement—personal involvement with the larger community based on accurate and timely information.

Unless people, armed with information, engage with their communities to produce a positive effect, information by itself is powerless.

Information alone does not guarantee positive outcomes. Consider one famous example. A front-page story in the June 8, 2004, *Times-Picayune*¹² in New Orleans detailed a near-stoppage in the work needed to shore up the city’s levees. The mere revelation of that information in itself did not mobilize the effort that might have spared the city the worst ravages of Hurricane Katrina 14 months later. Interested or influential people did not

engage with the information in timely, effective ways. Unless people, armed with information, engage with their communities to produce a positive effect, information by itself is powerless.

Engagement is the critical point where community and individual information needs intersect. Communities need policies, processes, and institutions that promote information flow and support people’s constructive engagement with information and with each other.

A community’s information ecology works best when people have easy, direct and timely access to the information they need. Many communities are developing online systems to access a variety of public records. Information aggregators use tools to help people quickly find the relevant records and data. Among the more exciting developments is increasing online availability of all kinds of public data, not just conventional “records.” Initiatives like these enable private and nonprofit

entrepreneurs to use existing government information as the basis for new businesses and civic projects. The sharing of data can also improve the quality, accountability and efficiency of government.

Direct access to information, however, is not a complete solution to a community's needs because *information can overwhelm*. Emerging technologies may help people sift, organize and evaluate information. But even tech-savvy individuals are unlikely to possess the institutional resources they need to meet all their personal information needs and objectives without help. No individual can generate all the analysis, debate, context and interpretation necessary to turn raw information into useful knowledge.

Thus, just as communities depend on citizens for engagement, individuals depend on formal and informal institutions for support to engage with information. The local daily newspaper is one such intermediary. So are local television and radio newsrooms. Some support comes from private enterprise. Public and nonprofit institutions can also function as intermediaries, sometimes through face-to-face programming, sometimes via Web sites. Family, friends and co-workers can be intermediaries. But the key point is simple: effective, trusted intermediaries help people engage with information.

Journalism Is a Critical Intermediating Practice

Individuals and communities depend on news as a critical element of the information ecology, and effective intermediaries are critical in gathering and disseminating news.

The 1947 Hutchins Commission Report, *A Free and Responsible Press*, defined news as “truthful, comprehensive, and intelligent account[s] of the day’s events in a context which gives them meaning.”¹³ The best journalism serves the interests of truth by reporting as fact only what can be verified through multiple trusted sources.

News can be life-enhancing. It can be decisive to individuals in their personal affairs. Local, national and international events can point the way to important challenges and opportunities. News can affect decisions that are both mundane and essential to personal well-being: where the Board of Education will locate a new school, whether plans are advancing for light rail through city neighborhoods, early reports of a possible flu outbreak at a local community college.

The news also helps people to connect their private and public concerns. It helps them identify and take advantage of opportunities to put issues of personal importance on the public agenda. To serve their individual purposes, people need continual access to news that is credible, verified and up-to-date.

News is also essential for the community as a whole. Community coordination cannot exist without shared news. The dissemination of information, debate and analysis is central to problem solving. The Hutchins Commission emphasized the importance of media's role in projecting a "representative picture of the constituent groups in the society." The news connects subcommunities by letting one neighborhood know what another neighborhood is doing and how the affairs of some affect the fortunes of all.

News promotes accountability. Watergate, the Pentagon Papers, and the 2007 Walter Reed Army Medical Center scandal are iconic examples. A 2003 international study showed a strong association between national levels of corruption and the "free circulation of daily newspapers per person." The same investigators found a similar relationship across American states. Government corruption declined in the United States between the Gilded Age and the Progressive Era. Historians identify the development of an information-oriented press as a possible factor.¹⁴

In the same vein, a 2008 MIT study found that members of Congress who are covered less by their local press work less for their constituencies, as evidenced by lower federal spending in their districts. They vote their party line more often, testify less often before congressional hearings, and appear to serve less frequently on constituency-oriented committees. This research suggests a tie between news coverage, voter awareness, and official responsiveness. Voters living in areas with less coverage of their members of Congress were found to be "less likely to recall their representative's name, and less able to describe and rate them."¹⁵

In any community, journalists are the primary intermediaries for news. They are the people most systematically engaged in gathering, analyzing and disseminating news. The connection between the potential positive effects of news and the vitality of professional journalism makes sense. Public accountability is an obvious case. People behave better if they think they are being watched. But journalism that is good at watching people in power is hard. It requires training, determination and time. It can also be expensive, especially when the prospects of legal expenses are added to the budget necessary to cover the basic costs of reporting and production.

The journalism of the future may or may not take the familiar form of newspapers. But for true public accountability, communities need skilled practitioners. They ask tough questions. They chase obscure leads and confidential sources. They translate technical matters into clear prose. Where professionals are on the job, the public watchdog is well fed. Part-time, episodic or uncoordinated public vigilance is not the same.

The Commission recognizes that new technologies and techniques can bring more information to light and can complement or substitute for more traditional journalism. This is an evolving process. But in the end, the goals of journalism persist and remain vital. Someone needs to dig up the facts, hold people accountable and disseminate the news.

Information Intermediaries Need Both Private and Public Investment

Effective information intermediaries require resources. But because *information is often a public good*, there are at least two challenges in funding them.

First, information creates what economists call “positive externalities.” These are benefits for the public as a whole from which no individual firm can profit. An informed public is likely to be a more engaged public. It is likely to make better decisions and to resolve conflict more productively. Better informed people are more helpful resources to one another. But no one economic actor will invest enough personal resources to achieve these outcomes because the benefits will flow to everyone in the community, not just to the investor.

Much information is also “non-rivalrous.” One person’s consumption of information does not reduce the amount others can consume. People who do not pay for information can thus make free use of a lot of the information that other people have paid for. This produces a “free rider” problem. People underinvest in information because they suspect that they can benefit, without paying, from the investments of others. (If others read newspapers and share what they learn, why subscribe?)

These facts point to a critical economic consequence: just because communities need journalism does not mean that consumers in the marketplace will generate enough revenue to support that journalism. Specialized publications, whether for investment counseling or restaurant reviews, can be market-supported. But subscriptions alone have never supported and are not likely ever to pay the full cost of gathering and disseminating general local news. In the 20th century, advertising compensated for much of the shortfall because advertisers were willing to pay substantial sums to newspapers and local broadcast stations to reach their audiences. The Internet and the fragmentation of media markets through the proliferation of new outlets have undermined this business model. Adjusted for inflation, newspaper ad revenues fell 31 percent between 2000 and 2007,¹⁶ hitting metropolitan dailies the hardest. These trends clearly call into question how communities and their citizens will pay for news and information in the future.

Because of information's special character, America has a long history of providing social support for the development and transmission of news and information. Beginning in the 18th century, the Postal Service subsidized the delivery of newspapers,¹⁷ and postal subsidies still support nonprofit publications. Congress created and partially funds public radio and public television. Commercial broadcasters have enjoyed protected use of their airwaves at little or no cost. States help to finance schools and colleges, and local communities fund libraries, as forms of social support for the generation and transmission of knowledge.

Public policies need to allow or encourage private market mechanisms to robustly serve community information needs. But because so much information is a public good, communities and the country also need to make some public investments in the creation and distribution of information.

Accordingly, if communities are to enjoy the kind of information ecology that fosters individual and collective success, they will need to pursue a dual course of action. Public policies need to allow or encourage private market mechanisms to robustly serve community information needs. But because so much information is a public good, communities and the country also need to make some public investments in the creation and distribution of information.

Promoting Democratic Values

In sum, a compelling vision for meeting the information needs of communities in a democracy must first take account of the needs of individuals who make up America's communities. It requires attention to the core community functions we have identified, the role of intermediaries, and the economics of information. But it also requires pursuing the values that a democratic information system should serve. In distilling all that it has read and heard, the Commission has come to regard the following five values as paramount here:

1. **Openness.** The information ecology should be maximally available to everyone as a producer and consumer of information and, within the bounds of law, should support the widest possible range of choices for personal lifestyle and civic initiative.
2. **Inclusion.** The information system should reflect the interests, perspectives, and narratives of the entire community; everyone should be able to find information relevant to their needs.
3. **Participation.** The information system should operate to encourage and support people's productive engagement with information for personal and civic purposes.
4. **Empowerment.** Individuals should have the opportunity to pursue their talents, dreams and interests. Communities should be able to govern their own affairs successfully, reflecting the needs and values of their members.
5. **Common Pursuit of Truth and the Public Interest.** People should be able to differentiate what is credible, verifiable and rigorously determined from what is speculative, false or propagandistic. They should also be able to engage with information and each other to develop public decisions that maximize community welfare.

The Commission recognizes that putting these principles into operation is challenging, in large part, because important values often exist in tension with one another. Democratic communities must invariably struggle, for example, with the balance between openness and privacy, and between the freedom of speech and the accountability of speakers. These issues, however, only underscore every citizen's need for the news, information and analysis necessary to participate meaningfully in the public decisions that effectively strike that balance.

The Commission believes that achieving its vision of informed communities requires pursuing three fundamental objectives, each discussed in the following sections of the Commission's report:

- **Maximizing the availability of relevant and credible *information* to Americans and their communities.**

Availability implies the creation, distribution and preservation of information. In addition to making important public information available directly to individuals, information flow improves when credible intermediaries help people to discover, gather, compare, contextualize and share information.

- **Strengthening the *capacity* of individuals to engage with information.**

Attending to *capacity* means that all people have access to the tools they need and opportunities to develop their skills to use those tools effectively as both producers and consumers of information. Everyone in a democracy should be able to communicate their information, creations and views to others. The Commission envisions actions that expand access to information and communications technologies, create more effective and affordable use of existing technologies, and foster lifelong learning at all levels and in multiple settings.

- **Promoting individual *engagement* with information and the public life of the community.**

Promoting *engagement* means generating opportunities and motivation to engage. The Commission envisions actions for engaging young people more deeply in the lives of their communities. It also envisions enabling communities to capitalize on the creativity and technological skills of young people and other segments of the community who may otherwise be overlooked or underengaged. Finally, the Commission encourages actions that empower citizens, both individually and in groups, to assume greater responsibility for community self-governance. This includes local community activism around access to information as a public need.

The Commission believes that the vigorous pursuit of these objectives would help produce what truly deserve to be called “informed communities.” In such healthy democratic communities:

- **People have convenient access to both civic and life-enhancing information, without regard to income or social status.**
- **Journalism is abundant in many forms and accessible through many convenient platforms.**
- **Government is open and transparent.**
- **People have affordable high-speed Internet service wherever and whenever they want and need it.**
- **Digital and media literacy are widely taught in schools, public libraries and other community centers.**
- **Technological and civic expertise is shared across generations.**
- **Local media—including print, broadcast, and online media—reflect the full reality of the communities they represent.**
- **People have a deep understanding of the role of free speech and free press rights in maintaining a democratic community.**
- **Citizens are active in acquiring and sharing knowledge both within and across social networks.**
- **People can assess and track changes in the community’s information health.**

An informed community would regard the health of its information environment as being as central to community success as the quality of its water system or electrical grid.

It would protect that health by persistent and simultaneous focus on issues of information availability, citizen capacity and public engagement.



Clear strategies and smart choices
can produce a revolution in civic
engagement, government openness and
accountability, and economic prosperity.

PART II

Commission Findings and Recommended Strategies

Commission Findings and Recommended Strategies

A. Maximizing the Availability of Relevant and Credible Information

To lead full lives in America's democratic republic, citizens need two kinds of information: civic information and life-enhancing information. These may come from the same sources or through the same media. The same information sometimes serves both purposes, but they remain distinct categories. Successful problem solving for both individuals and communities requires access to both. Yet, millions of Americans lack ready access to relevant, credible information in either or both categories.

Salvador "Chava" Bustamante is a former labor organizer currently working with the California organization Strengthening Our Lives. SOL promotes the involvement of Latinos in politics. As a speaker at the Commission's September 8, 2008, public forum, Mr. Bustamante highlighted the dual nature of the information people need to live as successful citizens in a democratic community. He said:

Fifteen years ago, I became a citizen, and I have been voting in every election. The reason I do it is because I want to participate in all the decisions that affect my life and the life of my community.... But being part of a democracy to me means more than one man or woman equals one vote. Democracy to me means making available all the opportunities in our society to as many people as possible all so we all can prosper.... Democracy is giving everybody an opportunity to better their lives.

Civic and social information is the information people need to “participate in all the decisions that affect . . . the life of [a] community.” People need to know their rights and how to exercise them. They need to know how well public officials and institutions function. They need the underlying facts and informed analysis about the social, economic, political and cultural factors that shape the community’s challenges and opportunities. They need news.

But, as Mr. Bustamante emphasized, democratic citizens also need *life-enhancing information*. This is information related to people’s personal welfare and ambitions—how to protect and advance their health, education, and economic position. Members of underserved populations have a special need for information about available services that can benefit them and their families. Mr. Bustamante’s straightforward testimony made the point poignantly. Speaking of his own life in the United States, he said, “Personally, I feel like I wasted a lot of time trying to find information about how to reach my goals. I know that if I would have had access to information about how to get my GED or training opportunities for a better job, I probably would have continued my education rather than working in the fields for 12 years.” Many Americans share Mr. Bustamante’s experience or something like it.

Information Ecologies

In terms of serving these two distinct information needs, every local community offers a specific information ecology. Its environment will include people interested in finding things out and sharing what they know. It will include people who know how to access at least some of the facts that community members need.

Every local
community
offers a specific
information
ecology.

The community will have formal and informal networks for people to exchange knowledge, ideas, opinions, and perspectives. It will have organizations that generate and transmit news and information. It will have institutions that help people sort through the overwhelming torrent of words, symbols and ideas bombarding them daily. Virtually everyone will be involved in creating and receiving information.

But, as the Commission heard frequently, not all information ecologies are equally effective. Few work equally well for all community members. Some communities and their citizens are conspicuously better off than others.

Communities Need Strong Information Intermediaries

The problem of information access is not a problem of volume. People are frequently awash in information, but they are desperate for trusted assistance to help make sense of the information they have. Everyone depends to some extent on intermediaries to help acquire, verify, select, and make sense of information. The range and quality of intermediaries will always be central to a healthy information ecology. This is true for both civic and life-enhancing information.

Libraries are vital actors on this stage. There are 9,198 public libraries in the United States, with over 16,500 outlets. Americans use them. Visits to public libraries totaled 1.4 billion in 2005. The circulation of materials topped two billion items.¹⁸ Over 68 percent of American adults today have a library card. This is the highest number since the American Library Association began tracking this statistic in 1990. Over three-quarters of all Americans used public libraries in the year leading up to a September 2009 survey.¹⁹ Young adults between 18 and 30 are the most likely to use libraries and the most likely to say they will use libraries in the future.²⁰

Moreover, public libraries increasingly emphasize civic and media training and serve as key centers for community dialogue. Yet, public libraries are typically strapped for resources. A 2006 study by the ALA showed that many libraries sustained deep cuts in fiscal years 2003, 2004, and 2005.²¹ As tax revenues dwindle, many libraries are having to cut hours and programs just when they are most needed.

Higher education institutions are also key information intermediaries. They have become increasingly important as sources of expertise and talent for social and economic development. This is dramatically evident in the evolution of land grant university extension services. No longer does “extension” signify a lonely agent driving an aging station wagon out to share crop information with area farmers. Many extension programs offer consulting services for small towns and rural areas doing strategic planning for economic growth and environmental sustainability. They sponsor public health programming and financial counseling. They publish online agricultural newsletters.

These and similar programs are evident across the full range of higher education. From the largest research universities to America’s more than a thousand community colleges, the best of the higher education sector is translating faculty teaching and research into practical resources for individuals and communities.

The **nonprofit sector** is also likely to provide important information services. Local foundations and other nonprofit initiatives—for example, America’s 15,000 senior centers—frequently channel information to community residents about issues of health, education, and economic opportunity. The Internet has been a boon to such activity. Even very low-cost, non-interactive Web sites may function effectively to deliver basic information to people looking to address personal and family issues.

Journalism Is Essential to Community Health

Journalists are key intermediaries in terms of local news and information flow. The Commission understands journalism broadly to encompass “the gathering, preparing, collecting, photographing, recording, writing, editing, reporting, or

publishing of news or information that concerns local, national, or international events or other matters of public interest for dissemination to the public.”²²

How can
we advance
quality, skilled
journalism that
contributes
to healthy
information
ecologies in local
communities?

Throughout the twentieth century, the practice of journalism found numerous outlets. Mainstream daily newspapers, community weeklies, the ethnic and alternative press, private and public radio and television, and cable news organizations have all been part of the mix. These media are now joined by an expanding array of online sources. Some new media resemble their pre-digital forebears. Others more closely resemble social networking sites and collaboratively gather, edit, and disseminate information.

During the months of Commission deliberations, near-daily news stories detailed the financial difficulties of metropolitan daily newspapers. Headlines report newspaper company bankruptcies, the shutdown of some newspapers, and threats to close others. The newspaper industry lost 100,000 jobs over the last decade, although this figure is hard to evaluate without knowing how many of those were journalists. The Project for Excellence in Journalism estimates that, from 2001 to the end of 2009, the total job loss among newspaper journalists will likely pass 14,000. That is roughly 25 percent of the industry’s news workforce lost in nine years.²³ It is no wonder that “whether and how to save newspapers” are questions much discussed across the blogosphere.

The Commission agrees there is serious cause for concern. Newspapers may have their shortcomings, but in many communities, they have been for a century or longer the primary source of fair, accurate and independent news. They are usually the major provider of “beat” and investigative journalism. They often set the news agenda for other community outlets, including both broadcast and new media. They have been critical to how cities, towns and regions understand themselves and their circumstances. Television and radio are also critical news sources, but are unlikely to offset fully any drop that local communities experience in original, verified newspaper reporting. That is because the average radio station provides under an hour of daily news coverage,²⁴ and television stations, even as they increase their news coverage, are doing so with fewer and less experienced journalists on staff.²⁵

From the standpoint of public need, however, the Commission believes that the challenge is not to preserve any particular medium. It is to promote the traditional public service functions of journalism. The key question is, “How can we advance quality, skilled journalism that contributes to healthy information ecologies in local communities?”

The Changing Face of Journalism

Journalistic institutions do not need saving so much as they need creating. The 2007 Newspaper Association of America count of daily newspapers in the United States was 1,422. At the same time, there are 3,248 counties, encompassing over 19,000 incorporated places and over 30,000 “minor civil divisions” having legal status, such as towns and villages.²⁶ It follows that hundreds, if not thousands of American communities receive only scant journalistic attention on a daily basis, and many have none. Even accounting for community weeklies—a 2004 survey identified 6,704 such papers nationwide²⁷—it is likely that many American communities get no attention from print journalism at all. Joe Hansen of Montana’s Big Timber News Citizen Newspaper Group and the Executive Director of the Western EMS (Emergency Medical Services) Network, told the Commission that no one should assume that local media in smaller towns cover a larger percentage of the community’s relevant events. Coverage falls short everywhere.

Hundreds, if not thousands, of American communities receive only scant journalistic attention on a daily basis, and many have none.

The Commission applauds efforts throughout the country to find new solutions and business models to preserve valued journalistic institutions and create new ones. We recognize there is a transition underway requiring fresh thinking and new approaches to the gathering and sharing of news and information.

Network technology may have hastened the decline in revenues to existing mass media institutions. But that same technology can lead to a new ecology of journalism in which reporters and their publics intermix in new ways.

A next stage is emerging with new forms of collaboration between full-time journalists and the general citizenry.

Some journalism organizations are already using network technologies to address cuts in coverage of local news. Among the most exciting aspects of the technology revolution is the opportunity it creates for emerging concepts like networked journalism and open source reporting.²⁸ We have already seen the rise of “citizen journalists.” These are nonprofessionals who use commonly available text, audio and video tools to create their own news stories or contribute to others. There are likewise

“citizen editors,” bloggers who collect news stories created by others that they believe are most interesting and relevant to a potential audience. A next stage is emerging with new forms of collaboration between full-time journalists and the general citizenry.

Networked journalism allows news enterprises to reorganize so that full-time staff members act as nodes for networks of citizen participants who cover every “beat” conceivably relevant to the news organization’s audience. Through networked journalism, technology can enable a diffusion of the news-gathering functions, creating greater coverage of local affairs. Technology also permits new depth in local news. In “open source reporting,” reporters, editors and large groups of users all work on the same story.²⁹

Local Nonprofits Can Also Perform Some Journalistic Functions

New, low-cost communication tools have likewise enabled non-profit organizations to undertake journalistic activity in response to the decline in local news. Muhammed Chaudhry, the President and CEO of the Silicon Valley Education Foundation (SVEF), presented one example at the Commission's September 8, 2008, forum in Mountain View, California. He related the evolution of his organization in terms that will likely sound familiar to other non-profits.

Chaudhry described the difficult information landscape his organization confronts with regard to its core focus—public education. There are 33 separate school districts in Santa Clara County, 19 in San Jose alone. As a result, according to Mr. Chaudhry, “There is no cohesion of message on public schools in general regarding their challenges, successes, or needs. There is not one body, a clearinghouse, articulating, ‘Here’s what our schools need; here’s what our teachers need.’”

At the same time, according to Chaudhry, cutbacks have diminished local media’s coverage of schools. The *San Jose Mercury News* dropped from eight reporters covering education to three. As for television, “[t]here are four major networks that cover the entire Bay Area population, which now exceeds six million people,” he continued. “Providing strong localized coverage of our schools? Impossible.”

Mr. Chaudhry then offered a brief snapshot of the information opportunity his organization saw amid its complex information ecology:

If we want to engage citizens in the process of change in our education system, we must do three things: inform, inspire and involve. We must inform the public of the challenges and opportunities our schools face. We must inspire them to believe that there are real solutions to our education problems and that through their action, we can implement those solutions. Finally, we must involve the public into action on the information we are able to deliver to them.

Through networked journalism, technology can enable a diffusion of the news-gathering functions, creating greater coverage of local affairs.

Informing comes first. And that comes by getting information out. Where we've seen traditional media struggle, SVEF believes there is opportunity An organization like SVEF takes on the role of 'reverse reporting.' . . . We can create a constant stream of information that an outlet, like the *Mercury News*, can use to draw readers. We can make it topical and compelling to readers, but we also ensure that it is localized and thus relevant to our audience. The *Mercury News*, in our example, plays less of a role of 'reporting' information and more the role of 'connecting' readers to information.

In short, the SVEF is contributing to journalism.

Situating journalistic activity in nonprofit advocacy organizations raises critical ethical questions. Independence of judgment and sensitivity to conflicts of interest are hallmarks of the best journalism. Because nonprofit advocacy organizations are committed to mobilizing public support for their particular issues, striving for dispassionate reporting will pose important issues. With appropriate training and resources, however, local nonprofits can help their communities by "filtering, integrating, analyzing, contextualizing, and authenticating information"³⁰ that is relevant to community welfare.

Such new intermediaries will likely supplement, rather than displace conventional news organizations and new forms of for-profit news. The traditional values of journalism cannot be completely outsourced. The Commission expects that news gathering and dissemination will have many new players, both public and private, performing journalistic functions. And in that process, the role and values of traditional journalism will be extremely important.

Just as networked journalism is creating new models for collaboration, new models for independent journalism are also emerging. Some new initiatives are taking advantage of opportunities arising from the economic crisis facing news organizations. For example, there are new projects that simultaneously create opportunities for aspiring young journalists, while reclaiming the experience and talents of mid-career journalists who have lost their jobs at local journalistic enterprises.

Public Access to Data Requires Government Support and Cooperation

A key variable affecting the information ecology will be the ease of getting relevant facts and data. Government is a central actor in determining that access. Government agencies create and maintain information about government activity. They know how citizens can acquire government services most easily. Government can provide leadership in offering access to information in forms that are usable by everyone, including accessible media for people with disabilities.³¹

Governments are also frequently the chief collectors of social information. They track where people live and work, how schools perform, what houses are worth, which businesses are opening and closing, public health patterns, and much more. Sharing this information with the public (while respecting privacy and confidentiality where appropriate) can empower individuals and groups to spot new business opportunities. It can reveal avenues for local improvement. It can trigger important stories in local media.

Governments could do much more to make available the civic, social and economic data they possess. The coalition behind 2009 Sunshine Week, a national initiative to spur public dialogue on open government and freedom of information issues, sponsored a national survey to determine the online availability of 20 categories of information.³² As the organizers explained, “The categories for the survey were selected for generally serving the overall public good—the kind[s] of information people need for their own health and well-being and that of the community.” Only half the states offer even a dozen of these categories online. One state—Mississippi—offered only four. In the case of campaign finance reporting, one observer calls the current pattern “failure by design.” Many states allow candidates to use paper forms to report contributions and expenditures. This significantly impairs government’s capacity to easily share public information. As a result, the public does not gain timely access to the information.

Government performance also falls short in the preservation and handling of public records. Every state has open records laws. So does the federal government. Yet, freedom of information audits routinely show failures to turn over documents that the law requires agencies to disclose. Compliance is too often slow and uncooperative. Both journalists and members of the public sometimes encounter demands for extraordinary fees.

Citizens frequently have no obvious recourse short of litigation when they are denied their information rights. The Commission supports the efforts of local nonprofit groups to gather and disseminate a wide variety of data on community conditions. Government could support and facilitate disclosure efforts far more aggressively.

The bottom line for local communities is that people need relevant and credible information in order to be free and self-governing.

THE COMMISSION CONCLUDES:

- **The current economic challenges facing private news media could pose a crisis for democracy.**
- **Public media should provide better local news and information.**
- **Not-for-profit and nontraditional media can be important sources of journalism.**
- **Public information belongs to the public. Government must be more open.**
- **Informed communities should be able to measure their information health.**

THE COMMISSION RECOMMENDS:**1****Recommendation 1: Direct media policy toward innovation, competition, and support for business models that provide marketplace incentives for quality journalism.**

Throughout American history, the main source of journalism has been private enterprise. The Commission does recommend below that the United States intensify its commitment to public media. But the journalism supported by marketplace incentives—including both for-profit and not-for-profit models—is likely always to provide the lion's share of original and verified reporting. The health of the private media sector is an important public-policy goal. So too is the independence of private media from governmental intervention on content grounds.

Existing companies and start-ups are busily searching for business models to sustain local news operations. Government's first role should be to let experimentation thrive. Governments should avoid regulations that distort incentives. Rules should not make investments in traditional media artificially more attractive than new ventures, or vice versa. Governments should be careful not to pose barriers to innovation. Agencies should regularly re-examine whether rules serve the proper ends of public policy in light of changing economic and technological conditions. This includes rules regarding property rights, ownership limits, and the legal obligations of media firms.

In the Commission's view, the central tenets of media policy should be innovation and competition. Federal agencies that regulate electronic media should make it possible for as many economically viable competitors as possible to gain access to local audiences. It is important to improve citizen access to the information sources of their choice.

Policy makers should promote competition both within and between different media platforms. There should be sufficient competition among providers of new and traditional information services to meet the needs of information consumers with the greatest effectiveness and at lowest cost.

While the Commission clearly does not invite governments to meddle in the practice of journalism, it is aware of a number of proposals to aid journalistic organizations. A persuasive case has not been made to the Commission for direct subsidies to private media enterprises. But there is a social value of journalism. So, without recommending any particular measure, the Commission suggests that governments explore modest viewpoint-neutral tax and regulatory changes to help media ease the burden of rapid change amid financial turmoil.

For example, state and federal governments could include a state sales tax exemption for print and online journalism subscriptions, or a federal tax credit for the support of investigative journalism.³³ Other changes to federal tax law could include “permissive joint operation of for-profit and not-for-profit journalism enterprises within the federal tax exemption regime, amendment of the deduction limitations for contribution of a newspaper business to a not-for-profit organization, deferral of gain in taxable acquisitions of newspapers by not-for-profit organizations, and permissive use of tax-exempt conduit bond financing in such acquisitions.”³⁴ Not-for-profit news organizations could also be strengthened if their advertising revenues were at least partially tax-exempt and if rules against engaging in unrelated businesses were relaxed. Without endorsing these measures, the Commission commends them for public dialogue.

Local governments should take note of the civic value of private investment in information infrastructure. Public policy should encourage local entrepreneurs to fill local information voids or provide alternatives in local information flow. Community-focused venture funds and tax incentives may be appropriate to spur local entrepreneurship in media and technology applications with civic virtues.

Innovation, competition, and marketplace incentives will be critical to the growth of both for-profit and not-for-profit models. Foundation funding will undoubtedly help to launch and sustain many significant local efforts. Still, the most successful nonprofits are likely to be those that succeed at developing multiple streams of revenue that are fed back into the organization. The Commission thus expects that public policies that support market incentives for the production of quality journalism will serve the interests of both for-profit and not-for-profit models.

2

Recommendation 2: Increase support for public service media aimed at meeting community information needs.

Like private media, public broadcasting in the United States has a mixed history of providing local news and information. On the one hand, a 2007 Roper opinion poll found that nearly half of all Americans trust the Public Broadcasting Service “a great deal,” higher than the numbers rating commercial television and newspapers.³⁵ On the other hand, with some notable exceptions, public broadcasting in America has been widely criticized as being insufficiently local or diverse. Public stations do not have a strong record of spearheading local investigative journalism, and most public radio broadcasters have little or no local news reporting staff. Finally, again with some promising exceptions, local public stations have failed to embrace digital innovations as a way to better connect with their communities.³⁶

The American commitment to First Amendment values has long bred an appropriate caution against reliance on government as a sponsor of news and information. But public broadcasters in the United States have demonstrated their capacity to deliver high-quality, fair, and credible news and information programming free of government interference.

Public broadcasting needs to move quickly toward a broader vision of public service media, one that is more local, more inclusive, and more interactive.

Public broadcasting in the United States has added a context and fullness to news and information during the past 40 years. But it has fallen short of its promise. Breakthroughs in children’s programming have not been mirrored in the information field. Simply put, our public media do not fully reflect the public nor engage with it sufficiently on the community level.

It is important now for public policy in the digital age to play a more determined role in enhancing the performance of public broadcasting in local news.

Public broadcasting needs to move quickly toward a broader vision of public service media, one that is more local, more inclusive, and more interactive. This means pursuing greater integration of new technologies and communication practices with traditional forms of broadcasting. It means using digital platforms to engage local institutions effectively in the public sphere. To advance this, government as well as private sector donors should condition their support of public media on its reform. They should support the creating, curating, and archiving of public media content on the community level.

The Commission agrees with the recent conclusion of American University's Center for Social Media that "[w]hat is needed for the future of high-quality [public media] content is at least partial taxpayer support for the many existing operations and for innovative new projects."³⁷ Other countries with similar commitments to freedom of speech and of the press make much larger per capita contributions to the financing of public media. The United States federal government, for example, spends \$1.35 per capita for public media, as compared to \$22.48 per capita in Canada and \$80.36 per capita in England.³⁸ A modest increase in tax-supported revenues would not compromise the American model of combined government seed money and local contributions, and it would recognize that seeding local public media makes sense in the digital age. Accordingly, Congress should increase the funding available for the transformation and localization of America's public media.

3**Recommendation 3: Increase the role of higher education, community and nonprofit institutions as hubs of journalistic activity and other information-sharing for local communities.**

Nonprofit institutions are reservoirs of expertise. Local community organizations, such as community development organizations, churches, fraternal organizations, and chambers of commerce, are critical in the transmission of information. All should make a priority of sharing information within the community and providing the tools necessary to turn information into knowledge.

This is especially important for otherwise underserved populations. It is critical that all segments of the community be able to locate useful online content that is directly relevant to their needs and interests. Whether the institution provides life-enhancing or civic information, it can strengthen the decision making of community members by providing information that is relevant, accurate, and

accessible. A genuine community effort to engage all neighborhoods in effective information flow could entail a variety of information portals run by different not-for-profits.

An especially worthy priority for nonprofit institutions, including foundations, may be financing short-term fellowships for journalists covering state and local government. Given the connection between serious news coverage of government and public accountability, the not-for-profit sector should be especially attentive to addressing reduced coverage of statehouses across the country.

Institutions of higher learning should likewise regard promoting community information flow as central to their mission. Community colleges may have especially strong relationships with adult and working-class students who can be involved in community-based projects. Faculty, staff, and student bodies can enrich a community's knowledge base in many ways. Universities should reward faculty members who share their expertise through public outreach initiatives. They should promote the dissemination of research-based knowledge in all fields and set up or contribute to online digests of research findings.

4

Recommendation 4: Require government at all levels to operate transparently, facilitate easy and low-cost access to public records, and make civic and social data available in standardized formats that support the productive public use of such data.

Public information belongs to the public. Governments at all levels should adopt a theme implicit in the remarks of many Commission witnesses: "Make information available; people will find ways to use it productively."

Open Government Laws

In this digital age, governments should define public information as broadly as possible, with only very narrow, specific exemptions. Governments at all levels should ordinarily collect data electronically and in standardized formats. Respecting individual privacy and other legal requirements of confidentiality, governments should then place their public information online in standardized formats, optimized for search with appropriate tags. In short, information should be available in ways that people can remix, mashup, and circulate for private or public

purposes. Achieving this level of openness is likely to entail major investments in the information infrastructure supporting government at the local and state levels. Major technology companies could make an enormous contribution to the public interest by volunteering expertise and facilities that could help accomplish this ambitious objective.

Federal, state, and local jurisdictions should clearly identify and train employees responsible for handling records requests. Laws should penalize government agencies and their employees who violate their own public information rules. Openness requirements should apply to all public bodies and government contractors. Finally, governments should provide for independent oversight of their transparency efforts.

Transparency in Government

The public's business should be done in public. Open-meetings laws should require that all public agencies conduct their deliberations and take their actions openly. The public should be able to witness and participate in the process of governing. If possible, governments should allow citizens to participate in hearings or other fact-gathering processes electronically.

At every level, legislative bodies should operate with genuine transparency. Members of the public should be able to track and comment upon successive versions of proposed statutes and ordinances, whether federal, state, or local. Except in genuine emergencies, legislators should not vote on proposals that have not had public vetting with a meaningful opportunity for public comment.

The public's
business should be
done in public.

Public trust in the judicial system likewise requires open courtrooms. In criminal and civil matters, any closing of proceedings or sealing of records should meet a high standard in terms of the public interests protected. Court proceedings, particularly at the appellate level, should be open to cameras.

5**Recommendation 5: Develop systematic quality measures of community information ecologies, and study how they affect social outcomes.**

Communities lack good tools to assess the quality of local information ecologies. There are no widely accepted indices for comparing different communities' ecologies or determining whether information flow within a particular community is improving or degrading. Communities need measures of both kinds. If activists, policy makers, and the general public had more concrete ways of describing, measuring, and comparing the systems of community news and information flow, it would be much easier to mobilize public interest around community information needs.

Communities can begin to lay the groundwork for such indices by conducting systematic self-assessments of their information environment. As a possible starting point for such an assessment, the Commission has composed a Healthy Information Community checklist (Appendix I) that local leaders can use. The regular compilation of data can begin with charging a diverse and inclusive community task force to take stock of the local information environment and offer a public report.

B. Enhancing the Information Capacity of Individuals

A community may be awash in timely and relevant information, yet not get maximum benefit from its information richness. That is because people cannot fully utilize the information available to them without the tools to access it and the skills to use those tools effectively. America already faces serious literacy challenges with regard to making sense of text. The proliferation of digital media raises further challenges with regard to understanding and communicating through new and often complex outlets.

America's current media landscape boasts an astonishing array of technological innovation for the creation, analysis, reshaping, and distribution of information:

- **The online local news and information ecology now includes local news aggregation sites, hyper-local information aggregators, citizen-journalism sites, local social networking, and place-specific blogs.**
- **The blogosphere and other social media platforms have emerged as powerful vehicles for individual and community expression, for community-building, for news aggregation and interlinking, and for community discussion.**
- **Tools are becoming available to improve the journalistic quality of blogs and to link them to sources of advertising support.**

Moreover, the pace of technological innovation is matched by cultural innovation in the use of new tools for civic and social purposes. Prominent examples include microblogging as a tool for emergency response and journalistic reporting, online maps as a tool for community organizing, and mobile telephony as the basis for citizen journalism.

Public Media 2.0, a compelling recent report by the American University Center for Social Media, identified five critical ways—choice, conversation, curation, creation, and collaboration—in which new tools and social practices are changing people's media habits:

Choice. Rather than passively waiting for content to be delivered as in the broadcast days, users actively seek out and compare media on important issues through search engines, recommendations, videos on demand, interactive program guides, news feeds, and niche sites. . . .

Conversation. Comment and discussion boards have become common across a range of sites and platforms, with varying levels of civility. Users are leveraging conversation tools to share interests and mobilize around issues. Distributed conversations across online services . . . are managed via shared tags. Tools for ranking and banning comments give site hosts and audiences some leverage for controlling the tenor of exchanges. . . .

Curation. Users are aggregating, sharing, ranking, tagging, reposting, juxtaposing, and critiquing content on a variety of platforms from personal blogs to open video-sharing sites to social network profile pages. Reviews and media critiques are popular genres for online contributors, displacing or augmenting other genres, such as consumer reports and travel writing, and feeding a widespread culture of critical assessment.

Creation. Users are creating a range of multimedia content (audio, video, text, photos, animation, etc.) from scratch and remixing existing content for purposes of satire, commentary, or self-expression, breaking through the stalemate of mass media talking points. Professional media makers are now tapping user-generated content as raw material for their own productions, and media outlets are navigating various fair use issues as they wrestle with promoting and protecting their brands.

Collaboration. Users are adopting a variety of new roles along the chain of media creation and distribution—from providing targeted funds for production or investigation to posting widgets that showcase content on their own sites to organizing online and offline events related to media projects to mobilizing around related issues through online tools, such as petitions and letters to policymakers. “Crowdsourced” journalism projects now invite audience participation as investigators, tipsters, and editors. So far, it is a trial-and-error process.³⁹

The Commission concurs with the authors of this report that “[t]hese five media habits are fueling a clutch of exciting new trends, each of which offers tools, platforms, or practices of enormous possibility.”⁴⁰

It is obvious, however, that these trends help people only if they have access to necessary hardware, software, and Internet connectivity, and have the skills to use them. Americans are potentially excluded from these trends by at least three overlapping “gaps.”

First is a **broadband gap**. Today, broadband Internet service is insufficiently defined by the federal government at the lowest common denominator, including speeds as slow as 200 kilobits per second. That speed is inadequate, for example, to transmit video programming at a level of quality comparable to video that consumers already receive over today's cable or satellite systems. Quality video on that order would require Internet speeds at least 10 times faster than the lowest speed the current FCC standard accepts as "broadband." Further, only about 25 percent of American households with annual incomes below \$20,000 have a broadband connection

Roughly one-third of rural American communities cannot subscribe to broadband Internet services at any price Only about 25 percent of American households with annual incomes below \$20,000 have a broadband connection.

even as currently defined.⁴¹ Thirty-seven percent of adult Americans still do not subscribe to broadband services at home,⁴² and roughly one-third of rural American communities cannot subscribe to broadband services at any price.⁴³ As a consequence, millions of Americans are simply being left out of the communications revolution.

Within the broadband gap, there are two especially troubling and widening geographic divides. One is between some communities in the United States and otherwise comparable communities in other countries that offer superior broadband service to a larger percentage of their populations. The other is between rural and urban Americans. Several developed countries from Asia and Europe offer significantly faster average broadband services than are available in the United States,⁴⁴ threatening to put even our high-penetration cities at an economic disadvantage.

At the same time, within America, the broadband gap often hits poorer and more rural states hardest. Only about a third of the populations of Mississippi and West Virginia have broadband at home, for example. Median household income alone explains nearly three-quarters of the variation among states in rates of home broadband adoption.⁴⁵

Second is a **literacy gap**. According to the 2003 literacy survey of the National Center for Education Statistics, 43 percent of adults fell short of the standard for “intermediate” prose competence. They were unable to read and understand “moderately dense . . . prose texts.” They fell short in “summarizing, making simple inferences, determining cause and effect, and recognizing the author’s purpose.” This means, for example, that more than four in ten adults would have trouble “consulting reference materials to determine which foods contain a particular vitamin.”⁴⁶

Statistics on high school graduation rates reinforce this discouraging picture. Across the country, roughly 30 percent of high school seniors fail to graduate on time, with graduation rates in some major cities at barely 50 percent overall.⁴⁷ Of the 13 percent of adult Americans scoring at “below basic” literacy, the lowest standard on the NCES survey, fully 55 percent had never graduated high school.⁴⁸ This fact strongly supports the intuitive connection between schooling and literacy. To the extent local information flow remains largely text-based, adult literacy and high-school dropout rates pose serious challenges. Indeed, the increasing technical complexity of public issues in areas like health, the environment, and telecommunications is likely to intensify the civic disadvantage of citizens with limited text literacy.

These two gaps combine to reinforce what leading media scholar Henry Jenkins has dubbed the “**participation gap**.” This is the gap “in social experiences between [people] who have a high degree of access to new media technologies at home and those who do not.”⁴⁹

As explained by Professor Jenkins, “There’s a huge gap between what you can do when you’ve got unlimited access to broadband in your home and what you can do when your only access is through the public library, where there are often time limits on how long you can work, when there are already federally mandated filters blocking access to certain sites, when there are limits on your ability to store and upload material, and so forth.”⁵⁰ Having a home computer correlates with higher rates of school enrollment and graduation rates, even controlling for other factors associated with levels of educational attainment.⁵¹ Home Internet use also results in higher standardized reading test scores for children of low-income families, without regard to the age of the children involved.⁵²

Those not participating confront both reduced digital literacy—the understanding of and capacity to use new information technologies—and reduced media literacy—the capacity to access, analyze, evaluate, and create messages in a variety of media.

Having a home computer correlates with higher rates of school enrollment and graduation rates, even controlling for other factors associated with levels of educational attainment.

The Commission concludes that anyone caught on the wrong side of these three gaps runs a significant risk of being relegated to second-class citizenship. Without public-policy intervention, people who are currently disenfranchised are unlikely to “catch up.” Those Americans advantaged by geography and personal resources will continue to pursue the cutting edge in both technology and training. Without public action, however, there will continue to be gaps between the information haves and have-nots. These threaten to create a two-tiered society with limited democratic possibilities for too many individuals and communities.

In short, people need the tools, skills, and understanding to use information effectively.

THE COMMISSION CONCLUDES:

- **All people have a right to be fully informed.**
- **There need be no second-class citizens in informed communities.**
- **Funding to meet this goal is an investment in the nation’s future.**
- **Americans cannot compete globally without new public policies and investment in technology.**

THE COMMISSION RECOMMENDS:**6****Recommendation 6: Integrate digital and media literacy as critical elements of education at all levels through collaboration among federal, state, and local education officials.**

Successful participation in the digital information ecology entails two kinds of literacy, or skill sets. One is typically called “digital literacy,” learning how to work the information and communication technologies of our networked age and understanding the social, cultural, and ethical issues surrounding those technologies. The second is “media literacy,” the ability to access, analyze, evaluate, and create the information products that media disseminate.

It may be tempting for teachers and administrators who are themselves uncomfortable with new media to view digital and media competencies as “add-ons” to basic learning in “reading, writing, and arithmetic.” They are, however, new forms of foundational learning.

Although virtually every school in the United States is connected to the Internet, many local communities have not integrated either digital or media literacy into their K–12 curricula. The Internet is offered primarily as a research tool, and students’ encounters with the Internet are framed by issues of reliability and censorship. The situation is often little better at the college level and for adult education generally. There may be more chances to learn the tools, but only rare opportunities to explore their use and implications more deeply. In many communities, informal adult-education opportunities to develop digital and media literacies are often wildly oversubscribed, if they exist at all.

The future of American democracy demands that we educate our citizens better, starting at an early age:

With an ever-increasing range of media messages in so many forms, students need to understand the process by which authors convey meaning about socially constructed experience. The use of digital media and popular-culture texts not only stimulates young people's engagement, motivation, and interest in learning but enables them to build a richer, more nuanced understanding of how texts of all kinds work within a culture.⁵³

It may be tempting for teachers and administrators who are themselves uncomfortable with new media to view digital and media competencies as “add-ons” to basic learning in “reading, writing, and arithmetic.” These competencies are, however, new forms of foundational learning.

The federal government should launch a national initiative to assess the quality of digital and media literacy programs in the nation's schools.

The consequences of neglecting this challenge can be dire. Students who are deeply immersed in the world of online communication outside of school may find classrooms that marginalize new technologies both tedious and irrelevant. For students who lack online access at home, schooling that fails to provide digital and media skills threatens to leave them at a profound social, economic, and cultural disadvantage.

The federal government should launch a national initiative to assess the quality of digital and media literacy programs in the nation's schools. This should include efforts made in institutions of higher

education to prepare future teachers for the new literacies. The survey should determine what schools are teaching their students and measure the needs for both equipment and teacher training. It is also critical to evaluate the learning opportunities available to Americans who have already graduated high school and to promote best practices for education at all levels to help Americans strengthen their digital literacy. Only a combination of national leadership and state and local initiative can successfully produce the reforms needed.

7

Recommendation 7: Fund and support public libraries and other community institutions as centers of digital and media training, especially for adults.

America's libraries need sufficient funding to serve as centers for information, training, and civic dialogue. Public libraries are located in nearly all communities in the United States. Most of them are wired for Internet service. Nearly all offer public Internet, and almost three-quarters are the only providers of free public computer and Internet access in their communities.

These libraries need additional resources to serve the public's digital needs. Inner city libraries frequently have extensive waiting times for computer use. Libraries need to support the software programs necessary to enable neighborhood youth to work on their homework assignments.

They also need the resources and support to work effectively towards improving digital literacy. For example, the Commission proposes that funds should be available to public libraries for mobile teaching labs to provide digital literacy instruction to members of the public. Eligibility to receive a mobile teaching unit could be based on E-rate criteria—that is, the criteria already used to qualify schools and libraries for discounted telecommunication services under the FCC-directed Universal Service program. Approximately 10,000 public libraries applied for E-rate discounts in 2008, and E-rate funds might also be made available for a mobile teaching initiative. This approach would ensure that the communities that most need the mobile teaching units would have priority consideration.⁵⁴

Libraries need additional resources to serve the public's digital needs.

The Commission also endorses digital literacy funding for community institutions, such as community centers and community-based development organizations. These organizations provide crucial services in the area of digital and media training, and can be useful sites to engage even moderately Internet-capable adults in sharing their knowledge with those less skilled. Community organizations that already serve as trusted information providers to underserved populations are well situated to help integrate their clients more effectively into the community's information networks.

8**Recommendation 8: Set ambitious standards for nationwide broadband availability and adopt public policies encouraging consumer demand for broadband services.**

The Commission endorses the view of the Federal Communications Commission that all Americans, urban and rural, should have affordable access to robust broadband services. However, the federal government's current embrace of broadband services, including economic stimulus for rural broadband services improvements, is insufficient to ensure the United States will reach full-fledged universal digital citizenship.

All Americans should have access to high-speed Internet service wherever and whenever they need it. In part, this means wireless access that can extend beyond home, work, and community centers. In their homes, however, consumers should have access to affordable Internet service capable of receiving and transmitting video programming with picture and sound quality comparable to the range of high-definition programming they receive over cable and satellite television systems in most American communities. To this end, the Commission endorses the government's use of financial incentives to help spur broadband deployment in areas where it has lagged because of market economics. The cost of such system upgrades for wired and wireless Internet services will likely be counted in the tens of billions of dollars. But not to make such an investment, we believe, will cost the nation significantly more in the years to come in lost competitiveness worldwide.

Government and commercial telecommunications firms have various levers to accomplish this goal (including subsidies and regulatory policies), but the Commission does not recommend using any one of these over the others. We simply note that many nations that lead in broadband deployment have used strategic incentives to encourage development of high speed Internet service. Toward this end, the federal government should determine systematically the kinds of Internet connectivity American households have, looking at speed, cost, the service providers involved, and whether access is wire-based or wireless.

If all Americans regardless of age, ethnicity, income or geography believe that broadband service will genuinely help them to address issues of everyday life, they will likely use that service in greater numbers.

Communities cannot realize the full benefit of broadband deployment, however, unless people actually connect to broadband networks. The Commission thus encourages public support for the development of applications that will make broadband service more attractive. If all Americans regardless of age, ethnicity, income, or geography believe that broadband service will genuinely help them to address issues of everyday life, they will likely use that service in greater numbers.⁵⁵

The Commission endorses these suggestions as elements of an overall leadership strategy to make broadband adoption as rewarding and universal as possible.

9

Recommendation 9: Maintain the national commitment to open networks as a core objective of Internet policy.

The early architecture of the Internet supported untold user innovation, yielding vast social benefits. Under the so-called “end-to-end principle,” computing intelligence resided chiefly with users at the ends of the network. The owners and operators of the networks exerted little control over the flow of data. Over time, however, network owners and operators asserted that their active management of networks would also yield benefits, especially with regard to network security and the ability to support new services. The policy challenge is to balance these network benefits against the potential risk to innovation. It is critical that network practices do not undermine the overall environment for innovation.

The Federal Communications Commission’s embrace of the four Internet freedoms identified by then-FCC Chairman Michael Powell well illustrates the federal commitment to openness. The first freedom is the right to access content of the consumer’s choosing. The second is the freedom to use all lawful applications. The third is the freedom to attach personal devices that do no harm to the network. Chairman Powell identified the fourth freedom as the right to receive full and accurate information about one’s service plan. The FCC broadened that freedom into an expansive right to competition. These principles are widely accepted, and the FCC should vigorously enforce them in a way that assures the public open access to the content and services they desire. The Knight Commission regards the openness of networks as essential to meeting community information needs. Legislators and other policy makers should remain vigilant and committed to maintaining openness.

10 Recommendation 10: Support the activities of information providers to reach local audiences with quality content through all appropriate media, such as mobile phones, radio, public access cable, and new platforms.

The uses of new technologies are frequently so astonishing that it is easy to forget about the importance of *all* information and communications technologies. Print is not dead. Broadcast and cablecast, for many Americans, remain the primary sources of news and information. Mobile phones are ubiquitous. New technologies tend to supplement, rather than replace old technologies. Public policy should enable local communities to capitalize on all available tools for connecting citizens to local information flows.

Those who regulate broadcast and cable should prioritize policies to allow as much news and information as possible to reach local audiences via these channels. The Commission notes significant initiatives, such as those of Denver Open Media, Public Radio Exchange, and pegmedia.org, which are creating model programs for sharing high-quality community programming. Public, educational, and government cable channels belong in a favored tier in terms of ease of access. As much as possible, the federal government should fashion spectrum policies to accommodate low-power FM and other innovations that increase the number of voices over the local airwaves.

Community-based technology centers can provide the training and equipment for citizens to take advantage of all the available media for creating and sharing community news and information. Enhancing the capacity of individuals to produce, organize, and disseminate information should not be limited to online platforms.

C. Promoting Public Engagement

Skilled people, appropriate technologies, and reliable and relevant information are the building blocks of a successful communications environment. What generates news and information flow in that environment, however, is not just those building blocks. It is engagement—specifically, people’s engagement with information and with each other.

Engagement within a community can take infinite forms. People engage when they watch, listen to, or read the news, discuss local affairs with neighbors, attend community celebrations, and volunteer for civic projects. They engage in formal ways, such as voting and running for office. They engage in informal ways, such as writing letters to the editor or to their elected representatives or blogging. The process of engaging does not mean that everyone must be active as a citizen at every moment. Engaging does mean, however, that people regard their geographically defined communities as communities in a deeper sense. They see their neighbors as a network of shared information and sustenance bound by feelings of mutual obligation and support.

What engagement means to a democratic community is that citizens genuinely participate in self-governance. Communities thrive when citizens are motivated to accept responsibility with respect to community issues. Communities are sustained when people feel themselves empowered to organize in order to achieve positive outcomes either through their own actions or the responsiveness of their elected representatives. Information is essential to this empowerment process, and personal involvement in community issues can provide the critical context in which information becomes active.

In a democratic community, any citizen who wants to should also have opportunities to exercise vigilance over those who conduct civic affairs. The network of people who engage daily with civic information may never include everyone, but ideally, the groups of citizens who engage seriously with civic information should represent the entire community. Otherwise, community problem solving may not fully reflect everyone’s interests. Engagement opportunities should not arbitrarily exclude anyone.

Engagement is important because of what its presence provides and because of what its absence portends. Engagement builds what political scientist Robert Putnam has famously called “social capital.”⁵⁶ Social capital is the stock of trust, reciprocity, and habits of cooperation that allow people to collaborate successfully for common purposes. Research suggests connections between social capital and indicators of community success such as public health, economic sustainability, and low crime rates.⁵⁷

Strong Community Problem Solving Requires “Bridging Capital”

Putnam’s work identified two kinds of social capital, “bonding” and “bridging.” Bonding social capital arises *within* fairly homogenous and close-knit groups. Bridging social capital arises *among* groups. Bridging capital helps knit together different neighborhoods, different social classes, and different subcommunities as they may be defined by age, religion, ethnicity, or culture.

Where strong bridging ties exist, people maximize their prospects for exchanging information or developing information collaboratively. No one is expert in everything, but everyone is informed about some things, including their own experience. The public’s diversity of information and perspective can contribute mightily to a community’s sense of shared identity and collective knowledge. When people engage across group lines, they share the diverse levels of information that all citizens possess. They inevitably strengthen a community’s capacity for problem solving.

When people engage across group lines, they . . . strengthen a community’s capacity for problem solving What follows from disengagement . . . is ignorance, misunderstanding, and higher levels of social conflict.

What follows from disengagement is the flip side of these community assets. Instead of trust, there is alienation. Instead of cooperation, there is indifference. Instead of knowledge, there is ignorance, misunderstanding, and higher levels of social conflict. People do not contribute to the larger community because they do not feel a part of it. They potentially suffer not only as citizens, in their public role, but as private individuals as well. They have less information about available opportunities. They have fewer connections to address issues in their own lives. There is even evidence that reduced social capital can be injurious to personal health.⁵⁸

Despite the vastly different demographics of Silicon Valley, the state of Montana, and the city of Philadelphia, the Commission's forum in each locale revealed a lack of, and yearning for, bridging capital. Speakers in Philadelphia addressed gaps in understanding and communication across racial and ethnic lines, and between working-class and wealthier Philadelphians. Speakers in Montana spoke of the relative "information isolation" of rural communities, including Native American communities. Speakers in Mountain View, California, addressed the need to bridge ethnic and economic subcommunities, but also gave voice to the alienation of young people.

The Commission is aware that the testimony it received represents only a slice of America's story. The consistent impression left, however, was that many Americans do not see themselves fully represented in the "mainstream" information flows of their local communities.

The witnesses who spoke to the Commission about their experiences as workers, as members of ethnic minorities, or as advocates for young people all believed that mainstream media convey too little information about—or relevant to—their subcommunities. They also see their concerns portrayed to the larger community in ways that are superficial, misleading, and negatively stereotypical. A common theme is that readers learn about poor people, labor unions, ethnic minorities, and youth only through stories framed by conflict.

Members of minority groups may engage less with mainstream media because they doubt whether mainstream media reflect the reality of their communities. Minorities own approximately eight percent of the full-power radio stations in the United States, three percent of the television stations.⁵⁹ Since 2000, minority journalists have never accounted for more than 14 percent of the total professional print journalism community, with the percentage in 2009 amounting to 13.4 percent. And more than 42 percent of print newsrooms in America employ no journalists who are African American, Asian American, Native American or Latino. Of the 6,000 journalists who lost their jobs in 2008, 854 were members of racial minorities.⁶⁰ These are stark figures considering that, within the next 35 years, it is likely that America's "minorities" will come to represent the numerical majority in the United States.⁶¹

Yet, it is clear that people want to engage. The impulse to share information, to create and be part of a larger information flow, is powerful across all groups in society. Raj Jayadev, a youth organizer who helped create *Silicon Valley De-bug*, a multicultural, youth-produced magazine, told the Commission that, in the current decade, “‘youth organizing’ and ‘youth media’ have become synonymous.” He reported:

Young people who are not from the dot-com fast track—having either not seen themselves in the traditional media or only saw themselves portrayed as criminals, drop-outs, or detractors to the community—have taken this work to another level through an embrace of newer technologies A consequence of not being included in the news world is an abandonment of it all together and an impulse to simply have your own.

In a similar vein, although witnesses testified to insufficient bridging between ethnic and mainstream media, ethnic media are in many ways thriving within the subcommunities they serve.

The Commission believes local communities can significantly strengthen public engagement by addressing two issues: opportunity and motivation. Because increased engagement has significant payoffs for both individuals and communities, it behooves institutions to address what makes engagement plausible and inviting to the general public, and to expand opportunities for constructive engagement where feasible.

To pursue their true interests, people need to be engaged with information and with each other.

THE COMMISSION CONCLUDES:

- **Creating informed communities is a task for everyone.**
 - **Young people have a special role in times of great change.**
 - **Technology can help everyone to be part of the community.**
 - **Everyone should feel a responsibility to participate.**
-

THE COMMISSION RECOMMENDS:**11****Recommendation 11: Expand local media initiatives to reflect the full reality of the communities they represent.**

Media institutions, old and new, will inevitably continue to be major players in the information networks serving local communities. As democratic institutions, they can serve their communities most effectively, however, if they reflect and help give voice to all segments of the public in the way news is gathered, analyzed, and shared. Mainstream media have an unusual capacity to foster the “bridging capital” that is critical to community welfare. This may be especially critical where communities are fragmented along social, economic, or political lines. Local media have the unique potential to enable citizens to see how life looks from the perspectives of multiple groups and to engage people in conversation across group lines.

Access to credible and knowledgeable sources from all segments of the community will be easier for newsrooms whose journalists are connected to all of a community’s ethnic, social, economic, and political subnetworks. If any segment of the community is unrepresented among the people who do the work of journalism, the accuracy and credibility of that journalism suffers. Conversely, a news organization’s commitment to represent the entire community can help overcome the sense of social exclusion that exists in many communities and discourages engagement.

Just as the diversity of a newsroom can bridge across a community’s various constituencies, so can and should diversity in a community’s media ownership. Achieving diversity in the ownership of mainstream print and broadcast media has proved a difficult challenge. Communities would benefit if the evolution of new media provided significant opportunities for minorities and other underrepresented groups to achieve a substantial ownership stake in the news and information sector.

12 Recommendation 12: Engage young people in developing the digital information and communication capacities of local communities.

Media habits of Americans vary greatly with age. Younger Americans, especially if relatively well-off, tend to integrate advanced information and communication technologies into their daily lives in ways that seem largely alien to their elders. To be an innovator in the social uses of digital media, it helps to have had early and lifelong experience. At the same time, many technologically savvy young people have little connection to the ideas and challenges of local democracy. This uneven distribution of knowledge across the generations actually creates a unique opportunity.

Imagine a “Geek Corps for Local Democracy” where, as a post-college opportunity, American youth volunteer to help connect a physical community to the networked infrastructure.

Imagine a “Geek Corps for Local Democracy” where, as a post-college opportunity, American youth volunteer to help connect a physical community to the networked infrastructure. They would be assigned to diverse communities to help local government officials, librarians, police, teachers, and other community leaders leverage networked technology. Geek Corps participants would teach community members how to use technology. They would help local leaders to understand technological shifts and how they can leverage new technologies for community practices. Participants from all the communities involved would be connected into a national network of participants to share best practices, develop collectively usable code, and build a network of information systems for local democracy.

Programs are already underway in which high school students volunteer to help with technology efforts. But the local nature of such initiatives means that there is little coordination among communities. A Geek Corps would weave together the local and the national through networks of passionate youth. Ideally, such a program would have the same stature as the Peace Corps or AmeriCorps, such that participants would be welcome into jobs with open arms. Yet, the real benefit for most youth would be a deep understanding of how different communities work and how democracy plays out at the local level. Those who invited Geek Corps participants to their community should relish the opportunity to help these youth understand local democracy and governance. The result is cross-generational civic education.

Geek Corps participants would need to have varying types of technological skills. The pay would not be overly generous. The unique quality of the opportunity would make up for the low level of income in the short-term. There would need to be a process for assessment to assure that local needs were met. A national staff could help coordinate local participants and provide a technological backbone to the project.

To work, this program will need support at both the local and national levels. It would make most sense for communities to fund a portion of the costs and for their contributions to be matched either by foundations, corporations, or the federal government. Local communities would also have to provide a structure for the Geek Corps participants to engage with the relevant community players.

13 Recommendation 13: Empower all citizens to participate actively in community self-governance, including local “community summits” to address community affairs and pursue common goals.

As powerful as the Internet is for facilitating human connection, face-to-face contact remains the foundation of community building. Indeed, recent years have seen an explosion in the use of the Internet not only to create “virtual communities” among strangers, but to enable people who know and encounter each other offline to sustain and deepen their connection. To build the “bridging capital” that American towns and cities need in order to prosper, local communities should pursue opportunities for citizens to share responsibility for addressing community needs and to organize on a community-wide basis to discuss common problems and to pursue common goals.

Community summits can be important catalysts for such self-governance activity. To be successful, local summits will have to make sense within the context of an actual decision-making agenda. Such gatherings should have the potential to lead to constructive action and to help identify and empower citizen-leaders who can move the common agenda forward. Engagement should be motivated by common awareness that what the gathering decides will create an action agenda that citizens can and will pursue. Inviting citizens to engage with one another and then offering an experience that is accessible, energetic, and constructive can overcome the barriers to opportunity and motivation that too often keep people at home.

A good start for initiatives in community dialogue would be summits directed at creating community action agendas to improve the local information environment. Mayors’ offices and city councils could lay the groundwork for such summits by using the Healthy Information Community checklist in Appendix I as a framework for gathering the basic facts about the community’s information environment. A follow-up summit could then bring together the public, private, and not-for-profit sectors in a united search for specific local steps in pursuit of the “informed community” vision. They could collaborate to map additional community information assets and determine voids that need addressing. They could design initiatives to promote information availability, citizen capacity, and public engagement.

14 Recommendation 14: Emphasize community information flow in the design and enhancement of a local community's public spaces.

Survey research shows that the physical aspects of place will often drive people's sense of attachment to their local community. Concern for the environment is converging with strategic planning around issues of social and economic development to renew interest in the creation and redesign of inviting public spaces. Such spaces can become inviting hubs for social contact within and among community groups. They can also become key spots for information sharing.

In addition to architectural measures, information technologies can help bring people together in a common space. It is easy to imagine public digital displays of news and culture becoming a major attraction in many communities. Public transportation venues, parks, community centers, and shopping malls could become the sites for kiosks featuring local information.

These efforts would not be a substitute for home access to broadband, but they could promote community information flow by encouraging citizens to be out and about. They would be interesting and aesthetically appealing ways for local residents to connect to the larger community.

15 Recommendation 15: Ensure that every local community has at least one high-quality online hub.

Given the volume of information on the Internet and the infinite diversity of user interests, it is not possible for any one Web site to aggregate all of the online information local residents want and need. Just as communities depend on maps of physical space, they should create maps of information flow that enable members of the public to connect to the data and information they want.

Communities should have at least one well-publicized portal that points to the full array of local information resources. These include government data feeds, local forums, community e-mail listservs, local blogs, local media, events calendars, and civic information. The best of these hubs would go beyond the mere aggregation of links and act as an online guidebook. They would enable citizens to map an effective research journey by letting people know what is available and where. The site should leverage the power of new forms of social media to support users in gathering and understanding local information.

Where private initiative is not creating community online hubs, a locally trusted anchor institution might undertake such a project with the assistance of government or foundation funding, or support from those who also support public media.

Conclusion and a Call to Action

The United States stands at what could be the beginning of a democratic renaissance, enabled by innovative social practices and powerful technologies. With multiple tools of communication, dynamic institutions for promoting knowledge and the exchange of ideas, and renewed commitment to engage in public life, Americans could find themselves in a brilliant new age. People would enjoy unprecedented capacity to fulfill their individual aspirations and to collectively shape the future of their communities. Community discussion, collaboration, and accountable public decision making could make life better in every neighborhood, town, and city.

To thrive in a democracy, America's local communities need information ecologies that support both individual and collective community life. They need accurate, relevant news and information to fuel the common pursuit of the truth and the public interest. Improving local ecologies requires public policies that support the production and dissemination of relevant and credible information, enhance the capacity of individuals to engage with information, and promote people's engagement with information and with one another. Informed communities require well-designed strategies to make these objectives a reality.

The questions America faces at this point in its information history, however, go beyond questions of strategy to questions of values. The Knight Commission has recommended a series of strategies that, in various ways, exhort our major public and nonprofit institutions to give new priority to values of openness, inclusion, and engagement. The values questions posed are equally profound, however, for individual citizens and for the institutions of the media.

Communities throughout America need for their members to re-examine their individual roles as citizens in the digital age. The opportunities of the current moment are conspicuously interrelated with new technologies of human connection. More than ever, these technologies enable each citizen to be a productive part of the community.

Those opportunities, however, and the social benefits they offer, imply a reciprocal responsibility to participate. Americans' sense of their very identity as citizens should entail a sense of responsibility to "step up" to the digital age. They need to attain the skills necessary to support first-class citizenship, to demonstrate an active willingness to acquire and share knowledge both within and across social networks, and to support democratic values in the way every person interacts with the information ecology that serves his or her community.

It is critical that Americans take the time to embrace the quality of community information flow as an issue worthy of their concern and involvement. The Commission has directed many of its recommendations to government agencies and officials. They are far more likely to respond if their constituents are campaigning day-in and day-out for a pro-information agenda.

Likewise, media institutions must confront how new technological capacities and social practices are challenging their core values. The evolving relationships among journalists, media firms, and the public should engender a deep discussion about how these changes affect the proper scope of intellectual property and such values as objectivity, privacy, and accountability. An increasingly uninhibited information culture creates opportunities not only for social benefit, but also for slander, harassment, fraud, pornography, spam, theft, intrusiveness, invasions of privacy, and all kinds of falsehoods, from innocent mistakes to intentional mischief.

It is unlikely that the formal instruments of law or the private initiatives of single individuals can fully address these challenges. Institutions that stand as critical nodes in America's information networks need to examine their own practices. They should consider how changes in institutional practice can protect core values at the same time that new ways are emerging for creating, organizing, and sharing information.

Society can be lulled into feeling that the very availability of exciting new tools will bring the solution to all problems. Alternatively, as long-standing practices are upended, people may imagine a past somewhat rosier than reality and exaggerate the threat to enduring values and allegiances. This Commission has tried to resist both impulses. This report is intended to help America maintain its commitment to enduring information ideals, even as individuals and communities create information ecologies more relevant, participatory, and inclusive than ever. There need be no second-class citizens in the democratic communities of the digital age. Whether America fulfills that vision will require individual and collective initiative at every level of society.

The Knight Commission has attempted to provide through this report a set of durable principles and broad recommendations that can frame the pursuit of the informed communities America needs. The Commission, however, understands "informed communities," like democracy itself, as a vision always to be pursued, not as a final state of perfection ever likely to be achieved. In that spirit, our first call is for an outpouring of additional ideas, dialogue, and action in communities throughout the United States. The "information issue" is everyone's issue.

The Knight Commission on the Information Needs of Communities in a Democracy

CO-CHAIRS

Marissa Mayer

Theodore B. Olson

MEMBERS

danah boyd

Walter Isaacson (ex officio)

Andrew Mooney

John Carroll

Benjamin Todd Jealous

Donna Nicely

Robert Decherd

Mary Junck

Michael Powell

Reed Hundt

Monica Lozano

Rey Ramsey

Alberto Ibargüen (ex officio)

Lisa MacCallum

Paul Sagan

Endnotes

1. Loris Ann Taylor, *Native Public Media Policy Priorities*, Paper Prepared for the Obama-Biden Presidential FCC Transition Team (2008), available at <http://www.media-democracy.net/files/NativePublicMediaPolicy-1.pdf>.
2. Although the Commission has strived to take an evidence-based approach to its analysis and recommendations, its experience confirms the conclusion of other researchers that “[e]fforts to understand and address these issues are limited by a lack of solid empirical evidence, and must rely instead on incomplete information, anecdotes, and information. We know far too little about how changes in the delivery and consumption of news are affecting public awareness, opinion, and public engagement.” Persephone Miel and Robert Faris, *News and Information as Digital Media Come of Age*, at 2 (2008), available at http://cyber.law.harvard.edu/sites/cyber.law.harvard.edu/files/Overview_MR.pdf.
3. Paul Starr, “Goodbye to the Age of Newspapers (Hello to a New Era of Corruption),” *The New Republic*, Mar. 4, 2009, at 28, available at <http://www.tnr.com/politics/story.html?id=a4e2aafc-c92-4e79-90d1-db3946a6d119>.
4. Project for Excellence in Journalism, *Local TV News Reports a Drop in Revenue, Ratings*, Mar. 26, 2009, available at http://www.journalism.org/commentary_backgrounder/local_tv_sees_drop_revenue_and_ratings.
5. AJR Staff, “AJR’s 2009 Count of Statehouse Reporters,” *American Journalism Review*, Apr./May 2009, available at <http://www.ajr.org/article.asp?id=4722>.
6. Michael Liedtke, “AP Survey of News Execs: Staff Cuts Hurting Coverage,” *EditorandPublisher.com*, May 13, 2009, available at http://www.editorandpublisher.com/eandp/news/article_display.jsp?vnu_content_id=1003972765.
7. “You Tell Us: Gigabit Wireless on the Cheap,” *IEEE Spectrum*, Jan. 2008, available at <http://spectrum.ieee.org/computing/networks/you-tell-us-gigabit-wireless-on-the-cheap>.
8. John Horrigan, *Wireless Internet Use*, 4, 33 (2009), available at <http://pewinternet.org/-/media//Files/Reports/2009/Wireless-Internet-Use.pdf>.
9. For many purposes, communities are properly defined in a broad sense as “networks of interpersonal ties that provide sociability, support, information, a sense of belonging, and social identity.” Barry Wellman, “Physical Place and CyberPlace: The Rise of Personalized Networking,” *25 Journal of Urban and Regional Research* 227, 228 (2001), available at http://www.chass.utoronto.ca/~wellman/publications/individualism/N_1_#N_1_. The quality of democracy, however, depends fundamentally on people’s relationship to the places in which they live. Geography defines the scope of people’s common governance over resources for which they share jurisdiction. At the founding of the republic, there was a significant correspondence between the geographical boundaries that defined people’s sense of community and most of the structures that evolved to produce news and information. From the age of the telegraph to the digital age, the evolution of technology has steadily worked to erode, if not eliminate, that correspondence. This is one key reason why focusing on the needs of geographically defined local communities is now so crucial.

10. These include INSEAD's Global Networked Readiness Index, available at <http://www.insead.edu/v1/gitr/wef/main/analysis/showcountrydetails.cfm>; the Media Sustainability Index created by the International Research and Exchanges Board (IREX), see <http://www.irex.org/msi/>, and the Access to Knowledge Index being created by Yale Law School's Information Society Project, see Lea Bishop Shaver, Defining and Measuring A2K: A Blueprint for an Index of Access to Knowledge, 4 I/S: A Journal of Law and Policy for the Information Society 235 (2008). UNESCO's Press Freedom and Development survey of 194 countries is beginning to find suggestive links between a free press and other measurable aspects of social welfare. Marina Guseva, et al., *Press freedom and development: An analysis of correlations between freedom of the press and the different dimensions of development, poverty, governance and peace* (UNESCO 2008), available at <http://unesdoc.unesco.org/images/0016/001618/161825e.pdf>.
11. At USC Annenberg, Professor Sandra Ball-Rokeach has developed the thesis that local communication infrastructure plays a critical role in three components of civic engagement: neighborhood belonging, collective efficacy, and civic participation. She has even developed a measure that she calls Integrated Connectedness to a Storytelling Network (ICSN), which she has determined—at least for the local communities she has studied—to be an effective summation of the relationship between what she calls local media connectedness, their scope of connections to community organizations, and the intensity of interpersonal neighborhood storytelling. Yong-Chan Kim & Sandra J. Ball-Rokeach, "Civic Engagement From a Communication Infrastructure Perspective," 16 *Communication Theory* 173 (2006). Researchers Mark Lloyd and Phil Napoli, in addition, have proposed a local media diversity index that could be used to correlate elements of media diversity with local levels of both civic participation and civic knowledge. Mark Lloyd and Phil Napoli, *Local Media Diversity Matters: Measure Media Diversity According to Democratic Values, Not Market Values*, Center for American Progress (2007), available at http://www.americanprogress.org/issues/2007/01/pdf/media_diversity.pdf. These projects, along with such community assessment efforts as the Sense of Community Index, D. W. McMillan & D. M. Chavis, "Sense of Community: A definition and theory," 14 *American Journal of Community Psychology* 6–23 (1986), the National Civic Health Index created by the National Council on Citizenship, available at <http://www.ncoc.net/index.php?tray=series&tid=top5&cid=97>, and Patchwork Nation, <http://www.csmonitor.com/patchworknation/>, point the way to the possibility of a deeper understanding over time between the precise elements of local information ecologies and other positive social outcomes.
12. Sheila Grissett, "Shifting Federal Budget Erodes Protection from Levees; Because of Cuts, Hurricane Risk Grows," *The Times Picayune*, June 4, 2004, at 1.
13. The Commission on Freedom of the Press, *A Free and Responsible Press – A General Report on Mass Communication: Newspapers, Radio, Motion Pictures, Magazines and Books*, 20 (1947).
14. Starr, *supra* note 3, at 29.
15. James M. Snyder, Jr. and David Strömberg, *Press Coverage and Political Accountability*, March, 2008, available at <http://www.nber.org/papers/w13878.pdf>. A new Princeton study even suggests that when news outlets close, people disengage more broadly from community affairs. The year after the *Cincinnati Post* closed "fewer candidates ran for municipal office in the suburbs most reliant on the *Post*, incumbents became more likely to win re-election, and voter turnout fell." Sam Schulhofer-Wohl and Miguel Garrido, *Do Newspapers Matter? Evidence from the Closure of The Cincinnati Post* (Woodrow Wilson School Discussion Papers in Economics, Mar. 2009), available at <http://wws-roxen.princeton.edu/wwseconpapers/papers/dp236.pdf>.

16. Ira Machefsky, *Newspaper Advertising Revenue Trends*, TheNumbersGuru.com, Aug. 1, 2008, available at <http://thenumbersguru.blogspot.com/2008/07/newspapers-advertising-revenue-trends.html> (based on data from the Newspaper Association of America, available at <http://www.naa.org/TrendsandNumbers/Advertising-Expenditures.aspx>).
17. Richard R. John, *Spreading the News: The American Postal System from Franklin to Morse* (1998).
18. Adrienne Chute and P. Elaine Kroe, *Public Libraries in the United States: Fiscal Year 2005*, at 3, (National Center for Education Statistics, 2007), available at <http://nces.ed.gov/pubs2008/2008301.pdf>.
19. American Library Association, *The State of America's Libraries 20*, (April, 2009), available at http://www.ala.org/ala/newspresscenter/mediapresscenter/presskits/2009stateofamericaslibraries/State%20draft_04.10.09.pdf.
20. Leigh Estabrook and Lee Rainie, *Information Searches that Solve Problems: How People Use the Internet, Libraries, and Government Agencies When They Need Help*, at 10, 22 (Pew Internet & American Life Project, 2007), available at <http://www.pewinternet.org/Reports/2007/Information-Searches-That-Solve-Problems.aspx>.
21. Denise M. Davis, *Funding Issues in U.S. Public Libraries, Fiscal Years 2003-2006*, at 1 (Mar. 10, 2006), available at <http://docs.google.com/gview?a=v&q=cache:yor2N5NrL6EJ:www.ala.org/ala/aboutala/offices/ors/reports/fundingissuesinuspls.pdf+denise+m.+davis,+Funding+Issues+in+U.S.+Public+Libraries,+Fiscal+Years+2003-2006&hl=en&gl=us>.
22. This is how the Free Flow of Information Act of 2009, H.R. 985, 111th Cong., 1st Sess. (2009), the proposed federal journalist shield law recently approved by the House of Representatives, defines journalism.
23. Pew Project for Excellence in Journalism, *The State of the News Media 2009: News Investment*, available at http://www.stateofthemediamedia.org/2009/narrative_newspapers_newsinvestment.php?cat=4&media=4.
24. Pew Project for Excellence in Journalism, *The State of the News Media 2009: Audio – News Investment*, available at http://www.stateofthemediamedia.org/2009/narrative_audio_newsinvestment.php?media=10&cat=4#1newsroomsize.
25. *Television News Jobs and Salaries Decline As Amount of News Increases*, RTNDA/Hofstra University Survey Shows, RTNDA.org, Apr. 19, 2009, available at <http://www.rtnnda.org/pages/posts/television-news-jobs-and-salaries-decline-as-amount-of-news-increases-rtndahofstra-university-survey-shows481.php>.
26. U.S. Census Bureau, *Geographic Areas Reference Manual*, Chap. 2 at 2-3 (2005), available at <http://www.census.gov/geo/www/GARM/Ch2GARM.pdf>.
27. *Circulation of U.S. Community Weekly Newspapers by Circulation Groups*, EditorandPublisher.com, available at <http://www.editorandpublisher.com/eandp/images/pdf/US%20Weekly%20Circ.%20by%20Circ.pdf>.

28. See generally Charlie Beckett, *SuperMedia: Saving Journalism So It Can Save the World* (2008).
29. Jay Rosen, the founder and director of NewAssignment.net, writes, "At New Assignment, pros and amateurs cooperate to produce work that neither could manage alone. The site uses open source methods to develop good assignments and help bring them to completion. It pays professional journalists to carry the project home and set high standards; they work closely with users who have something to contribute. The betting is that (some) people will donate to stories they can see are going to be great because the open methods allow for that glimpse ahead." Jay Rosen, *Welcome to NewAssignment.Net*, NewAssignment.net (Aug. 19, 2006), available at http://www.newassignment.net/blog/jay_rosen/welcome_to_newassignment_net.
30. Charles M. Firestone, "The New Intermediaries," in David Bollier, *The Future of Community and Personal Identity in the Coming Electronic Culture*, Aspen Institute (1995).
31. See Association for Computing Machinery, *ACM U.S. Public Policy Committee (USACM) Universal Internet Accessibility Policy Recommendations*, available at <http://www.acm.org/public-policy/accessibility>.
32. *Sunshine Week 2009 Survey of State Government Information Online*, SunshineWeek.org, Mar. 14, 2009, available at <http://www.sunshineweek.org/index.cfm?id=7284>.
33. Stephanie R. Hoffer, *Taxes, Local Journalism, and Transition to the Public Sector* (Paper for the Knight Commission on the Information Needs of Communities in a Democracy, November, 2008), at 1.
34. *Id.*, at 1.
35. PBS Research, *Roper Public Opinion Poll on PBS: 2007 vs. Past Years*, available at <http://www.pbs.org/aboutpbs/pbsfoundation/news/pastroperpolls.pdf>.
36. National Public Radio, *Final Report to the John S. and James L. Knight Foundation re: Local News Initiative: Research and Planning Phase* (June 2006).
37. Jessica Clark and Patricia Aufderheide, *Public Media 2.0: Dynamic Engaged Publics*, at 21 Center for Social Media (2009) (hereafter, *Public Media 2.0*).
38. Victor Pickard, Josh Stearns and Craig Aaron, "New Ideas for Challenging Times," in Free Press, *Changing Media: Public Interest Policies for the Digital Age*, at 221 (2009) (hereafter, "*Changing Media*").
39. *Public Media 2.0*, *supra* note 37, at 6-7.
40. *Id.* at 7.
41. John Horrigan, *Home Broadband 2008: Adoption stalls for low-income Americans even as many broadband users opt for premium services that give them more speed*, at ii (Pew Internet and American Life Project, July 2, 2008), available at http://www.pewinternet.org/PPF/r/257/report_display.asp.
42. Pew Internet & American Life Project, *Home Broadband Adoption 2009*, at 9 (2009), available at <http://www.pewinternet.org/-/media/Files/Reports/2009/Home-Broadband-Adoption-2009.pdf>.

43. Jon M. Peha, *Bringing Broadband to Unserved Communities*, Brookings Institution, (July 2008), available at http://www.brookings.edu/papers/2008/07_broadband_peha.aspx. One recent report suggests a rural “broadband penetration rate” of 75 percent, but appears to define “penetration rate” as the percentage of all homes with an Internet connection that have broadband—not the percentage of all homes that have broadband. *Broadband Plays Catch-Up in Rural Areas, Outpaces Growth in Big Cities: Broadband Penetration Rate Grows 16 Percentage Points in Rural Areas Over Past Two Years, Significantly Outpacing that of Metropolitan Areas*, ComScore.com (Aug. 19, 2009), available at http://www.comscore.com/Press_Events/Press_Releases/2009/8/Broadband_Plays_Catch-Up_in_Rural_Areas_Outpaces_Growth_in_Big_Cities.
44. Akamai Report: *The State of the Internet, 1st Quarter 2009*, at 26 (2009), available at <http://www.akamai.com/stateoftheinternet/>.
45. S. Derek Turner, “The Internet,” in *Changing Media*, *supra* note 38, at 16, 37–39.
46. National Center for Education Statistics, *National Assessment of Adult Literacy (NAAL): A First Look at the Literacy of America’s Adults in the 21st Century*, at 3 (2005), available at <http://nces.ed.gov/NAAL/PDF/2006470.PDF> (hereafter, “NAAL”).
47. Christopher B. Swanson, *Cities in Crisis 2009: Closing the Graduation Gap*, Editorial Projects in Education (2009), available at http://www.edweek.org/rc/articles/2009/04/22/cities_in_crisis.html.
48. NAAL, *supra* note 46, at 5.
49. Henry Jenkins, *MySpace and the Participation Gap*, Aca-Fan: The Official Weblog of Henry Jenkins (July, 2006), available at http://www.henryjenkins.org/2006/06/myspace_and_the_participation.html.
50. Id.
51. Robert W. Fairlie, et al., *Crossing the Divide: Immigrant Youth and Digital Disparity in California*, at 5, Canter for Justice, Tolerance, and Community, (2006).
52. Linda A. Jackson, et al., *Does Home Internet Use Influence the Academic Performance of Low-Income Children?* 42 DEVELOPMENTAL PSYCHOLOGY 429, 434 (2006).
53. Renee Hobbs, *Reading the Media in High School: Media Literacy in High School English*, at 7 (2007).
54. John Carlo Berthot and Charles R. McClure, *Public Libraries and the Internet 2008: Study Results and Findings*, Florida State University College of Information (2008).
55. The Commission notes that the Information Technology and Innovation Foundation has called for a “revitalized Technology Opportunities Program, with a particular focus on the development of nationally scalable Web-based projects that address particular social needs, including law enforcement, health care, education, and access for persons with disabilities.” Robert D. Atkinson, Daniel K. Correa and Julie A. Hedlund, *Explaining International Broadband Leadership*, at 3 (2008), available at <http://www.itif.org/files/ExplainingBBLeadership.pdf>. It likewise encourages governments to “[s]upport new applications, including putting more public content online, improving e-government, and supporting telework, telemedicine, and online learning programs.” Id., at 44.

56. Robert Putnam, *Bowling Alone: The Decline and Revival of American Community* (2000).
57. “Sustainable development and sustainable communities typically measure indicators that show the overall health of the community: i.e., looking at measures of the economy, health, crime, in addition to human and social capital levels. We completely agree that a community’s stock of social capital is not the sole measure of a community’s health. Nevertheless, we believe that social capital is important in that it is a key driver for these other indicators (economy, health, crime, etc.) rather than merely a goal in and of itself.” The Saguaro Seminar: *Civic Engagement in America*, available at <http://www.hks.harvard.edu/saguaro/faqs.htm#2>. See Susan Saegert, Gary Winkel, and Charles Swartz, *Social Capital and Crime in New York City’s Low-Income Housing*, 13 Housing Policy Debate 189 (2002), available at http://www.fanniemaefoundation.org/programs/hpd/pdf/hpd_1301_saegert.pdf (describing how social capital helps lower crime).
58. Ming Wen, Christopher R. Browning, and Kathleen A. Cagney, *Neighbourhood Deprivation, Social Capital and Regular Exercise during Adulthood: A Multilevel Study in Chicago*, at 44, *Urban Studies* 2651 (2007).
59. S. Derek Turner, *Off the Dial: Female and Minority Radio Station Ownership in the United States*, Free Press (June 2007), available at http://www.freepress.net/docs/off_the_dial.pdf; S. Derek Turner and Mark Cooper, *Out of The Picture: Minority & Female TV Station Ownership in the United States*, Free Press (Oct. 2006), available at http://www.stopbigmedia.com/files/out_of_the_picture.pdf.
60. *Changing Media*, note 38, at 191–192.
61. U.S. Census Bureau News, *An Older and More Diverse Nation by Midcentury*, Census.gov (Aug. 14, 2008), available at <http://www.census.gov/Press-Release/www/releases/archives/population/012496.html>.

The following endnotes appear in Appendix IV:

62. The Commission was assisted in the organization of this forum by Dave Mills, Program Officer (San Jose), John S. and James L. Knight Foundation.
63. The Commission was assisted in the organization of this forum by Professor Monroe Price of the University of Pennsylvania’s Annenberg School of Communication, along with Annenberg staff members Sylvia Beauvais and Libby Morgan, research fellow Kate Coyer, and graduate student Lee Shaker. The planning team also included Matt Bergheiser, Program Officer (Philadelphia), John S. and James L. Knight Foundation, and Todd Wolfson, Media Mobilizing Project.
64. The Commission was assisted in the organization of this forum by Dean Peggy Kuhr and Professors Dennis Swibold and Denise Dowling of the University of Montana School of Journalism.

Appendices

APPENDIX I

Taking Stock: Are You a Healthy Information Community?

No one has developed a system for scientifically measuring the quality of a local community's information environment. But communities can begin to take stock of their information environments by considering the following eight features that the Knight Commission report stresses as elements of a healthy information community:

1. A majority of government information and services online, accessible through a central and easy to use portal

- Driver license and vehicle registration information
- Tax information
- Social services
- Contact information for government officials

2. A local government with a committed policy on transparency

- Are documents publicly available and understandable?
- Are they easy to obtain and promptly released under appropriate freedom of information laws?
- Is government operating in the sunshine?

3. Quality journalism through local newspapers, local television and radio stations, and online sources

- Are they economically healthy and robust, providing high quality civic information as well as life-supporting information?
- Is there a diversity of viewpoints and competitive choice?

4. Citizens with effective opportunities to have their voices heard and to affect public policy

- Are there civic organizations prepared to transform information into active civic engagement and public policy engagement?
- Is there opportunity for public comment on proposed policies and expenditures?
- Are there online channels for expressing views and concerns?
- Does the community have regular summits and town meetings to inform and engage the community in civic issues?

5. A vibrant public library, or other public center for information that provides digital resources and professional assistance

- Does the community have public spaces available to all that provide easy access to Internet content as well as traditional sources material, such as newspapers, periodicals and books?

6. Ready access to information that enhances quality of life, including information provided by trusted intermediary organizations in the community on a variety of subjects:

- Health
- Education resources
- Employment
- Social services
- Public transit
- Emergency services
- Arts and Entertainment

7. Local schools have computer and high-speed Internet access, as well as curricula that support digital and media literacy

- Are kids trained to use the modern digital tools to learn, to produce content, and to coordinate and organize activity? This is digital literacy.
- Are kids trained to question the validity of online material, develop a critical eye, perceive and protect themselves from dangerous situations, and appreciate the dictates of journalistic integrity? This is media literacy.

8. High-speed Internet is available to all citizens

- Does local and state government promote development of and access to a telecommunications infrastructure that gives easy and affordable access to services and information found primarily on-line or digitally?
- Are these services, including high speed Internet access, available in the home, in schools and in other public institutions?
- Are there choices of service providers?
- Wireless and wireline communications and Internet services are valuable and offer different experiences. Are both available?

APPENDIX II

Executive Director's Memo: Potential Action Items

Date: September 1, 2009
To: Marissa Mayer and Theodore B. Olson, Co-Chairs
From: Peter Shane, Executive Director
Re: Some Potential Responses to *Informing Communities*

I have prepared for your review a list of some of the kinds of responses the Commission might anticipate from various actors if they were moved to implement vigorously the Commission's 15 actual recommendations. In some cases, these speculations are more specific than the Commission's recommendations and have not been discussed or endorsed. Nonetheless, the list gives an idea of the range of initiatives likely at least to come under consideration within the report's various potential audiences. Of course, the specific steps needed to implement the Commission's strategies and recommendations will probably evolve over time and take different forms in different communities. When the Commission launches its online public dialogue with the launch of the report, the public will undoubtedly have additional or substitute suggestions.

Congress

- **Adopt universal broadband as the standard for the country, creating a network that connects the nation, just as the nation has done with railroads and highways.**
- **Require federal agencies to collect information electronically and, wherever possible, place it online in accessible, standard, searchable formats.**
- **Fund the development of special training programs for federal employees responsible for handling records requests.**

- **Require agencies to pay penalties from general appropriations if found by a court to have acted in gross disregard of the law in withholding mandatorily disclosable records from the public.**
- **Authorize the administrative imposition of discipline on agency employees who willfully violate their own public information rules.**
- **Adopt a Government Contractor FOIA to ensure public access to the records of private contractors that bear on the discharge of their public functions.**
- **Require agencies, where practicable, to allow citizens to participate in hearings or other fact-gathering processes electronically.**
- **Provide for the televising of federal judicial proceedings, except when precluded in rare, special circumstances.**
- **Consider a federal tax credit for the support of investigative journalism.**
- **Allow permissive joint operation for for-profit and not-for-profit enterprises within the federal tax law regime.**
- **Amend deduction limits for contributions to non-profit news organizations and deferral of gain in taxable acquisitions of newspapers by not-for-profit businesses.**
- **Authorize increased support for public media, including increases for news and information at the local level.**
- **Adopt tax relief on ad revenues to support the growth of nonprofit journalism.**
- **Increase the postal subsidy for the delivery of nonprofit print journalism.**
- **Direct the Department of Education to launch a national initiative to assess the quality of digital and media literacy programs in the nation's schools.**
- **Authorize the FCC to expand the categories of library services available for support from E-rate funding.**
- **Appropriate funds to help support local community "Geek Corps" that involve young adults 18–26 in providing technical training and consultation to local governments and community groups.**

State Legislatures

- **Recognize universal broadband as part of a national standard, creating a network that connects everyone in the state at least at the level set by the federal government.**
- **Reform state FOI laws to promote best practices. Reaffirm that all information should be public unless specifically exempted by statute.**
- **Require state and local agencies to collect information wherever possible electronically and in standard formats.**
- **Fund the development of special training programs for state and local employees responsible for handling records requests.**
- **Require agencies to pay penalties from general appropriations if found by a court to have acted in gross disregard of the law in withholding public records.**
- **Authorize the administrative imposition of discipline on agency employees who willfully violate their own public information rules.**
- **Adopt a Government Contractor FOIA to ensure public access to the records of private contractors that bear on the discharge of their public functions.**
- **Require agencies, where practicable, to allow citizens to participate in hearings or other fact-gathering processes electronically.**
- **Provide for the televising of state judicial proceedings, except in rare, special circumstances.**
- **Exempt the purchase of print and online journalism from state and local sales taxes.**
- **Support the creation of community-focused venture funds and local tax incentives to spur local entrepreneurship in media and technology applications.**
- **Adopt tax law changes to support the growth of not-for-profit journalism.**
- **Consider “community information enhancement” in the design and construction of public facilities built with local funds.**
- **Mandate the development of state curricular standards on media and digital literacy.**

FCC and Other Federal Agencies

- **Complete a national broadband strategy aimed at bringing Americans low-cost high-speed Internet access, including wireless, everywhere they want and need it.**
- **Establish a national target for household broadband access at speeds sufficient to support video transmission at a level of quality comparable to the household video services now delivered through cable and satellite television services.**
- **Adopt public policies encouraging consumer demand for broadband services. Continue to use financial incentives to help spur broadband deployment in areas where it has lagged because of market conditions.**
- **Consider an inquiry to define the appropriate characteristics of open networks.**
- **Determine and clearly map the kinds of Internet connectivity American households have—looking at speed, cost, the service providers involved, and whether access is wire-based or wireless.**
- **Push for the inclusion of public, educational, and government cable channels in the basic cable package offered by any cable service operator.**
- **Use E-rate funds to support public libraries' creation of mobile teaching labs to provide digital literacy instruction.**
- **Pursue spectrum policies to accommodate low-power FM and other innovations that increase the number of broadcast voices over the local airwaves.**
- **Promote diversity in media ownership.**

Foundations

- **Host community forums on meeting the information needs of the community, perhaps modeled on the Knight Commission forums, to produce a local action agenda to improve information flow.**
- **Encourage online information hubs in communities where market conditions have not established them.**
- **Provide short-term fellowships for journalists covering state and local government.**
- **Support community-based technology centers to provide the training and equipment for citizens to produce, organize, and disseminate information through online and broadcast platforms.**
- **Condition new support for public media on the digital transformation and localization of the service.**
- **Promote media projects aimed at serving entire communities.**
- **Follow up on the recommendations in this report to see to their implementation.**

Libraries

- **Create mobile “digital literacy” classrooms.**
- **Provide classes or other means of teaching digital literacy.**
- **Host community forums on local issues.**
- **Provide the technology needed to meet public demand.**

Universities, Colleges, and Community Colleges

- **Create civic engagement programs across the curriculum that credit students for community projects that develop their civic knowledge.**
- **Encourage research aimed at describing, measuring, and comparing the quality of community news and information flow over time and across geographies.**
- **Expand free and low-cost adult digital and media literacy courses.**
- **Reward faculty research relevant to local issues that is shared through public outreach initiatives.**
- **Distribute as much research as possible clearly and openly online.**
- **Create teacher education courses on the integration of digital and media literacy into K–12 subject matters.**

Local Governments

- **Conduct systematic self-assessments of their information environments. A possible starting point for such an assessment is the Commission’s Healthy Information Community checklist.**
- **Fund community organizations providing digital media instruction to the general public.**
- **Fund digital and media literacy instruction in the public schools.**
- **Ensure that all public high schools support opportunities for students to engage in journalism in all forms.**
- **Ensure that the financial resources available to public libraries in FY 2011 are sufficient to meet community needs, including the provision of computing services and high-speed Internet connections, plus staffing adequate to provide support and training for digital literacy programs.**
- **Support community “Geek Corps” that involve young adults 18–26 in providing technical training and consultation to local governments and community groups.**
- **Stage community summits as a way of empowering both individual citizens and community groups to organize around an action agenda that they help to develop and implement for the resolution of local issues.**

- **Consider a “community information enhancement” in the design and construction of public facilities built with local funds.**
- **Take leadership in fostering widespread broadband diffusion to all citizens in the community.**
- **Provide local government information online in understandable, standardized, searchable formats; invite citizens to participate in local hearings electronically; and provide government services online in streamlined form.**
- **Fund the development of special training programs for employees responsible for handling records requests.**
- **Allocate local government funds for advertising in ways that reach the entire community.**

K–12 Education

- **Teach students, in age-appropriate ways, to interpret and evaluate what is presented to them as news and information.**
- **Help students to develop digital and media skills that will enable them to produce and communicate their ideas and creative products effectively and engage productively with online information networks.**
- **Encourage students to develop the habits and ethics that support respectful online interaction with others.**

Media and News Organizations

- **Openly share and discuss the organization’s strategies to make sure that issues relevant to all segments of the community receive appropriate coverage.**
- **Sustain the “watchdog” function essential to civic accountability and promote public understanding of its value.**
- **Participate vigorously to keep government open.**
- **Serve the interests of public debate.**
- **Strive to have the diversity of staff at all levels reflect the diversity of the community it serves.**

- **Operate the daily news operations of verification and clarification with integrity, accountability, and openness.**
- **Provide staff training to maintain standards and credibility and foster innovation.**
- **Consider work with citizens who are actively engaged in local news reporting through blogs and Web sites.**

Civic Organizations

- **Create high-quality local information portals and blogs on the issues around which the group is organized.**

Tech Companies and Entrepreneurs

- **To the extent permitted by law, provide pro bono or discounted services and products to help state and local governments build the information infrastructure necessary to achieve openness and transparency.**

Citizens

- **Be a media literate citizen who takes full advantage of the opportunities of the digital age.**
- **Prod local authorities to take stock of the community's information environment, starting with the Knight Commission's "Taking Stock: Are you a Healthy Community?" checklist, and blog about the issues raised.**
- **Consume news from multiple sources.**
- **Vote.**
- **Be vigilant to protect the freedom of expression of all speakers, while also protective of other people's privacy, property rights, and sensibilities.**
- **Participate in public forums and freedom of information coalitions.**
- **Find and contribute to local blogs and community resource efforts; engage in local news reporting.**

APPENDIX III

Speakers at Meetings of the Knight Commission

To assist in its deliberations, the Knight Commission devoted much of its first four meetings to hearing presentations by experts who briefed the Commission on developments in information and communications technology, trends in media, journalism and journalism education, the structure of community information flow, and the achievements of—and challenges facing—community institutions dedicated to empowering community self-governance through information and organization. Below is the roster of the speakers from these meetings. Each was speaking solely in his or her individual capacity; institutional affiliations are supplied for identification purposes only. The Commission is grateful for the time and insights of all participants. None is responsible for the content of this report, which represents solely the views of the Knight Commission. Minutes of these meetings and videos of all presentations are available at www.knightcomm.org. Speakers listed in order of appearance.

JUNE 24, 2008

Washington, D.C.

Bryan Alexander, Research Director, National Institute for Technology in Liberal Education

Michael Wood-Lewis, Founder, Front Porch Forum

Vincent Price, Provost and Professor of Communication and Political Science at the University of Pennsylvania

Barbara Cohen, President and Founder, Kannon Consulting

Jeffrey Stevenson, Managing Partner and Co-Chief Executive Officer, Veronis Suhler Stevenson

Jon Wilkins, Partner, McKinsey and Co.

Beverley Wheeler, Executive Director, District of Columbia State Board of Education

AUGUST 9, 2008

Aspen, Colorado

Tom Rosenstiel, Director, Project for Excellence in Journalism

Loris Ann Taylor, Executive Director, Native Public Media

Ron Williams, Founder, Detroit Metro News and other alternative weeklies; Publisher, Happy Frog (www.happyfrog.ca)

SEPTEMBER 9, 2008

Mountain View, California

Larry Alder, Product Manager and Member of Alternative Access Team, Google

Krishna Bharat, Creator, Google News

Adam Smith, Print Product Manager, Google

Lior Ron, Project Manager, Google Earth and Google Maps

Jason Miller, Group Project Manager, AdSense, Google

Sandra Ball-Rokeach, Professor and Associate Dean for Faculty Affairs, USC Annenberg School of Communication; Director, Communication Technology and Community Program; and Principal Investigator, Metamorphosis Project

NOVEMBER 17, 2008

Chicago, Illinois

Keith Hampton, Assistant Professor, Annenberg School for Communication, University of Pennsylvania

Mary Dempsey, Commissioner, Chicago Public Library

Alan C. Miller, Founder, News Literacy Project and former investigative reporter, *Los Angeles Times*

Patrick Barry, Journalist and Content Manager for LISC/Chicago's New Communities Program

Toni Preckwinkle, Alderman, Ward 4, Chicago

Jim Capraro, Executive Director, Greater Southwest Development Corporation

Jack Doppelt, Medill School of Journalism, Northwestern University

Michele Bitoun, Medill School of Journalism, Northwestern University

APPENDIX IV

Speakers at Knight Commission Community Forums

To assist in its deliberations, the Knight Commission sponsored three full-day forums during fall, 2008 in three demographically distinct American communities: Mountain View, California; Philadelphia, Pennsylvania; and Missoula, Montana. Below is the roster of the speakers from these forums. Each was speaking solely in his or her individual capacity; institutional affiliations are supplied for identification purposes only. The Commission is grateful for the time and insights of all participants. None is responsible for the content of this report, which represents solely the views of the Knight Commission. Video of all presentations is available at www.knightcomm.org.

SEPTEMBER 8, 2008

“Meeting the Public’s Information Needs in Silicon Valley”
Google Corporate Headquarters
Mountain View, California⁶²

ROUNDTABLE ON UNMET COMMUNITY INFORMATION NEEDS

Salvador (Chava) Bustamante, Strengthening Our Lives (SOL)

Emmett Carson, President and CEO, Silicon Valley Community Foundation

Muhammed Chaudhry, CEO, Silicon Valley Education Foundation (SVEF)

Matt Hammer, Executive Director, People Acting
in Community Together (PACT)

Judy Nadler, Senior Fellow in Government Ethics, Markkula
Center for Applied Ethics, Santa Clara University

Kim Walesh, Chief Strategist, City of San Jose, California

ROUNDTABLE ON MEDIA

Jim Bettinger, Director, John S. Knight Fellowships for Professional Journalists, Stanford University

Linjun Fan, *Albany Today* blog

Raj Jayadev, Founder, Silicon Valley De-Bug

Linda O'Bryon, Chief Content Officer, KQED Public Media

George Sampson, News and Program Director, KLIV Radio Station

Dave Satterfield, Managing Editor, *San Jose Mercury News*

ROUNDTABLE ON TECHNOLOGY AND INNOVATION

Richard Adler, Principal, People & Technology, and Research Affiliate, Institute for the Future

danah boyd, Commissioner, Knight Commission on the Information Needs of Communities in a Democracy

Mike McGuire, Vice President of Research, Gartner

Chris O'Brien, Project Manager, The Next Newsroom Project, and Reporter, *San Jose Mercury News*

Amra Tareen, AllVoices.com

Holmes Wilson, Co-Founder, Participatory Culture Foundation

SEPTEMBER 27, 2008

**“Meeting the Public’s Information Needs in Philadelphia”
University of Pennsylvania Annenberg School of Communication
Philadelphia, Pennsylvania⁶³**

ROUNDTABLE ON UNMET COMMUNITY INFORMATION NEEDS

Peter Bloom, Director and Co-Founder, Juntos

Nijmie Dzurinko, Executive Director, Philadelphia Student Union

Don Kimelman, Managing Director, Information Initiatives, The Pew Charitable Trusts

Janet Ryder, Vice President of Labor Participation, United Way of Southeastern Pennsylvania

Paul Socolar, Editor and Director, *The Notebook*

Zack Stalberg, President and CEO, The Committee of Seventy

PANEL ON CHALLENGES TO MAINSTREAM MEDIA

Josh Cornfield, City Editor, Metro Philadelphia

Dave Davies, Senior Writer, Philadelphia Daily News

Phyllis Kaniss, Executive Director, American Academy of Political and Social Science, Annenberg School for Communication, University of Pennsylvania

Susan Phillips, Reporter, WHYY, Inc.

Chris Satullo, Columnist and Director of Civic Engagement,
The Philadelphia Inquirer

Wendy Warren, Vice President and Editor, *Philly.com*

ROUNDTABLE ON ALTERNATIVE MEDIA

Matt Golas, Managing Editor, PlanPhilly

Gustavo Martinez, Reporter, Al Día

Beth McConnell, Executive Director, Media and Democracy Coalition

Bruce Schimmel, Founder & Editor Emeritus, Philadelphia City Paper

Dan Urevick-Ackelsberg, Founder, Young Philly Politics

Linn Washington, Co-Director, Multimedia Urban Reporting Lab (MURL)

Todd Wolfson, Founder, Media Mobilizing Project

OCTOBER 25, 2008

Meeting the Public's Information Needs in Montana
The University of Montana
Missoula, Montana⁶⁴

VIDEOCONFERENCE ON THE NEEDS OF AGRICULTURE AND SMALL COMMUNITIES

Moderator: William Marcus, Director, Broadcast Media Center, the University of Montana, Montana Public Radio/KUFM-TV, Montana PBS

Senator Jerry Black, Former owner and General Manager, KSEN-KZIN Radio

Joseph D. Hansen, Executive Director and Board Member, Western EMS Network

Gary Moseman, Managing Editor, *Great Falls Tribune*

Russell Nemetz, Agriculture Director, Northern Agriculture Network, and coordinates nation's best Farm Broadcaster Team

Douglas Steele, Vice Provost and Director, Montana State University Extension

PUBLIC INFORMATION NEEDS ON THE ENVIRONMENT AND NATURAL RESOURCES

Moderator: Nadia White, Assistant Professor, The University of Montana School of Journalism

Gayla Benefield, Community Organizer, Libby, Montana

Tom France, National Resources Counsel, National Wildlife Federation, Rocky Mountain Region

Ian Marquand, Former Special Projects Coordinator, KPAX Television, and Committee Chairman, Montana Society of Professional Journalists Freedom of Information

Ray Ring, Senior Editor, *High Country News*

Jonathan Weber, Founder, Publisher, CEO and Editor-in-Chief, NewWest.net

THE INFORMATION NEEDS OF UNDERSERVED PEOPLE AND COMMUNITIES

Moderator: Sally Mauk, News Director, Montana Public Radio

Mark Anderlik, Executive Officer, UNITE HERE Local 427,
and President, Missoula Area Central Labor Council

Luella Brien, Former Reporter, *Billings Gazette*, Member, Crow Tribe

Ellie Hill, Executive Director, Poverello Center, Inc.

Patty LaPlant, Enrolled member of the Blackfeet Tribe and
Coordinator of the National Native Children's Trauma Center

Richard S. Wolff, Gilhousen Telecommunications
Chair, Montana State University

THE PUBLIC'S NEEDS FOR POLITICAL INFORMATION

Moderator: Dennis Swibold, Professor of Public Affairs Reporting, The
University of Montana School of Journalism

Linda Gray, President, Max Media of Montana

Charles S. Johnson, Chief, Lee State Bureau

Stephen Maly, Executive Director, Helena Civic TV

Matt Singer, CEO, Forward Montana, and Founder, Left in the West

K'Lynn Sloan, Montana Correspondent, MTV Choose or Lose Street Team '08



APPENDIX V

Informal Advisors

To assist in Knight Commission deliberations, its staff regularly made informal inquiries of a great many journalists and academic and practitioner experts from a wide variety of fields. The Commission is grateful to all of the following individuals who offered input on one or more occasions. Each was commenting or providing research material solely in his or her individual capacity; institutional affiliations are supplied for identification purposes only. The Commission is grateful for the time and insights of all participants. None is responsible for the content of this report, which represents the views only of the Knight Commission.

Martin Baron, Editor, *The Boston Globe*

Gary Bass, Founder and Executive Director, OMB Watch

Beverly Blake, Program Director for Columbus, Macon and Milledgeville, John S. and James L. Knight Foundation

Jeanne Bourgault, COO and Senior Vice President for Programs, Internews Network

Nolan Bowie, Adjunct Lecturer in Public Policy and Senior Fellow of Shorenstein Center, Harvard University John F. Kennedy School of Government

Angela J. Campbell, Professor and Co-Director of Institute for Public Representation, Georgetown University Law Center

Farai Chideya, Author and Multimedia Journalist

Ira Chinoy, Associate Professor, Philip Merrill College of Journalism, University of Maryland

Everette E. Dennis, Felix E. Larkin Distinguished Professor of Communication and Media Management, and Director, Center for Communications, Fordham University Graduate School of Business

Stephen K. Doig, Knight Chair, Walter Cronkite School of Journalism and Mass Communication, Arizona State University

John Dotson, Publisher Emeritus, *Akron Beacon-Journal*

Johanna Dunaway, Assistant Professor, Department of Political Science, Manship School of Mass Communications, Louisiana State University

Paula Ellis, Vice President for Strategic Initiatives, John S. and James L. Knight Foundation

Garrett Epps, Professor, University of Baltimore School of Law

Michelle Ferrier, Managing Editor, *MyTopiaCafe.com*

Pamela Fine, Knight Chair in News, Leadership and Community, School of Journalism and Mass Communications, University of Kansas

Baruch Fischhoff, Howard Heinz University Professor, Carnegie Mellon University

Ed Fouhy, Founder, Stateline.org

Sydney P. Freedberg, Staff Writer, *St. Petersburg Times*

Archon Fung, Ford Foundation Professor of Democracy and Citizenship, Harvard University John F. Kennedy School of Government

Mark Glaser, Executive Editor, MediaShift

Gabriel Gluck, Adjunct Professor, Kean University, and former reporter, *The Star-Ledger*

Anna Godfrey, Research Manager, Research & Learning (R&L) Group, BBC World Service Trust

Harvey Graff, Ohio Eminent Scholar in Literacy Studies and Professor, The Ohio State University

Charlotte Grimes, Knight Chair in Political Reporting, Newhouse School of Public Communications, Syracuse University

Liza Gross, Interim Executive Director, International Women's Media Foundation

Jay Hamilton, Sydnor Professor of Public Policy, DeWitt Wallace Center for Media and Democracy, Duke University

Debra Gersh Hernandez, ASNE Sunshine Week Coordinator

Ellen Hume, Research Director, MIT Center for Future Civic Media

Paul Hyland, Executive Producer, edweek.org

Larry Jinks, Director, McClatchy Company

Sue Clark-Johnson, Executive Director, Morrison Institute for Public Policy, Arizona State University

Eric Klinenberg, Professor of Sociology and Director of Graduate Studies, New York University

Gerald Kosicki, Associate Professor, The Ohio State University School of Communication

Joel Kramer, CEO and Editor, *Minnpost.com*

Peggy Kuhr, Dean, University of Montana School of Journalism

Nicholas Lemann, Dean, Columbia University Graduate School of Journalism

Amy Lesnick, CEO, Full Circle Fund

Mark Lloyd, Vice-President for Strategic Initiatives, Leadership Conference on Civil Rights

Frank LoMonte, Executive Director, Student Press Law Center

Carolyn Lukensmeyer, Founder and President, AmericaSpeaks

Diane Lynch, President, Stephens College

Michael Maidenberg, Consultant, John S. and James L. Knight Foundation

Bill Marimow, Editor and Executive Vice President, *The Philadelphia Inquirer*

John McCarron, Senior Scribe, LISC/New Communities Program

Sascha Meinrath, Research Director, Wireless Future Program, New America Foundation

Rachel Davis Mersey, Assistant Professor of Journalism, Northwestern University

Philip Meyer, Knight Chair Emeritus, School of Journalism and Mass Communication, University of North Carolina at Chapel Hill

Andrew Nachison, Founder and CEO, iFOCOS and Founder, We Media

Kimberly L. Nalder, Assistant Professor, Department of Government, California State University, Sacramento

Chris O'Brien, Columnist, *San Jose Mercury News*

Rory O'Connor, Shorenstein Center, Harvard University
John F. Kennedy School of Government

Geneva Overholser, Director, School of Journalism,
USC Annenberg School for Communication

Susan Patterson, Program Director for Charlotte, North Carolina, Myrtle Beach and Columbia, South Carolina, John S. and James L. Knight Foundation

Thomas E. Patterson, Bradlee Professor of Government and the Press,
Shorenstein Center, Harvard University John F. Kennedy School of Government

Aaron Presnall, director of Studies, Jefferson Institute

Monroe Price, Director, Center for Global Communication Studies,
University of Pennsylvania Annenberg School for Communication

Hong Qu, User Experience Researcher, YouTube

Howard Rheingold, author and teacher

Alexandra Samuel, CEO, Social Signal

Ernest Sanders, New Communities Program Organizer,
Greater Auburn-Gresham Development Corporation

Michael Schudson, Professor, Columbia University
Graduate School of Journalism

Ben Scott, Policy Director, Free Press

Andrew Jay Schwartzman, President and CEO, Media Access Project

Lee Shaker, Senior Research Specialist, Department
of Politics, Princeton University

Ben Shneiderman, Professor, Department of Computer Science, University of Maryland

Josh Silver, Executive Director, Free Press

Keith L. Smith, Associate Vice President, Agricultural Administration; Associate Dean FAES; Director, Ohio State University Extension and Gist Chair in Extension Education and Leadership, the Ohio State University

Marc Smolowitz, Executive Producer, Full Circle Fund

James H. Snider, President, iSolon.org

Paul Starr, Professor of Sociology and Public Affairs, and Stuart Professor of Communications and Public Affairs, Princeton University

Natalie (Talia) Jomini Stroud, Assistant Professor, Department of Communication Studies and Assistant Director, Annette Strauss Institute for Civic Participation, University of Texas at Austin

Teresa Jo Styles, Professor, Department of Journalism and Mass Communication, North Carolina A & T State University

Loris Ann Taylor, Executive Director, Native Public Media

Patricia Thomas, Knight Chair in Health & Medical Journalism, Grady College of Journalism and Mass Communication, University of Georgia

Esther Thorson, Associate Dean for Graduate Studies and Research and Director of Research, Donald W. Reynolds Journalism Institute, University of Missouri School of Journalism

Lars Hasselblad Torres, IDEAS Global Challenge, MIT Public Service Center

Gordon Walek, Chicago Local Initiatives Support Corporation (LISC)

Tova Wang, Senior Fellow, Demos

Michael Weiksner, Co-Founder, e-thepeople.org

Bob Weissbourd, Founder and President, RW Ventures, LLC

Tracy Westen, Chief Executive Officer, Center for Governmental Studies

Journalism
Commission
public
Needs
people
democratic
engagement
personal
civic
citizens
openness
digital
Internet
without
intermediaries
capacity
skills
individuals
informed
government
commmendation
lives
flow
use
second class

Members of the Commission

Members of the Commission

danah boyd is a social media researcher at Microsoft Research and a Fellow at Harvard University's Berkman Center for Internet and Society. Her research focuses on how people integrate technology into their everyday practices. She has been analyzing different social media phenomena for almost a decade.

Dr. boyd received her Ph.D. from the School of Information at the University of California-Berkeley. Her dissertation "Taken Out of Context: American Teen Sociality in Networked Publics" examined teen engagement with social network sites like MySpace and Facebook. Her work was part of a MacArthur Foundation-funded project on digital youth and informal learning. The findings of this project are documented in the co-authored book *Hanging Out, Messing Around, and Geeking Out: Kids Living and Learning with New Media*.

At the Berkman Center, danah co-directed the Internet Safety Technical Task Force to help identify risks and potential technical solutions for keeping children safe online. With support from the MacArthur Foundation, danah and her Berkman colleagues have created a Youth and Media Policy Initiative to further examine how research can inform policy.

Dr. boyd received a bachelor's degree in computer science from Brown University and a master's degree in sociable media from the MIT Media Lab. She has worked as a researcher for various corporations, including Intel, Tribe.net, Google, and Yahoo! She sits on corporate, education, and nonprofit advisory boards, and regularly speaks at industry conferences and events. She also created and managed a large online community for V-Day, a non-profit organization working to end violence against women and girls worldwide. Dr. boyd actively shares her research on her blog (<http://www.zephorias.org/thoughts>) and via Twitter (@zephorias).





John S. Carroll has been Editor of the *Los Angeles Times*, *Baltimore Sun* and *Lexington Herald-Leader*. He was a reporter in Vietnam, the Middle East, and Washington. He was a member of the Pulitzer Prize board for nine years and was its chair in 2003. He is a graduate of Haverford College, has had fellowships at Harvard and Oxford, and was the Knight Visiting Lecturer at Harvard's Kennedy School in 2006. He is now writing a nonfiction book and serving on several nonprofit boards.

Robert W. Dechard is Chief Executive Officer of A. H. Belo Corporation. A. H. Belo Corporation owns and operates the *Dallas Morning News*, Texas's leading newspaper and winner of eight Pulitzer Prizes; the *Denton Record-Chronicle*; the *Providence Journal*, the oldest continuously-published daily newspaper in the U. S. and winner of four Pulitzer Prizes; and the *Press-Enterprise*, serving southern California's Inland Empire region and winner of one Pulitzer Prize. A. H. Belo owns and manages various Web sites associated with the newspapers, as well as certain niche products, direct mail, and commercial printing businesses.



A. H. Belo's newspapers and related assets were spun off in February 2008 from Belo Corp., which Dechard led as CEO for the prior 21 years. Dechard has worked for A. H. Belo Corporation and Belo Corp. since his graduation from Harvard College in 1973. During his years as Belo Corp.'s CEO, the company grew in revenue from \$397 million to \$1.6 billion. Net income grew from \$20 million to more than \$130 million. The company's three major newspapers and 20 television stations, including six in the top 14 markets, have won 13 Pulitzer Prizes, 25 Alfred I. duPont-Columbia University Awards, 22 George Foster Peabody Awards, and 38 national Edward R. Murrow Awards.

Dechard has played a significant role in the newspaper and television broadcasting industries, and in freedom of information organizations. He has served on the boards of the Newspaper Association of America and the Freedom of Information Foundation of Texas, which he helped found, as well as being appointed to presidential and FCC commissions concerned with television industry issues.



Reed E. Hundt was Chairman of the Federal Communications Commission (FCC) from 1993 to 1997. He was a member of Barack Obama's Presidential Transition Team (2008–09) where he was the economic agency review group head. Reed is currently the Co-Chairman of the Coalition for the Green Bank, as well as Principal at REH Advisors, a business consulting firm. Reed has also served as a Senior Adviser to McKinsey & Company, a strategic management consulting firm. He was Co-Chairman of the Forum on Communications and Society at the Aspen Institute (1998–2006). From 1982 to 1993 he was a Partner in the Washington, D.C. office of Latham &

Watkins, a national and international law firm and was an associate in Los Angeles and Washington offices (1975–1982). Reed is on the Board of Directors of Intel Corporation, Infinera, and Data Domain, all public companies, and a member of the board of Telegent Systems and Vanu, Inc., both private companies. Reed has been Principal at Charles Ross Partners, a consulting firm, since 1997. He serves as a member of the District of Columbia, Maryland, and California bars (former).

His books include *In China's Shadow: The Crisis of American Entrepreneurship* (Yale University Press, 2006) and *You Say You Want A Revolution: A Story of Information Age Politics* (Yale University Press, 2000). Reed graduated from Yale College (1969) with a B.A. in History magna cum laude and with honors with exceptional distinction in history. He graduated from J.D. Yale Law School (1974) and is a member of the executive board of the Yale Law Journal. He is married to Elizabeth Katz and has three children: Adam (b. 1982), Nathaniel (b. 1985), and Sara (b. 1989).

Alberto Ibargüen is President and CEO of the John S. and James L. Knight Foundation.

Previously, he was Publisher of the *Miami Herald* and of *El Nuevo Herald*. During his tenure, the *Miami Herald* won three Pulitzer Prizes and *El Nuevo Herald* won Spain's Ortega y Gasset Prize for excellence in journalism. Earlier, he was an executive at *Newsday* and at the *Hartford Courant*, and practiced law in Hartford, Connecticut.

Ibargüen is Chairman of the Board of the Newseum and of the World Wide Web Foundation. He serves on the boards of PepsiCo, American Airlines, ProPublica, and the Council on Foreign Relations. He is a former board chair of PBS.

He is a graduate of Wesleyan University and of the University of Pennsylvania Law School and served in the Peace Corps in Venezuela and in Colombia. For his work to protect journalists in Latin America, he received a Maria Moors Cabot citation from Columbia University and an honorary doctorate from George Washington University.





Walter Isaacson is the President and CEO of the Aspen Institute, a nonpartisan educational and policy studies institute based in Washington, D.C. He has been the Chairman and CEO of CNN and the Editor of *Time* magazine.

He is the author of *Einstein: His Life and Universe* (April 2007), *Benjamin Franklin: An American Life* (2003), and *Kissinger: A Biography* (1992), and coauthor of *The Wise Men: Six Friends and the World They Made* (1986).

Isaacson was born on May 20, 1952, in New Orleans. He is a graduate of Harvard College and of Pembroke College of Oxford University, where he was a Rhodes Scholar.

He began his career at the *Sunday Times* of London and then the *New Orleans Times-Picayune/States-Item*. He joined *Time* magazine in 1978 and served as a political correspondent, national editor, and editor of new media before becoming the magazine's 14th editor in 1996. He became Chairman and CEO of CNN in 2001, and then President and CEO of the Aspen Institute in 2003.

He is the Chairman of the Board of Teach for America, which recruits recent college graduates to teach in underserved communities. He is also Chairman of the Board of the U.S.-Palestinian Partnership, set up by the U.S. State Department to promote economic and educational opportunities for the Palestinian people. He is on the board of United Airlines, Tulane University, Society for Science & the Public, and the Bipartisan Policy Center. He was appointed after Hurricane Katrina to be the Vice-Chairman of the Louisiana Recovery Authority.

He lives with his wife and daughter in Washington, D.C.

Benjamin Todd Jealous grew up believing that there was no higher calling than to further the cause of freedom in this country and in the world. It is a mindset he inherited from his parents and grandparents. Their drive for community betterment blazed the trail for Jealous' own deep commitment to social justice, public service, and human rights activism. Now, as the 17th President and Chief Executive Officer of the NAACP, and the youngest person to hold the position in the organization's 100-year history, Jealous is well positioned to answer the call.



During his career, he has served as President of the Rosenberg Foundation, Director of the U.S. Human Rights Program at Amnesty International, and Executive Director of the National Newspaper Publishers Association (NNPA), a federation of more than 200 black community newspapers. From his early days of organizing voter registration drives up until his nomination and election as NAACP president, Jealous has been motivated by civic duty and a constant need to improve the lives of America's underrepresented. All things considered, Jealous' leadership roles and active community involvement have well prepared him for his current duties as president of the NAACP. In fact, his path through journalism and the Black Press is not unlike several other former NAACP presidents, including Roy Wilkins, Walter White, Ida B. Wells, and W.E.B. Dubois. As a student at Columbia University, he worked in Harlem as a community organizer for the NAACP Legal Defense Fund. On campus, Jealous led school-wide movements, including boycotts and pickets for homeless rights, a successful campaign to save full-need financial and need-blind admissions when other national universities were cutting such programs, and an environmental justice battle with the university.

These protests ultimately led to the suspension of Jealous and three other student leaders. Jealous used this time off to work as a field organizer helping to lead a campaign that prevented the state of Mississippi from closing two of its three public, historically black universities, and converting one of them into a prison.

He remained in Mississippi to take a job at the *Jackson Advocate*, an African American newspaper based in the state's capital. His reporting—for the frequently firebombed weekly—was credited with exposing corruption among high-ranking officials at the state prison in Parchman. His investigations also helped to acquit a small black farmer who had been wrongfully and maliciously accused of arson. His work at the *Jackson Advocate* eventually led to his promotion to Managing Editor.

In 1997, Jealous returned to Columbia University and completed his degree in political science. With the encouragement of mentors, he applied and was accepted to Oxford University as a Rhodes Scholar, where he earned a master's degree in comparative social research.

Jealous eventually went on to serve as Executive Director of the National Newspaper Publishers Association (NNPA). While at the NNPA, he rebuilt its 90-year old national news service and launched a Web-based initiative that more than doubled the number of black newspapers publishing online.

Most recently, Jealous was President of the Rosenberg Foundation, a private independent institution that funds civil and human rights advocacy to benefit California's working families. Prior to that, he was Director of the U.S. Human Rights Program at Amnesty International. While there he led efforts to pass federal legislation against prison rape, rebuild public consensus against racial profiling in the wake of the September 2001 terrorist attacks, and expose the widespread sentencing of children to life without the possibility of parole.

Active in civic life, Jealous is a board member of the California Council for the Humanities and the Association of Black Foundation Executives, as well as a member of the Asia Society. He is married to Lia Epperson Jealous, a professor of constitutional law and former civil rights litigator with the NAACP Legal Defense and Educational Fund. They presently reside in Washington, D.C. with their young daughter.

Mary Junck joined Lee Enterprises in 1999 as Executive Vice President and Chief Operating Officer. She became president in 2000, Chief Executive Officer in 2001, and Chairman in 2002.

She previously held senior executive positions at the former Times Mirror Company. As Executive Vice President of Times Mirror and President of Times Mirror Eastern Newspapers, she was responsible for *Newsday*, the *Baltimore Sun*, the *Hartford Courant*, the *Morning Call*, Southern Connecticut Newspapers and a magazine division. From 1993 to 1997, she was Publisher and Chief

Executive Officer of the *Baltimore Sun*. She began her career with Knight Ridder at the *Charlotte Observer* in 1972 and advanced to Assistant Advertising Director at the Miami Herald, Assistant to the Knight Ridder Senior Vice President of Operations, and to Publisher and President of the *St. Paul Pioneer Press*.

She serves on the board of directors of the Associated Press and is a former board member of the Newspaper Association of America. In Davenport, she serves on the board of DavenportOne and Putnam Museum.

She received a bachelor of arts degree in English from Valparaiso University in Indiana and a master's degree in journalism from the University of North Carolina at Chapel Hill. She and her husband, Ralph Gibson, have a son and a daughter.

Lee Enterprises (NYSE: LEE) is a premier provider of local news, information, and advertising in primarily midsize markets, with 53 daily newspapers, online sites, and more than 300 weekly newspapers and specialty publications in 23 states.





Monica C. Lozano is Publisher and CEO of *La Opinión*, the nation's largest Spanish language daily newspaper, as well as Senior Vice President of Newspapers for impreMedia LLC, overseeing the company's entire publications group. ImpreMedia is the No. 1 Hispanic news and information company in the U.S. in online and print, with newspapers and magazines in most of the country's top Hispanic markets. In addition to the print platform, impreMedia distributes content through its online portal and newspaper sites as well as via mobile platforms.

La Opinión's award winning editorial content has established the paper as a leader in coverage of issues important to the Latino community and has been recognized by numerous journalistic, civic, and business organizations. The paper has received numerous awards including "Best Hispanic Daily Newspaper" from the National Association of Hispanic Publications and the coveted Ortega y Gasset Award from Spain, the highest honor in Spanish language publishing for Lifetime Achievement.

The newspaper has been involved in important public information campaigns designed to empower the Latino community in the areas of health, economic advancement, immigration, and education. *La Opinión* and impreMedia were national partners to the "Ya es hora" campaign targeting Latino civic participation in the presidential elections resulting in historic levels of voting in November 2008. It has also been selected as a national partner for the upcoming 2010 Census and has a program underway to support small business through these challenging economic times.

Lisa MacCallum is the Managing Director and General Manager of the Nike Foundation, a nonprofit organization supported by NIKE, Inc. that is dedicated to investing in adolescent girls as the most powerful force for change in the developing world. Lisa oversees all functions of the Foundation, including its investments and portfolio, accounting and finance, strategic planning and operations, and branding and communications. In addition, she ensures that all aspects of the organization are coordinated and deliver against the Foundation's mission to achieve maximum impact. She brings more than 15 years of business management experience to the Foundation.



Lisa has been with NIKE, Inc. since 2001. She served as the Business Development Director for USA Apparel, a \$1.2 billion business division of NIKE, Inc. In that capacity, she was responsible for long-term business strategy, go-to-market strategic planning, and overseeing the resolution of time-sensitive business issues critical to the long-range success of the business. Lisa was also the Strategic Planning Director for NIKE, Inc.'s USA Region, a \$5.3 billion combined consumer products and marketing organization (Athletic Footwear, Apparel and Equipment).

Previously, Lisa was a co-founder and company director of Tokyo-based Business Breakthrough, Inc., a satellite and Internet broadcasting company committed to strengthening management leadership in Japan through innovation in business management training.

During her time in Tokyo, Lisa provided independent consulting for Ohmae & Associates, focused on joint ventures and partnerships between Japanese companies and those based in the United States, Australia and other Asian countries. Earlier in her career, Lisa was responsible for driving growth planning initiatives for Coca-Cola's interest in Australia, New Zealand and the South Pacific Islands. She began her professional career with KPMG and as a Certified Chartered Accountant.

Lisa has contributed to editorials focused on the evolving dynamics of the global economy. Her work has appeared in *Time* magazine, *Japan Times*, the *Wall Street Journal*, and the *Australian Financial Review*. She serves on PEPFAR's Steering Committee for an HIV-Free Generation and is a member of the Knight Commission on the Information Needs of Communities in a Democracy. Lisa was born and raised in Queensland, Australia.



Marissa Mayer joined Google in 1999 as the company's first female engineer. Today, she leads the company's product management and design efforts for search and search properties as well as the overall user experience, including the Google.com home page. Google's search product portfolio includes Web search, images, news, books, products, maps, toolbar, iGoogle, and more. She also works with the company's user-experience team, developing designs and setting standards for the look-and-feel that keep the company's products simple, intuitive, and useful.

Marissa serves as Co-Chair of the Knight Commission on the Information Needs of Communities in a Democracy. She also is a member of the board of trustees for the San Francisco Ballet, San Francisco Museum of Modern Art, and the Smithsonian's Cooper-Hewitt National Design Museum. Her contributions and leadership have been recognized by numerous publications including *Newsweek*, *BusinessWeek*, *Fast Company*, *Portfolio*, and the *New York Times*. In 2008, at 33, Marissa became the youngest woman ever to be included on *Fortune's* Most Powerful Women's list (#50).

Concurrently with her full-time work, Marissa has taught introductory computer programming classes at Stanford University, which has recognized her with the Centennial Teaching Award and the Forsythe Award for her outstanding contributions to undergraduate education. Marissa earned both her B.S. in Symbolic Systems and her M.S. in Computer Science from Stanford, specializing in artificial intelligence for both degrees. She also holds an honorary doctorate of engineering from Illinois Institute of Technology.

Andrew J. Mooney is the Executive Director of Local Initiatives Support Corporation/Chicago (LISC). Founded 30 years ago, LISC is a not-for-profit development intermediary that provides grants, loans and equity—as well as technical assistance—to community organizations engaged in the revitalization of their neighborhoods.

Under Mr. Mooney’s leadership, LISC/Chicago has become one of the nation’s leading community development agencies. Since 1996, he has raised approximately \$120 million in grants and loans to invest in the city’s neighborhoods, leading in turn to the development of approximately 23,000 units of housing, 2.5 million square feet of commercial space, and numerous community facilities, leveraging over \$2.5 billion in total investment.

Mr. Mooney and his colleagues are best known for cutting-edge community development strategies that have become national models, including the New Communities Program (NCP), a comprehensive effort at neighborhood development supported by the John D. and Catherine T. MacArthur Foundation. Other initiatives include the Centers for Working Families; Elev8, a community schools program; the Chicago Neighborhood News Bureau (CNNB); the Digital Excellence Demonstration Communities (DEDC); and Neighborhood Sports Chicago.

Mr. Mooney has devoted his career to community development and has held leadership positions in a number of agencies. Early in his career, he led the Chicago Housing Authority, and in more recent years, served a second term on the CHA board, co-authoring the latter’s groundbreaking “Plan for Transformation.” He has been on the governing boards of a number of public and private agencies, and is currently a member of the Knight Commission on the Information Needs of Communities in a Democracy.

A native of Chicago, Mr. Mooney is a graduate, summa cum laude, of the University of Notre Dame, and of the University of Chicago, where he was a Danforth Fellow.





Donna Nicely has served as Director of the Nashville Public Library since 1995. Prior to that, she was Director of the DeKalb Public Library in Decatur, Georgia. She is involved in many leadership positions in her community and the library profession, including the boards of Community Foundation of Middle Tennessee, the Nashville Downtown Partnership, Country Music Foundation, and Nashville's Agenda Steering Committee. Donna has served on the Urban Libraries Council Executive Board, and was Chair from 2004 to 2005. In July 2009 she was awarded the Charlie Robinson Award from the Public Library Association, which recognizes a library director for innovation and risk taking.

Theodore B. Olson is a Partner in Gibson, Dunn & Crutcher's Washington, D.C. office, a member of the firm's Executive Committee, Co-Chair of the Appellate and Constitutional Law Group and the firm's crisis Management Team.

Mr. Olson was Solicitor General of the United States during the period 2001–2004. From 1981 to 1984 he was Assistant Attorney General in charge of the Office of Legal Counsel in the U.S. Department of Justice. Except for those two intervals he has been a lawyer with Gibson, Dunn & Crutcher in Los Angeles and Washington, D.C. since 1965.



Mr. Olson has argued 55 cases before the United States Supreme Court. He is a Fellow of the American College of Trial Lawyers and the American Academy of Appellate Lawyers. He is currently Co-Chair of the Knight Commission on the Information Needs of Communities in a Democracy. Mr. Olson is a member of the Board of Trustees of the Ronald W. Reagan Presidential Foundation and a member of the Board of Directors of the National Center for State Courts. He was a Visiting Scholar at the National Constitution Center, 2006–2007.



Michael K. Powell served as Chairman of the Federal Communications Commission at a time of revolutionary change in technology and communications. He was appointed by President Clinton in 1997 and was designated Chairman by President Bush in 2001.

As chairman, Mr. Powell created the right regulatory conditions to stimulate the deployment of powerful technologies that put more power in the hands of the people. He clearly saw the importance of the rise of digital technologies and the impact they would have on our lives, from health care to education. As chairman, he focused on initiatives that

encouraged market-driven solutions that promoted consumer interests and drove innovative approaches to getting broadband technology out to people—such as broadband over power lines, WiFi hotspots, cable broadband and DSL. From campaigning for the right to keep your phone number when switching wireless carriers to fighting to block unwanted telemarketing calls with a Do-Not-Call list to cautiously policing the airwaves for indecency, Mr. Powell put consumers at the forefront in this exciting and dynamic marketplace.

Chairman Powell previously served as the Chief of Staff of the Antitrust Division in the Department of Justice.

Mr. Powell was an associate in the law firm of O'Melveny & Myers, and he clerked for the Honorable Harry T. Edwards, Chief Judge of the U.S. Court of Appeals for the D.C. Circuit.

Mr. Powell graduated in 1985 from the College of William and Mary with a degree in government. He earned his J.D. from Georgetown University Law Center.

Mr. Powell is currently a Senior Advisor of Providence Equity Partners, Mr. Powell is also a board member of Cisco, ObjectVideo, the Rand Corporation, the Aspen Institute, and America's Promise. He is also working to raise resources to build the American Veterans Disabled for Life Memorial in Washington, D.C.

Rey Ramsey is Co-Founder and Chief Executive Officer of One Economy Corporation. Mr. Ramsey led the organization's growth from four employees working in a basement to a global organization that has taken root on four continents. Since 2000, One Economy has helped bring broadband access into the homes of over 300,000 low-income Americans. More than 16 million people have visited One Economy's multilingual Web properties. Mr. Ramsey has been on the forefront of driving the creation and distribution of public purpose media, most notably through the Public Internet Channel (www.pic.tv), which he founded. Through One Economy programs, hundreds of youth have delivered nearly 50,000 hours of service to their communities.



Through One Economy programs, hundreds of youth have delivered nearly 50,000 hours of service to their communities.

Prior to the founding of One Economy, Mr. Ramsey served as President and Chief Operating Officer of the Enterprise Foundation. Before joining Enterprise, Mr. Ramsey served in the cabinets of two governors of Oregon as the state's director of housing and community services and practiced law. He was the Chairman of Habitat for Humanity International from 2003 to 2005. He holds a bachelors degree in political science from Rutgers University and is a graduate of the University of Virginia Law School.



Paul Sagan, President and CEO of Akamai, joined the company in October 1998. Sagan was elected to the Akamai Board of Directors in January 2005, and he became CEO in April 2005.

Previously, Sagan served as senior advisor to the World Economic Forum from 1997 to 1998, consulting to the Geneva-based organization on information technology for the world's 1,000 foremost multinational corporations.

In 1995, Sagan was named President and Editor of new media at Time Inc., a division of Time Warner, and worked in that role until 1997. Previously, he served as Managing Editor of Time Warner's

News on Demand project and was a senior member of the team responsible for the development of the company's online, cable online, electronic publishing, and Internet publishing activities. He was a founder of Road Runner, the world's first broadband cable modem service, and Pathfinder, one of the Web properties that pioneered Internet advertising. Sagan joined Time Warner in 1991 to design and launch NY1 News, the cable news network based in New York City.

Sagan's career began in broadcast television news. He joined WCBS-TV in 1981 as a news writer and was named news director in 1987, a position he held until 1991.

Sagan, a three-time Emmy Award winner for broadcast journalism, became a fellow of the American Academy of Arts and Sciences in 2008 and was named a Global Leader for Tomorrow in 1996 by the World Economic Forum. He is a director of EMC Corp. (NYSE: EMC), and previously served as a director of Dow Jones & Company and Digitas, Inc. before they were acquired.

Sagan is a trustee of Northwestern University; a graduate of the Medill School of Journalism; co-chairman of the Medill Board of Advisors; a member of the Dean's Council at the Kennedy School of Government at Harvard University; a member of the advisory board of the Shorenstein Center on the Press, Politics & Public Policy at the Kennedy School; an advisor to the MATCH charter public school in Boston; and a member of the Presidential Advisory Council at Berklee College of Music.




THE ASPEN INSTITUTE
Communications and Society Program

 John S. and James L.
Knight Foundation
www.knightfoundation.org

A project of the Aspen Institute Communications and Society Program and the John S. and James L. Knight Foundation.



 creative
commons
09/015



Center for Social Media

Public Media 2.0: Dynamic, Engaged Publics

DRAFT—NOT FOR CITATION

Dec. 18, 2008

Jessica Clark
Director, Future of Public Media Project
Center for Social Media

Patricia Aufderheide
Director, Center for Social Media

A Future of Public Media Project, funded by the Ford Foundation

February 2009



EXECUTIVE SUMMARY

There has never been a more promising moment to shape the future of media for public engagement. Opportunities abound to support and participate in the extraordinary creative outpouring unleashed by digital production and communication. But we need to embrace the participatory—the feature that has also been most disruptive of current media models. We need examples, standards and metrics to define truly meaningful participation in media for public life. And we need to support policies and initiatives that can turn today’s successful experiments into tomorrow’s tried-and-true public media. Public media stakeholders, especially trusted institutions such as public broadcasting, need to take leadership to create a true public investment in public media 2.0.

TAKEAWAYS

- The key goal for tomorrow’s public media is the **ability to generate a public around a problem**.
- Quality **content** is critical, paired with effective engagement strategies.
- Public media projects can happen in **any venue**, commercial or not.
- **Collaborations** are central.
- **Trust** is critical, both for content and participation.
- **Access** is essential; citizens need affordable access and the skillsets to act.
- Impact **measurements** are crucial.

ACTION AGENDAS

- *Public Media Makers* can embrace participation with partners and publics; cross cultural, social, economic, ethnic and political divides; learn from others’ examples, and their mistakes.
- *Policymakers* can use universal design principles in infrastructure policy and universal service values in constructing and supporting infrastructure; support platforms that offer stability and reliability in information provision; support lifelong education that helps everyone be media makers as well as consumers.
- *Funders* can fund media activities that build democratic publics; doing, not being; norms-setting; standardization of reliability tools; impact metrics; incubation and experiment in media making, media organizations, and media tools, especially among disenfranchised communities.



INTRODUCTION

Once upon a time, in the post-World War II boom, the shallowness and greediness of consumer culture appalled many people concerned with the future of democracy. They looked to commercial media and with few exceptions—such as some news beats in prestige newspapers—they mostly saw media that catered to advertisers who were cultivating the self-absorption of their audiences. How could a well-intentioned member of this society even find out about important issues, much less address them?

In the United States, this widespread concern inspired such initiatives as the Hutchins Report of the Commission on the Freedom of the Press (1947), the Carnegie Commission on Public Broadcasting (1966), the Poynter Institute (1975) and other journalistic standards and training bodies. Foundations also made investments in media, including the longstanding commitment of the Ford Foundation to public broadcasting, the Rockefeller Foundation investment in independent filmmakers, and the John D. and Catherine T. MacArthur Foundation commitment to media arts centers. Some corporations also created public media for a mass media era: For instance, the burgeoning cable industry offered C-SPAN as a service particularly interesting to legislators. Guided by public interest obligations, broadcasters supported current affairs programming and investigative reporting. Taken together, these efforts placed the onus of educating, serving and enlightening the public on media makers and owners. They secured the public stake through regulation, tax exemptions, and chances for citizen review.

In an era that sanctioned and fostered the crassest of commercial media, these initiatives nurtured fields of public-interest media, somewhat distanced from the relentless bottom-line criteria of advertiser-fueled media. Like parks bordering a shopping mall, such media inhabited a separate zone: public broadcasting, cable access, nonprofit satellite set-asides, national and international beats of prestige journalism. These media played occasional major roles (showcasing political debates; airing major hearings; becoming the go-to source in a hurricane) while also steadily producing news and cultural enrichment in the background of Americans' daily lives.

Such mass public media were often hobbled by the inevitable clash between democratic debate and entrenched interest. In public broadcasting and in print journalism, partisan and corporate pressures distorted—even sometimes defanged—public discussion. Cultural battles sapped government funding for socially relevant arts and performance.

Mass-media versions of public media were also hobbled in generating vigorous public conversations by their one-to-many structure. They valiantly tried to inform public discourse through coverage of issues by reporters and filmmakers, and struggled to create slightly more open spaces: broadcast town hall forums with representative citizens; op-ed pages where carefully selected proxies air carefully balanced views; ombudsmen; talk shows where two or three callers can contribute. But print and broadcast are inevitably top-down, reinforcing consensus views and limiting a diversity of people and perspectives.

Public media 1.0 was widely accepted as important, but rarely loved. Public media 1.0 was politely under-funded by taxpayers, subsidized weakly by corporations, grudgingly exempted

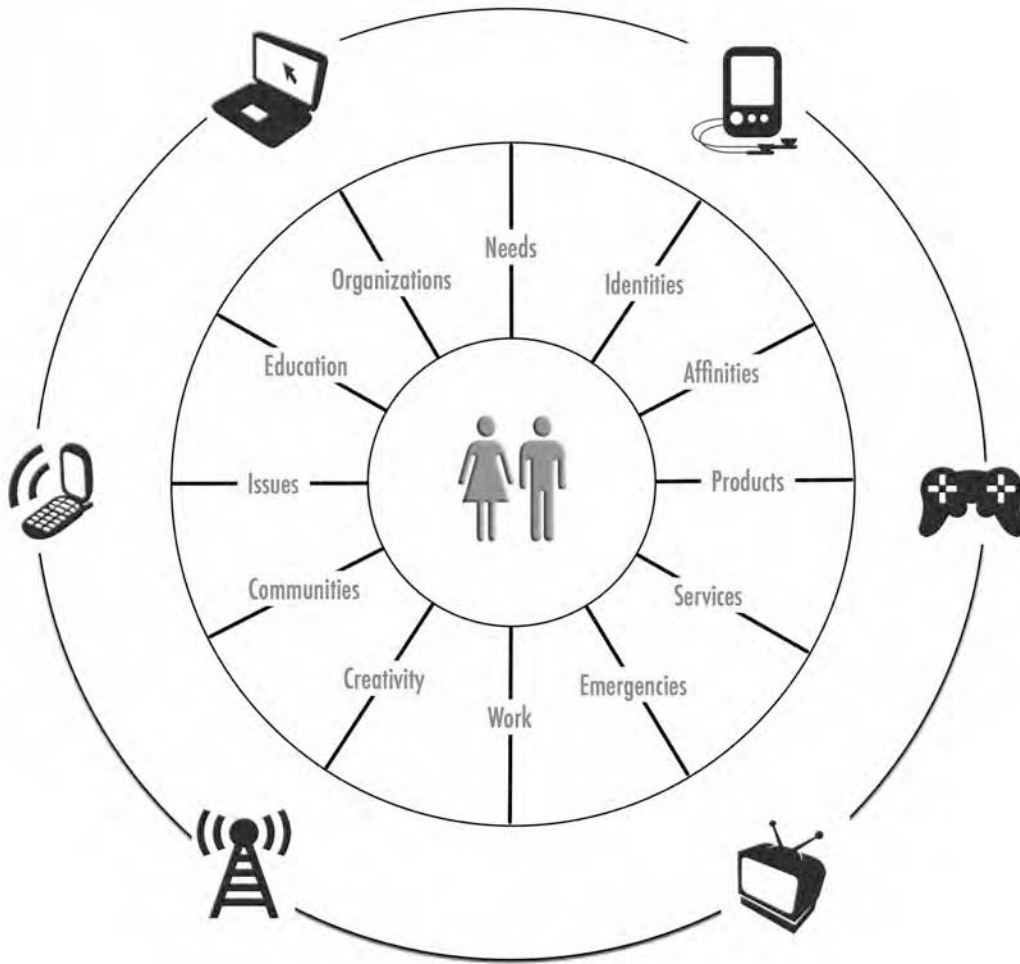


from being profit centers by shareholders.

And then came the Internet. Soon on its heels, came participatory and social media. After a decade of quickfire change—first Web pages, then interactive Flash sites; first blogs, then Twitter; first podcasts, then iPhones; first DVDs, then BitTorrent—the individual user has moved from being an anonymous part of a mass to being the center of the media picture.

People-centric public media

"The customer is the new platform"—Doc Searls



Not only is much more content—a catch-all term that has come to encompass the previously siloed fields of print, image, audio, film, TV and user-generated production—now available for free, but advertisers are migrating online with it. Commercial media still dominate the scene, but the people formerly known as the audience are spending less time with older media formats. Open platforms for sharing, remixing and commenting upon both amateur and professional media are now widely popular—hastening the demise of print subscriptions and “appointment television.”



While broadcast still reaches more people, the Internet (whether accessed through phones, laptops or multimedia entertainment devices) has become a mass medium.¹ New channels and markets have sprung up for the educational programming, documentary film and cultural uplift that used to be the province of public broadcasting. The public-interest, good-guy media are taking a beating as the top-down business models surrounding them transform (even though Web 2.0 did not generate all of mainstream media's problems).² Many "digital natives" born after 1980 (and a number of us born before) now inhabit a media-saturated environment that spans highly interactive mobile and gaming devices, social networks, chat—and only sometimes television or newspapers.

New business models are emerging, grounded in participation by users. As Lawrence Lessig writes in *Remix: Making Art and Commerce Thrive in the Hybrid Economy*:

Commercial economies build value with money at their core. Sharing economies build value, ignoring money. Both are critical to life online and offline. Both will flourish more as Internet technology develops. But between these two economies, there is an increasingly important third economy: one that builds upon both the sharing and commercial economies, one that adds value to each. This third type—the hybrid—will dominate the architecture for commerce on the Web.

Technology and infrastructure trends point to a continued increase in connectivity, participation and digital media creation. Broadband access is growing, and may increase more with FCC-permitted access to unlicensed "white spaces" in the spectrum. Digital audio and video recorders, laptops and Web-enabled mobile phones are only getting cheaper and more sophisticated. And Web 3.0 is on the way, featuring "semantic" technologies that will automatically filter user input to create more accurate and meaningful search experiences.³

People are not waiting for gatekeepers to tell them how to proceed. They are connecting with one another, sharing and making content, and mobilizing around issues.⁴ They are vetting media for reliability and social relevance themselves. Dynamic, engaged publics are now helping to set and drive the news cycle (often in near-real time), to transform cultural production, and to break through the stalemate of mass-media journalism's canned talking points.⁵

Here are five fundamental ways that media practices are changing with this shift:

Choice: Rather than passively waiting for content to be delivered as in the broadcast days, users are actively seeking out and comparing media on important issues, through search engines, recommendations, video on demand, news feeds and niche sites. This is placing pressure on many makers to convert their content so that it's not only accessible across an array of platforms and devices, but properly formatted and tagged so that it is more likely to be discovered.

Conversation: Comment and discussion boards have become common across a range of sites and platforms, with varying levels of civility in evidence. Distributed conversations across online services such as Twitter and FriendFeed are managed via shared tags. Tools for ranking and banning comments give site hosts and audiences some leverage for controlling the tenor of exchanges.



Curation: Users are aggregating, sharing, ranking, tagging, reposting, juxtaposing and critiquing content on a variety of platforms—from personal blogs to open video sharing sites to social network profile pages. Reviews and media critique are popular genres for online contributors, feeding a widespread culture of critical assessment. This can be a boon for outlets and producers, drawing unprecedented attention to independently produced media projects, but can also drive unwanted negative attention.

Creation: Users are creating a range of multimedia content (audio, video, text, photos, animation, etc.) from scratch, or remixing existing content for purposes of satire, commentary or self-expression. Professional media makers are now tapping user-generated content as raw material for their own productions, and outlets are navigating various fair use issues as they wrestle with promoting or protecting their brands.

Collaboration: Users are serving a variety of new roles along the chain of media creation and distribution—from providing targeted funds for production or investigation, to posting widgets⁶ that showcase content on their own sites, to organizing online and offline events related to media projects, to mobilizing around related issues through online tools such as petitions and letters to policymakers. “Crowdsourced” journalism projects now invite audience participation as investigators, tipsters or editors—so far, a trial-and-error process.

DYNAMIC MEDIA, DYNAMIC PUBLICS

Public media 2.0 is emerging, awkwardly, in this transition. What can and will public media look like tomorrow, when members of the public can be part of building it directly? Exciting experiments in public media are happening both inside and outside of the confines of noncommercial outlets:

In spring 2007, the CPB-funded Independent Television Service (ITVS) launched **World Without Oil** (<http://worldwithouthoil.org>), a multi-player “alternative reality” game driven by public participation. More than 1900 gamers from 40-plus countries collaboratively imagined their reactions to an eight-month energy crisis through submissions via privately owned social media sites such as YouTube and Flickr—and made corresponding real-life changes, chronicled at the WWO Lives blog (<http://wwolives.wordpress.com>).

At the same time, the Media Focus on Africa Foundation worked with the Arid Lands Information network to equip citizen reporters in Kenya with mobile phones. The **Mobile Report** project used an online map interface to aggregate their ground-level reports on election conditions (http://mfoa.africanews.com/site/page/mobile_report), offering a valuable overview of breaking news about a contested vote that traditional media sources did not have the capacity to cover.

In fall 2007, a set of independent bloggers worked with *The New York Times* editorial board and MSNBC to develop and promote the **10Questions Presidential Forum** (<http://www.10questions.com/>), designed to open the process for submitting presidential



debate questions. More than 120,000 visitors voted on 231 videos. A cross-section of the presidential candidates then answered the top 10 questions via online video. The top question was also aired during the MTV/MySpace “Presidential Dialogue” featuring Barack Obama.⁷

In December 2007, a news network of nonprofits, OneWorld, connected delegates and participants at the United Nations Climate Change Conference in Bali to reporters and advocates around the world via Second Life, an online 3-D virtual world. The event spawned regular meetings of environmental activists on OneWorld’s virtual **OneClimate Island**.

In July 2008, St. Louis public broadcasting station KETC launched **Facing the Mortgage Crisis** (<http://stlmortgagecrisis.wordpress.com>), a multiplatform project designed to help publics grappling with mortgage foreclosures. Featuring on-air and online elements that mapped pockets of foreclosures, and invited audience questions, the project directed callers to an information line managed by the United Way for further help. Calls to the line increased significantly as a result.

What do all of these media projects have in common? They provide a context for people from a variety of perspectives to work together to tackle a topic or problem—to share stories and facts, to ask hard questions, and then shape a judgment on which they can act.

People come in as participants in a media project, and leave as *members of a public*—a group of people who understand themselves as commonly affected by an issue. They have found each other and exchanged information on an issue in which they all see themselves as having a stake. In some cases, they take action based on this transformative act of communication.

“The networked information environment has permitted the emergence to much greater significance of the nonmarket sector, the nonprofit sector, and most radically, of individuals,” writes political philosopher Yochai Benkler in *The Wealth of Networks: How Social Production Transforms Markets and Freedom*.⁸ “...From the perspective of democratic discourse and a participatory republic, the networked information economy offers a genuine reorganization of the public sphere.”

We are at the very beginning of a new era of public media. Legacy public outlets are gingerly stepping beyond their traditional mass media roles. Traditional journalists are seeking new, more accurate job descriptions.⁹ Commercial projects such as CNN iReport (<http://www.ireport.com/index.jspa>) or the Associated Press Mobile News Network (<http://www.ap.org/mobilenews/>) now encourage users to upload their own reports and images. The *Online NewsHour* offers both content from the *NewsHour with Jim Lehrer* and Web-only features that invite interaction. Selected public broadcasting producers have developed “widgets” that showcase user-generated content.¹⁰

Local public media outlets are also reinventing themselves. Some public broadcasting stations, such as Portland’s Oregon Public Broadcasting (<http://www.opb.org/>), are positioning themselves online as cross-platform, trusted multimedia news producers and aggregators. Others, like WILL in Urbana, Illinois, are retraining producers in community engagement practices that can guide more responsive and engaged programming. Still others are encouraging direct production of content by audience members, such as the



Docubloggers project (<http://www.klru.org/docubloggers/>) hosted by KLRU in Central Texas. The Knight Foundation has also been underwriting a surge of innovation in community news—the next phase in their historic support of local newspapers.¹¹ Cable access media centers such as the Manhattan Neighborhood Network, long practiced in engaging citizens, are now experimenting with webstreaming (<http://www.mnn.org>) and other online platforms.

Outside traditional media, political bloggers have built sites that are now institutions, such as Daily Kos (<http://www.dailykos.com>) or The Huffington Post (<http://www.huffingtonpost.com>). Citizen journalism is blooming, sometimes with the help of increasingly strapped newspapers and sometimes in response to their deficiencies. Projects such as J-Lab's Knight Citizen News Network (<http://www.kcnn.org/>) and the Center for Independent Media (<http://newjournalist.org/>) are offering journalistic training to citizen media makers in an effort to raise the quality and reliability of reporting.

Participatory public media is now a global phenomenon, with countless international blogs that offer personal stories, political and cultural commentary, photos of daily life, podcasts, video programs and more,¹² and with international web platforms such as Open Democracy (<http://www.opendemocracy.net/>). Projects like LinkTV's "Dear American Voter" (<http://www.linktv.org/dearamericavoter>) bring global citizens into conversation.

Mobile devices are becoming increasingly powerful tools for both production and consumption of public-minded text, audio, photo and video content, especially in developing countries. Common forms of mobile reporting include SMS-based updates on issues and breaking events, "man-on-the-street" photojournalism, election monitoring, and live audio or video streaming. Cell phones are also creating public media access across class lines in the U.S.¹³ Projects like The People's 311 (<http://peoples311.com/>) in New York demonstrate how mobile citizen media creation can coalesce into ongoing public media: participants are encouraged to post photos of broken sidewalks, damaged fire hydrants and other urban blight, supplementing reports to the city's free 311 phone service.

Commercial/noncommercial hybrid projects now regularly mobilize publics around issues. Robert Greenwald's documentary, *Wal-Mart: The High Cost of Low Price* triggered change both in laws and in Wal-Mart practice. *An Inconvenient Truth*, a "double bottom line" production of Participant Productions has prompted worldwide conversations around climate change issues.

Still other public media moments happen on open online platforms, such as the flurry of editing that happened on Wikipedia around Sarah Palin's entry when she was named John McCain's running mate. Both Palin supporters and detractors as well as observers repeatedly edited it, with Wikipedia monitors maintaining order, creating an ongoing, vibrant public forum on the meaning of Sarah Palin in American politics.¹⁴

All of these media projects enable publics to form by setting a clear context for learning, participation, and action. This is the kind of media that political philosophers have wistfully been looking for all this time. When Thomas Jefferson said that he would rather have newspapers without government than government without newspapers, he was talking about the need for a free people to talk to each other about what matters. When American



philosopher John Dewey argued that conversation was the lifeblood of a democracy, he meant that people talking to each other about the things that really affect their lives is what keeps power accountable. When German philosopher Jürgen Habermas celebrated the “public sphere” created by the French merchant class in the 18th century, he was noting that when non-aristocrats started to talk to each other about what should happen, they found enough common cause to upturn an order. They all saw ordinary people talking to each other about what matters as what holds the power of corporations and government in a society accountable.

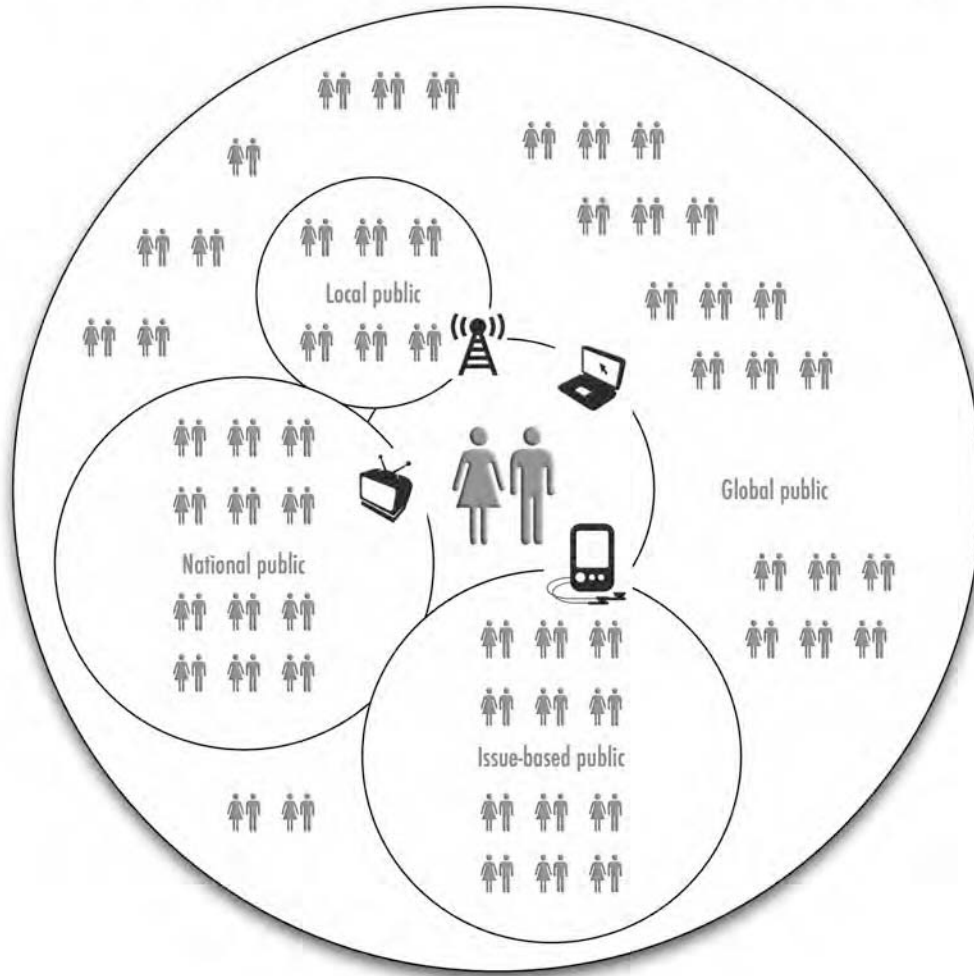
A public, then, exists because particular kinds of problems exist. Publics provide essential accountability in a healthy society, checking the natural tendency of people to do what’s easiest, cheapest, and in their own private interest. They are not rigid structures—publics regularly form around issues, problems, and opportunities for improvement—and this informality avoids the inevitable self-serving that happens in any institution. Publics are fed by the flow of communication.

Public media is not tantamount to popular media, and does not operate according to mass logic—small, focused publics can still make a big difference. People may not always want to make, view or read media for public knowledge and action, but we all want them there when we need them. We want reliable sources of information about events and processes that affect our quality of life and political options.

The open digital environment holds out the promise of a new framework for creating and supporting public media—one that prioritizes the creation of publics, moving beyond representation and into direct participation.¹⁵



Users can now participate in publics through a range of media



Participatory public media practices are anchored in reliable, high-quality information. Some of that comes and probably will continue to come from trusted, legacy public media sources, like newspapers, magazines, television news, and public broadcasting. Independent filmmakers and journalists have also long served as a core resource for public media, providing diverse voices and perspectives on key issues. But now, vital content moves across platforms, screens and venues, to serve as a tool for education, advocacy and debate.¹⁶ It interweaves the capacity of professional expression with nonprofessional, with the goal of letting publics discover themselves. For instance, the ITVS Community Cinema screening series (<http://www.pbs.org/independentlens/getinvolved/>) combines professional storytelling with nonprofessional, and long-form mass media with face-to-face interactions and online offerings targeted to specific publics.

Public media 2.0 will take the capacities of digital networked interaction, and release its possibilities for public life. It will ensure that self-expression is not merely more noise in an already cacophonous media environment. Public media 2.0 will be an enabler of opportunity, a catalyst for innovation, and an access provider for people who may never even have given



themselves the permission to be media makers. In public media 2.0, they will be contributors to media for public life, about the issues that most touch them. So public media 2.0 won't just provide information, but also contribute to helping people understand ongoing and complicated issues, both with content and through practices. Public media 2.0 will offer models for respectful and engaging conversation.

Public media 2.0 may look dramatically different from the highly produced media of the mass media era. Some may wistfully recall an era when grammatical rules always applied; some may recall the term “broadcast quality” with nostalgia. Aesthetics always matter, and the way things are expressed always affects reception. We shouldn't give up on beauty or eloquence.

But at the same time, the new public media are creating a much wider range of production, with goals of inclusion and problem-solving at the core. The result is a shift from passive consumption to engaged citizenship—giving publics the tools and knowledge they need to challenge power and change their own lives.

PUBLIC MEDIA'S SHIFTING COMMERCIAL CONTEXT

Public media 2.0 will evolve, but not in isolation. Public media have always been shaped by the larger media context—a context that can differ radically from country to country. In any market-driven system, commercial forces work in tandem with policymakers to set the parameters for how public media work, with citizens finding ways to use media to maintain and influence democracy. Here are some tech trends that every media actor is watching with passionate interest:

Ubiquitous video

While professional video has been migrating online to sites such as Hulu and YouTube, amateur video has been moving into traditional broadcast contexts as news coverage, debate questions and “color.” Both are now available all over the Web, and increasingly on mobile devices, and live streaming video is now on the rise.

Powerful databases

The popularity of data-driven maps and widgets has rendered deep wells of data and imagery increasingly valuable for reporting, information visualization, trendspotting and comparative analysis. Databases also now serve as powerful back-ends for managing and serving up digital content, making it available across a range of browsers and devices.

Social networks as public forums

Durable social-networking platforms such as Facebook and on-the-fly social networks such as the open-source Ning allow multi-faceted media relationships with one, few, or many people. Both outlets and advocates are using these platforms as tools to connect with audiences.

Locative media

GPS-enabled mobile devices are allowing users to access and upload geographically-relevant content, and a new set of “hyperlocal” media projects are feeding this trend.



Conversely, maps are becoming a common interface for news, video and data.

Distributed distribution

RSS feeds, search engines, widgets, and newsreaders are allowing content to escape the traditional boundaries of the channel or site. Users are coming to expect access to anywhere, anytime searchable media.

Hackable platforms

Commonly shared open source tools and applications are becoming increasingly customizable. Media makers can tailor their platforms, sharing tips across a broad community of developers, and users can pick and choose how they will interact with content. Iterative design principles are powering the speedy evolution of new interfaces.

Accessible metrics

Ranking and metrics sites such as Google Analytics, Alexa and Technorati make it easier for media makers to compile and compare their audiences—and for outsiders to more easily judge success.

Cloud content

Applications, media and personal content are migrating away from computers and mobile devices and onto hosted servers. On the one hand this offers simplicity, easy sharing, and protected backups; on the other it threatens control and privacy.

Pervasive gaming

A September 2008 report from the Pew Internet and American Life Project notes that 97 percent of teens ages 12-17 play computer, web, portable or console games. The researchers found that while many games are violent, gaming practices can foster social interaction and civic engagement.

More dialogue across outlets

The same conversational tools that allow users to critique and curate content are bringing professional outlets and media producers into conversation with one another. The older competitive model of the journalistic “scoop” is giving way to a cooperative mode, in which the influence of online outlets is predicated in part on how much they link and are linked to.¹⁷

All live, all the time

Not only has the mainstream news cycle accelerated, but new tools and devices are making it easier for users to produce and disseminate live audio, video and text content. “Breaking news” is being replaced by simultaneous, ubiquitous coverage, with those first on the scene—amateur or professional—scoring distribution.

The initial period of individualistic experiment in participatory media is passing, and large institutions—including political campaigns, businesses, universities and foundations—are now adopting social media forms such as blogs and user forums. With greater use comes consolidation in tools, applications, and platforms such as YouTube and Blogger (owned by Google), Flickr (owned by Yahoo), WordPress, Facebook, and Twitter (all in play). Every



step of consolidation is also a step in path dependence. That forecloses options and creates powerful stakeholders, and also creates a more stable environment for investing in media creation. As new business models emerge, the heady days of experiment will cede to the familiar terms of power and profit.¹⁸

Some media and legal scholars see big trouble in this phenomenon of consolidation. Jeff Chester thunders against corporate greed; Jonathan Zittrain fears that Apple will make our digital lives easy by taking away our creative choices; Siva Vaidhyanathan fears that Google's tentacles will reach into every aspect of our lives while making it ever easier for us to do our work with its tools; Cass Sunstein is sure we're losing our social souls.

Government policy offers a critically important check on corporate excess, and will be essential to the creation of public media 2.0. Just as we could not depend only on commercial media to provide public content, we cannot depend only on commercial platforms to prioritize the formation of publics. But policy will also be shaped around the basic habits and tools that are being created today. Public media 2.0 will develop on the basis of the platforms that are the winners of the consolidation taking place today, and with the help of policy that supports it within that environment.

NEW TOOLS, NEW PARTNERS, NEW RELATIONSHIPS

Public media 2.0 will take advantage of the participatory possibilities unleashed by the networked digital environment, building projects around the five C's of choice, conversation, curation, creation, and collaboration.

Partnership is the key to public media 2.0—because partnership brings actors with different assets and approaches together to work on platforms that thrive on participation. Some partners will be individuals, but many will be institutions.

For hybrid partnerships to work, each partner will need to identify assets and allies. Potential partners for public media 2.0 today include legacy public media, community media makers, digital companies, social entrepreneurs, and nonprofit institutions.

The assets of legacy public media—public broadcasters, prestige newspapers and magazines, respected broadcast news programs, and tried-and-true independent media outlets—include public trust, connections to existing communities, deep archives (even if fraught with ownership issues), and long-time relationships with funders and advertisers.

Community media makers—such as low power FM and cable access stations, independent TV and radio stations, and youth media outlets—are often already primed to train and support those interested in making their own media, because they have long subscribed to a philosophy of empowerment through citizen production. The most ambitious of these are retooling for the participatory environment, but their resources are scarce. Many community-based ethnic media outlets operate via commercial business models, which can create cultural clashes between projects serving overlapping publics.

Digital companies—including social media platforms, search engines, hardware and software developers and Web 2.0 startups—offer businesses based from the ground up on



participation, and an understanding of the importance of noncommercial content and projects in building an attractive commercial model. They often have low overhead compared to older film and broadcast outlets, and many are attractive to venture capitalists, which encourages innovation and risk-taking.

Potential nonprofit partners for public media creation and distribution include institutions in the nonprofit sector, such as universities, museums, libraries; as well as issue-focused educational and social organizations. Their assets include archives and databases, issue expertise, legitimacy, and trusted brands. Universities and federal research agencies are already wired to next-generation fiber optic networks, which could be used, as the National Public Lightpath project envisions, to create a cooperative public media broadband infrastructure.¹⁹ Nonprofits can also serve as hosts for long-term education and advocacy campaigns that media makers may spur, but are not prepared to sustain.

Social entrepreneurs, both in the foundation world and in corporate environments, are seeking partners who can deliver a “double bottom line” of social good and profit. (See sidebar above.) Their projects can serve as points of connection for actors and outlets from different media sectors.

When structured well, collaborations between the different sectors can drive rapid innovation and offer mutual benefit. Take the Bay Area Video Coalition’s Producer’s Institute, which matches up independent and public media makers with commercial Web tools to produce working digital engagement prototypes. The sessions equip producers with powerful new technologies, while providing industry leaders with compelling examples of how their products can enable public participation. One such project is iWitness (<http://www.pbs.org/frontlineworld/stories/iwitness/>), hosted online by the PBS series *Frontline/World*. Producers worked with BAVC trainers to combine webcams and the Internet telephone service Skype to build a customized tool enabling citizens and experts on the ground to report on breaking news. The project launched with a story about riots in Johannesburg²⁰, and was so popular it jumped immediately to the PBS home page.

Social Entrepreneurs and Public Media 2.0

*Can business and public life work together? That’s the hope of some social entrepreneurs who target media, blending economic, social and environmental values.*²¹

Omidyar Network

Rather than providing grants, the Omidyar Network reframes philanthropy as a low-interest investment. Pierre Omidyar, the founder of eBay, and his wife, Pam, established the Omidyar Network in 2004. They have worked with their partners to create opportunities that enable people to “improve their lives and make powerful contributions to their communities.” These efforts are organized around two investment initiatives: Access to Capital, and Media, Markets and Transparency. The Omidyar Network’s portfolio of past and current partners/grantees includes One World, WITNESS, Green Media Toolshed, the Sunlight Foundation, and SourceForge.Net (<http://www.omidyar.net/portfolio.php/>).

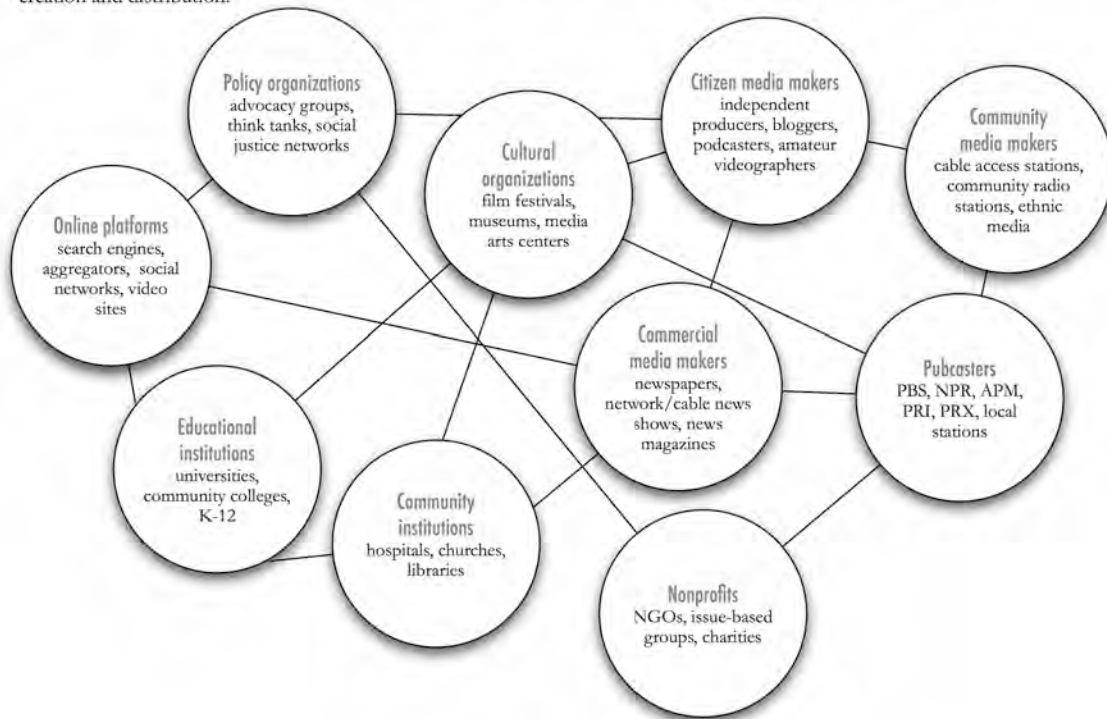
Participant Media

Participant Media, founded by Jeff Skoll, the first employee of eBay, asserts that “a good story well told can truly make a difference in how one sees the world.” Participant has produced dozens of dramatic features over the past few years, including *Good Night and Good Luck*, as well as a number of leading documentaries, including the Academy Award-winning *An Inconvenient Truth*. Films are designed with social action campaigns in mind, and investment is allocated for engagement projects. Participant teams up with social sector organizations, non-profits and corporations committed to creating open platforms for discussion and education and who can, with Participant, offer specific ways for audience members to get involved. The company has also launched a new social action network entitled Take Part (<http://www.takepart.com/>).



Public Media 2.0: New partners, new possibilities

In the digital participatory environment, public media projects have a constellation of potential partners for content creation and distribution.



Another success story is Public Radio Exchange (PRX), which has brokered a partnership between makers and programmers to “make public radio more public,” working to integrate activities around the five C’s. Their site (<http://www.prx.org/>) allows independent producers to upload radio pieces (*creation*). Audiences and public radio professionals seek out pieces (*choice*) and write reviews (*curation*) that help public radio station producers (*collaboration*) to assess whether they should play the pieces on air or online. The result is an extensive, searchable online catalogue of independently produced content that was previously inaccessible to listeners and stations. PRX has also launched a social network (*conversation*) that connects young radio producers and teachers, called Generation PRX (<http://generation.prx.org/>).

CHALLENGES AND OPPORTUNITIES FOR PUBLIC MEDIA 2.0

What will public media 2.0 look like? Who will lead it? How will it be supported by policy and paid for?

Shape



Public media 2.0 will exist beyond the zoned environments of today's public broadcasting, newspapers, cable access channels, and so on. *Being* public media will be replaced by *doing* public media.

Public media 2.0 will be built around mission, most fundamentally the ability to support the formation of publics around breaking issues—that is, to link us to deep wells of reliable information and powerful stories, to bring contested perspectives into constructive dialogue, to offer access and space for minority voices, and to build both online and offline communities. This is a mission fundamental to a vital open society. In 2005, public broadcasters sat down to think what roles they might serve in the digital future, and came up with four categories: lifelong education, local engagement, public health, and emergency preparedness. All are true needs, but not sufficient as the basis of a robust 21st-century public sphere. The real challenge will be to build capacity for dynamic responsiveness.

At its best, public media 2.0 is:

- *Socially relevant*: It both provides and solicits information on an issue that affects the public welfare (i.e.—how people can live together with dignity and decency, and how they need to work with the organizations and people around them to promote solutions).
- *Accessible*: It is available to citizens without extensive digital expertise or unusual equipment.
- *Egalitarian*: It allows participants to see each other as significant contributors to a common project, even when they differ.
- *Open*: It is multidirectional, dynamic, and networked.
- *Reliable*: It offers tools and sources for verifying information and holding media makers and participants accountable.
- *Enabling*: It helps participants shape a judgment on which they can act.

These characteristics make it possible to distinguish a public media moment within a commercial service from the rest of its service, and to distinguish a public media project from other sorts, such as partisan, self-promotional, or entertainment media.

Leadership

Who will lead the charge to reframe public media for the networked information environment? Public media 2.0 needs reliable centers of gravity, and they have not yet emerged in the networked environment. Both newspapers and public broadcasting can claim high trust ratings and deep archives, but have been saddled with the limitations of their mass-media structures, legacy organizations, and sunk investments.²² Emerging sites have not yet garnered credibility or stability. Such centers of gravity will have to be able to command the respect, engagement and participation of people across varied communities of practice, as Wikipedia does today.

Leadership will take resources as well as will. Wikipedia is a lovely exception to the general rule that public media experiments do not usually take off without subsidy.²³ Most new public media experiments will continue to need taxpayer, funder and donor support to thrive as they seek sustainability.



Leadership will also need to make strategic decisions to address inequality, especially given the nation's shifting demographics.²⁴ Diversity and the digital divide are still leading issues in the new public media. The emerging experiments tend to replicate the same socio-economic, ethnic and political structures as the analog world. If public media 2.0 looks less highly stratified and culturally balkanized than the public media of today, it will be because of conscious investment and policy choices.

Outcomes

In a world where public media 2.0 is about doing rather than being, measuring success becomes critical. Audience demographics, and the metrics of clicks and hits reveal only that audiences have encountered a piece of media. The salient question is “What happened next?”

Useful measurement standards should take into account the mission of each outlet or media project, the publics targeted, and whether they were reached. How do we know when a public has formed? New impact metrics might include: facts learned; conversations launched; mental frameworks changed; events held; policies proposed, endorsed or challenged; videos shared; memes spawned; students involved; skills acquired, or submissions posted. Public media benchmarks should also take into account the composition of participants, given the social, economic, political and ethnic divides of the society. Do media projects create a sense of trust and buy-in, making audiences feel as though they have a voice and can make a difference?

Developing methods for measuring such impacts is a fast-evolving field. Compelling new online tools such as network mapping²⁵ and data visualization²⁶ make it possible to explore the dynamics of media dissemination in unprecedented richness and detail. Impact measurements from the community media²⁷ and media development²⁸ fields also offer some clues, but much more research is needed to translate these metrics reliably to the field of participatory public media.

Failed experiments have as much to tell us as successes. For instance, The *Why Democracy?* Project, a collection of documentaries aired in the same month around the globe and linked to public discussion, succeeded in winning broadcast airings but failed at launching global conversations.²⁹ Developing related impact measurements in each area listed above will help both media makers and supporters decide what to try next.

Documentary Films as Public Engagement

Already practiced in partnering for impact—with activist organizations, universities, public broadcasters—documentarians are now tapping online tools to attract and mobilize publics.

Not in Our Town, Patrice O’Neill

First broadcast as a half-hour special on PBS in 1995, *Not in Our Town I* told the story of how the people of Billings, Montana—including grassroots activists, elected officials, schools, unions, newspapers, and churches—got together in the face of assaults on Native American, Latino, and Jewish residents to create an initiative that continues as part of the civic life of the city. This model of citizen action—the diversity of which is traced in many more NIOT films—has inspired a nationwide movement of communities that have adapted and enriched it for use in schools, workplaces, and cities coping with racial, ethnic, and gender-based hate crimes. In 2007, leaders from more than 50 towns and cities gathered to share information and discuss the formation of a national organization and the creation of a social networking site.

State of Fear: The Truth About Terrorism, Pamela Yates, Paco de Onis, Peter Kinoy

Addressing the anti-terrorist policies of Peru’s Fujimori government, this film became an international platform to discuss suspension of civil liberties under the threat of terrorism. In addition to English and



PUBLIC MEDIA 2.0 TOOLS AND PRACTICES

What's working in the highly experimental and unstable public media 2.0 environment? Some trends stand out:

The establishment and promulgation of public media standards and practices

In open environments, commonly shared expectations for style, tone, format, and responsibility are critical to trust and participation. Areas for establishing standards include:

- **Freedom of expression:** The Global Network Initiative (<http://globalnetworkinitiative.org/>) has brought private companies, human rights organizations, academics, investors and technology leaders together to craft principles that guide information and communications technology companies when faced with government censorship or requests for user information. Such open communication is the baseline requirement for creating public media.
- **Balancing features of copyright:** Broader participation in media requires broader understanding of the rights of new creators under copyright, so that they can use today's culture to build tomorrow's. These rights are in policies that balance owners' rights, specific to each country. The Center for Social Media's fair use project (<http://centerforsocialmedia.org/fairuse>) has both educated makers and media organizations and changed industry practice within the U.S. Internationally, media organizations and makers are exploring their own opportunities to assert the rights that make copyright friendly to a participatory media era.
- **Ethics:** Projects such as the Online Ethics Wiki draw from earlier codes of media practice, applying them to the networked environment. YouTube's Community Guidelines discourage posting videos that are obscene, violent, depict illegal activities, violate copyright law, or contain hate speech. Such efforts help to underscore the values of civility, truth-telling and transparency in media production and public debate. Wikipedia's principle that entries should hew to a "neutral point of view" is one example of how individual sites can encourage distributed users to actively establish and monitor cultural norms that support high-quality information.
- **Open source tools:** Open source tools create common platforms that can be adapted to a wide variety of purposes.³⁰ Even controlling a minority of a market, such as Mozilla does in the browser market with Firefox, has a powerful effect on the market as a whole, and provides tools for innovation and access to creative participation by many more than purely proprietary platforms.

Distributed fact-checking and quality control

Vetting of information for quality and accuracy is becoming a shared activity,



whether done by committed professionals or by crowdsourcing.

NewsTrust.net (<http://www.newstrust.net/>) attempts to both inculcate media literacy and apply a wider filter by soliciting volunteers to rate stories from across the Web using core journalistic principles as benchmarks, while Factcheck.org (<http://www.factcheck.org/>), managed by the University of Pennsylvania's Annenberg School, monitors claims made by politicians in ads, speeches, and interviews. There's even an automated solution for sniffing out news bias: the Spin Spotter (<http://spinspotter.com/home>) runs news stories through a set of algorithms based on ethnics recommendations from the Society of Professional Journalists and a database of terms used by spinmeisters. (Results so far are mixed.) Of course, sometimes even the fact-checkers themselves may need fact-checking—Mark Glaser of PBS MediaShift notes that partisan fact-checking operations get more traffic than non-partisan ones. Public broadcasters have made forays into factchecking, but have not yet launched a dedicated site.

Sites such as Digg (<http://digg.com/>) and Technorati (<http://technorati.com/>) offer a preview of how crowdsourced ranking and vetting of content from across the Web might evolve. The sites reflect content choices made by many people, revealing both the most influential and the most reliable sources.

Multiplatforming and engagement as a matter of course

Public media outlets and individual projects are now regularly including offline, online, print and social media elements, which extend relevance and impact and provide multiple opportunities for publics to form around media. For example, Al Gore's hit documentary film *An Inconvenient Truth* was in theaters, is available on DVD, and has a companion book. Related downloads include widgets for bloggers, posters, desktop images of changing weather patterns, screensavers, electronic greeting cards, and a teacher's guide. This trend is driving multiplatform training in journalism schools.³¹ What used to be after-the-fact "outreach" tied to static media content has now become central to strategic design. Media projects are planned with the engagement of publics as a core feature.³² (See the "Evolution of Engagement" sidebar for more examples.)

Data-intensive visual reporting

Highly visual and information rich, sites such as Everyblock (<http://chicago.everyblock.com/>) and MapLight (<http://www.maplight.org/>) demonstrate how information can be culled from a variety of online sources and combined to reveal trends and stories via interactive, user-friendly interfaces.³³ So-called "charticles" are also on the rise in both print and online newspapers, mirroring public enthusiasm for creating visual mashups using tools such as Google Maps. Micah Sifry of the Personal Democracy Forum calls this "3-D" content (Dynamic, Data Driven).³⁴ Its rise suggests a role for outlets, governments, nonprofits and universities as trusted curators of valuable data sets.³⁵

Silo-crossing collaborations

Educational and advocacy organizations are finding points of contact with public media makers around issues³⁶, while noncommercial and commercial outlets are



developing partnerships that exchange prestige for reach.³⁷ Community projects such as Philadelphia's Plan Philly site (<http://www.planphilly.com>) bring journalists, educators, and citizens together to address local issues. Citizen journalism projects such as :Vocalo (<http://vocalo.org/>), *Talking Points Memo* (<http://www.talkingpointsmemo.com>) and *Open Salon* (<http://open.salon.com>) are collaborating with audiences to create and select content, and to investigate breaking stories. These new partnerships demonstrate the hybrid nature of emerging public media—combining commercial with noncommercial, pro with amateur, media outlets with organizations not traditionally tasked with media-making.

Evolution of niche online publics

Publics are gathering around particular sites and outlets to learn and share information around in-group issues. Such sites may be based on a combination of identity and politics—such as Feministing (<http://www.feministing.com>), which targets young female readers through pop culture analysis,³⁸ or Jack and Jill Politics, which describes itself as “a black bourgeoisie perspective on U.S. politics.” (<http://www.jackandjillpolitics.com/>) Others are based on location—such as the regional communities that cluster around international meta-blog Global Voices³⁹, or the local blogs featured in the Knight Citizen News Network map. (http://www.kcnn.org/citmedia_sites/) Still others hinge on particular issues or communities of interest, such as Moms Rising (<http://www.momsrising.org/>), which coordinates advocacy campaigns and blogs around policy issues related to motherhood, or Blog for a Cure (<http://www.blogforacure.com/>), which brings cancer survivors together to support one another and discuss concerns related to symptoms and treatment.

Decoupling of public media content from outlets

With business models for outlets flagging, content has acquired a life of its own. Nonprofit projects like ProPublica (<http://www.propublica.org>) and the Center for Public Integrity (<http://www.publicintegrity.org>) underwrite investigative reporting that can be placed in print or broadcast contexts but also lives online on the projects' sites. The increasing primacy of search engines and open platforms as interfaces for finding news and information allows new content producers—such as academics⁴⁰, advocacy groups⁴¹, and even political campaigns⁴²—to generate widely circulated content addressing public issues. And the rise of tools for online syndication—such as NPR's recent decision to release its Application Programming Interface (API)—means that even content originally created by an outlet is not destined to stay within its confines.

New toolsets for government transparency

Journalists have traditionally served as watchdogs on politicians and federal agencies, but open online access to government documents and data now offers raw material for both legacy and citizen media efforts. Projects like Open Congress (<http://www.opencongress.org>) invite users to view and comment on bills, track Congressional votes and follow hot issues. A forthcoming project called Subsidyscope promises to track and analyze spending, loans and tax breaks associated with the financial bailout (<http://subsidyscope.com>). The government itself is a key provider of digital transparency projects, like USAspending.gov



(<http://usaspending.gov>), which allows users to search federal contract and grant data. A coalition of government transparency advocates has crafted a “right-to-know” agenda for the new administration.⁴³

Peer-to-peer public media training

Networks of media outlets, such as OneWorld (<http://us.oneworld.net>), the Integrated Media Association (<http://www.integratedmedia.org/home.cfm>), New America Media (<http://news.newamericamedia.org/news/>) and The Media Consortium (<http://www.themediaconsortium.org/>), working together to share and assess strategies for producing effective, public-minded content for the digital, participatory environment. Individual producers are also sharing strategies through projects like Shooting People (<http://shootingpeople.org/>), an international networking organization for independent filmmakers.

These trends demonstrate a widespread, cross-sector interest in developing and sustaining high-quality public media in the networked environment. But unless and until new pipelines, partnerships, standards and benchmarks are hashed out, the new public media will continue to develop piecemeal, and with erratic support.

POLICIES AND STRATEGIES

Tomorrow’s public media cannot simply be improvised either by legacy or new media businesses or by enthusiastic volunteers. There will continue to be a powerful role for public policy in shaping the environment. The dawn of a new presidential administration offers the chance to advance a new vision for U.S. public media. What kinds of policies are needed now to give makers and users of media for public knowledge and action control?

At the infrastructure level:

- A national broadband policy that can create “universal service” standards for a digital era, and particularly target neighborhoods and communities poorly served by economic and social services, such as inner-city and rural areas.
- “Net neutrality”—the need for standards that will prevent second-class status (or worse) for public media, disenfranchised social groups, and individuals as broadband carriers prioritize the lucrative.
- Privacy and identity security—the need for members of the public to be safe communicating with each other, unafraid of government surveillance or corporate information-harvesting.
- Mandating of universal design principles into essential communication services, such that people of all levels of enablement can access communication and media for public life.

At the level of the platform:

- Policies that support nonprofit enterprises with discounts or tax waivers on communications and media services
- Taxpayer support for public media venues, channels and brands.
- Policies that support the use of open source tools and platforms for public projects.



At the level of production:

- Taxpayer support for professional or professional-amateur public media production.
- Taxpayer support for public media training and cultural education both in public education and in community centers such as libraries and caregiver sites.
- Public policies that provide tax incentives and privileges for nonprofits creating information banks and tools for public media, and for commercial media companies that offer pro bono services to them.
- Education on balancing features of copyright such as fair use, and policy actions on “orphan works,” or abandoned copyrights, and the Digital Millennium Copyright Act’s limitations on use of copyright’s balancing features.

NEXT STEPS FOR STAKEHOLDERS

Different stakeholders have different opportunities to make the most of a rare open moment of transition.

Public Media Makers:

- Identify goals and participants for any media designed to promote democratic participation.
- Embrace participation with your publics, and build your relationship into your media from the start.
- Seek out opportunities to cross cultural, social, economic, ethnic and political divides.
- Learn from others’ examples, and their mistakes.
- Collaborate with institutions and people that can bring content, expertise, experience, communities.
- Build the case for public media with communities.

Policymakers:

- Use universal design principles in infrastructure policy.
- Use universal service values in constructing infrastructure and supporting its growth.
- Support platforms that offer stability and reliability in information provision.
- Support lifelong education to permit every member of society to be an active participant and potential media maker as well as consumer.

Funders of media for public engagement:

- Fund media activities that build democratic publics.
- Fund action, not existence; outcomes, not outlets.
- Fund and use norms-setting, in the form of standards and practices, training and peer education.
- Fund standardization of reliability tools, for fact-checking, debunking, adding value.
- Fund the creation and standardization of impact metrics, and demand outcomes documentation that uses impact metrics and can be publicly shared.
- Fund incubation and experiment in media making, media organizations, and media tools, especially among disenfranchised communities.



The challenge for public media 2.0 is not only to provide a vision for what it might be, but to generate political capital for it. People need to make demands for public media 2.0 of their elected officials, their regulators, their communications service providers, and their media entities.

That challenge must begin, as always, in conversations among engaged publics. Stakeholders, whether they are incumbents, innovators or both, need to begin that conversation. They are the core public for public media 2.0 today.

Those stakeholders need to host these conversations within the networks of attention and concern that they command, in order to mobilize them for a vital public media 2.0. Publics can powerfully and flexibly act; they are grown and nurtured within rich communications environments. These environments exist today, and can become more effective as they develop links across sectors and as they develop awareness, investment and a shared vision with wider, engaged publics.



ACKNOWLEDGEMENTS

This white paper was produced by the Center for Social Media, directed by Pat Aufderheide. The center is located at the School of Communication at American University, led by Dean Larry Kirkman. This work is part of the Future of Public Media project, funded by the Ford Foundation and led by Jessica Clark; Center research and media fellows, especially Barbara Abrash and Neil Sieling, contributed substantially. Our partners in Ford's Global Perspectives in a Digital Age initiative have provided us with invaluable examples, feedback and inspiration. We have also consulted with hundreds of public media producers, researchers, policy experts and engaged citizens on the topics addressed in this paper; we appreciate your time, generosity and insight.



END NOTES

¹ An August 17, 2008 report by the Pew Research Center for the People & the Press illustrates the shift. “Integrators” who get news from both the internet and traditional sources, made up 23 percent of the respondents; “net-newsters,” who turn principally to the Web for news, made up 13 percent; and “traditionalists”—with the oldest median age in the sample—made up 46 percent, relying heavily on television news.

² The Berkman Center’s Media Re:public project recently published a suite of papers on the state of participatory media: <http://cyber.law.harvard.edu/pubrelease/mediarepublic/downloads.html>. In the lead paper, *News and Information as Digital Media Comes of Age*, Persephone Miel and Robert Feris argue that the decline of the advertising-based business model is what’s leading the disruption in legacy journalism organizations, and that support and collaboration will be needed to shore up the core civic functions of journalism. They also recommend investment in intermediaries that build bridges between high-quality information and publics.

³ The *Semantic Wave 2008 Report* published by consulting firm Project 10X in September 2008, describes several of the coming technologies: “A key trend in Web 3.0 is toward collective knowledge systems where users collaborate to add content, semantics, models and behaviors, and where systems learn and get better with use. ... Key features of Web 3.0 social computing environments include (a) user generated content; (b) human-machine synergy; (c) increasing returns with scale; and (d) emergent knowledge.

⁴ Authors like Clay Shirky and Alison Fine have documented how individuals and groups have leveraged technologies like e-mail, low-cost video, mobile communication, social networks and blogs for advocacy around issues large and small.

⁵ Here’s a great example of debunking the talking points: <http://www.alternet.org/blogs/peek/105043/>

⁶ A widget is a small, self-contained piece of code that performs a particular task. See <http://www.widgets-gadgets.com/2007/08/what-is-web-widget.html> for more details.

⁷ The 10Questions Presidential Forum was produced by techPresident—a group blog focused on technology and politics—in cooperation with the *New York Times* editorial board, with support from MSNBC.com, and sponsored by blogs from across the political spectrum. Questions were posted to the site by users, and hosted on a variety of commercial video sharing platforms.

⁸ Benkler’s book is available online as well as in print: http://cyber.law.harvard.edu/wealth_of_networks/Main_Page

⁹ A mapping exercise at the News Tools 2008 gathering suggested some fresh job titles for the journalism world: editors become “sense makers,” reporters become “beat bloggers, and “community weavers” interface with audiences while “information architects” wrangle data and produce graphics. Tom Rosenstiel, who directs the Project for Excellence in journalism also endorses “sense maker,” and adds that reporters should act as “authenticators,” “navigators,” or “forum leaders.” Or perhaps, as Portuguese blogger and journalist Alexandre Gamela suggests, journalists are becoming DJs, “remix[ing] and mak[ing] the news flow coherent.”

¹⁰ “Public Media Serves Up Election Widgets For Bloggers,” Inside NPR.org, http://www.npr.org/blogs/inside/2008/08/public_media_serves_up_electio.html

¹¹ Check the Media Shift Idea Lab (<http://www.pbs.org/idealab/>) for running blogs by Knight News Challenge grantees exploring new concepts in community news.

¹² See <http://rising.globalvoicesonline.org/blog/2008/01/16/a-introductory-guide-to-global-citizen-media/>



¹³ See <http://www.comscore.com/iphone/> for statistics on higher iPhone adoption among lower-income users.

¹⁴ The *Washington Post* reported that more than 1.1 million people read the Sarah Palin Wikipedia article within the first 36 hours after she was announced as John McCain's running mate. The entry had been the subject of very heavy editing; an analysis by Dan Cohen of George Mason University tracked over 500 edits in a 24-hour period, August 31-September 1. Suspicions were piqued by a series of flattering changes entered by a Wikipedia user named "Young Trigg," a play on the name of Palin's son. After NPR reported on the controversy, many other users flooded in to edit the page, and Wikipedia placed a partial block, allowing only established editors to update the entry. The UK-based *Times Online* reports that Young Trigg admitted to being a McCain volunteer, and then retired the Wikipedia alias. As of October 10, the entry contained more than 220 footnotes, substantiating various claims.

¹⁵ For a detailed discussion of the concept of participatory public media, see the *Future of Public Media FAQ*: http://www.centerforsocialmedia.org/resources/publications/public_media_faq/

¹⁶ As a *New York Times* article by David Carr and Brian Stelter noted on November 2, the recent presidential contest has shifted public expectations about media: "For many viewers, the 2008 election has become a kind of hybrid in which the dividing line between online and off, broadcast and cable, pop culture and civic culture, has been all but obliterated."

¹⁷ See this June 2008 map of the political blogosphere for an example of the relationship between links and influence: <http://presidentialwatch08.com/index.php/map/>

¹⁸ "The corporate media know where they wish to take us," writes Jeff Chester in *Digital Destiny: New Media and the Future of Democracy*. "If they are successful we are likely to live with a communications system that offers us dazzling entertainment and seeks to fulfill our every consumer desire. Yet it will not meaningfully contribute to improving our lives or our democracy. We run the risk of merely serving as observers while special interests determine America's 'digital destiny.'"

¹⁹ As this paper was being drafted, President-elect Barack Obama had proposed a stimulus package that would include the expansion of broadband infrastructure across the country. Public interest advocates were fighting for the inclusion of a set-aside of network capacity that would include a 10-gigabit backbone. Creating such a high-speed public interest pipeline would allow public media 2.0 projects to flourish, and to be scalable and localized at increasingly low cost.

²⁰ See the tool here: http://www.pbs.org/frontlineworld/stories/iwitness/video/video_index.html

²¹ See <http://www.blendedvalue.org>, which includes a helpful blended value map at <http://www.blendedvalue.org/publications/index.html#bvmap/>.

²² See *Public Broadcasting and Public Affairs: Opportunities and challenges for public broadcasting's role in provisioning the public with news and public affairs*, by Pat Aufderheide and Jessica Clark, for more details: <http://cyber.law.harvard.edu/pubrelease/mediarepublic/downloads.html>

²³ And in fact, Wikipedia had two initial kinds of subsidy: support from its parent foundation, and the benefit of the contents of the 1911 Encyclopedia Britannica. Largely, however, Wikipedia has grown and thrived on volunteer efforts.

²⁴ As keynote speaker Larry Irving noted at the 2008 Beyond Broadcast conference, "If you look at the skewing of public broadcasting, the median age of public broadcasting viewers is 46 years old. The median age of this country is 36 years old; the median age of Latinos in this country is 24 years old. We are going to grow by 130 million people between 1995 and 2050, and 90 percent of that growth will be people of color."



²⁵See the Center for Social Media’s Mapping Public Media project for examples:
http://www.centerforsocialmedia.org/site/resources/mapping_public_media/

²⁶ See this nifty tool for tracking viral videos, called Shifting the Debate:
<http://www.shiftingthedebate.com/shifting/videobarometer.html>

²⁷ “Impact on Our Own Terms” a document published by the Center for International Media Action (Sullivan & Kidd, 2007), offers a model for qualitative, social-justice driven media impact goals. These include:
Individual impacts—such as the number of people who have been trained to create their own media, freedom of expression and creative expression, increased skill in practices of deliberative and participatory democracy
Organizational impacts—such as an increase in the number of people who access the organization’s resources, new partnerships and collaborations, increased content containing narratives of under-served and marginalized communities
Community impacts—such as an increase in volunteer efforts, new means of sharing knowledge for a common purpose, lessons about alternative remedies (i.e., practical case studies) which make practice more effective.

²⁸ *Empowering Independent Media: U.S Efforts to Foster Free and Independent News Around the World*, a 2008 report from the Center for International Media Assistance, provides an overview of useful indices for measuring media change on the national and international level, but notes the difficulty of the challenge: “Questionnaires, surveys, on-site visits, anecdotal case studies and statistical data, such as numbers trained and audience gained can all be helpful. But too often, say trainers, they do not reflect the sometimes subtle and long-term progress that occurs in media development programs. Donors are often making long-term investments in changing entrenched ways of thinking within the media by building mentors, role models and centers of excellence.”

²⁹ See the Center for Social Media field report assessing this project:
http://www.centerforsocialmedia.org/resources/articles/field_report_why_democracy/

³⁰ For example, see the public broadcasting developers who have banded together at PubForge (<http://pubforge.org>) to build a “toolchest of open source applications that address the needs of public media websites in a practical way”

³¹ See the News21 (<http://newsinitiative.org/>) project for a suite of forward-looking multiplatform student projects.

³² As Center for Social Media Research Fellow Barbara Abrash noted in a series of interviews with *P.O.V.* leaders (<http://www.centerforsocialmedia.org/files/pdf/pov.pdf>), “These interviews reveal a project driven not only by social concern but by a passionate commitment to fostering public knowledge and action. As it evolved, *P.O.V.* leaders consistently sought out ways to involve viewers—as active commentators, as sources of new information, as mobilizers themselves of public knowledge and action.”

³³ Glaser at MediaShift reports that Gannett, the country’s largest newspaper publisher, has reinvisioned its 85 daily newsrooms as “Information Centers,” offering more databases and maps, such as the Cinci Navigator (<http://data.cincinnati.com/navigator/>)

³⁴ See this post by Sifry on a “Bailout Datatorial” for an example:
http://www.techpresident.com/blog/entry/30490/bailout_datatorial_follow_the_money_from_wall_st_to_dc_1990_present

³⁵ A recent Knight News Challenge submission by ProPublica and *The New York Times* suggests a related role: outlets as hosts of primary-source documents.

³⁶ For example, Twin Cities Public Television partnered with the League of Minnesota Cities to profile sustainability efforts throughout the state in *Green Cities: Leading the Way*. (<http://www.tpt.org/mnchannel.new/descriptions.php#DEMOG>)



³⁷ For example, WNYC's *The Takeaway* is a partnership between a few public broadcasting stations, *The New York Times*, and the BBC World Service, and includes a number of online and on-air tools for encouraging user interaction and conversation.

³⁸ Is this partisan media or public? In an open publishing environment, the lines aren't so clear. On their "About" page, Feministing editors write: "We view Feministing as a platform for not only discussion among feminists and allies, but for reaching (rational, not hateful) people who may not agree with every word we write."

³⁹ See the Center for Social Media field report on this project for details:
http://www.centerforsocialmedia.org/files/pdf/global_voices.pdf

⁴⁰ See Juan Cole's blog for an example: <http://www.juancole.com/>

⁴¹ See the ACLU's *Freedom Files* for an example: <http://aclu.tv/>

⁴² See the Obama campaign's *Keating Economics: John McCain and the Making of a Financial Crisis* for an example:
<http://www.keatingeconomics.com/>

⁴³ See *Moving Toward a 21st-Century Right-to-Know Agenda*: <http://www.ombwatch.org/21strtkrecs.pdf>



Rethinking **PUBLIC MEDIA**

More Local, More Inclusive, More Interactive

A WHITE PAPER BY BARBARA COCHRAN


THE ASPEN INSTITUTE
Communications and Society Program

 **John S. and James L.
Knight Foundation**
Informed and engaged communities.

A project of the Aspen Institute Communications and Society Program
and the John S. and James L. Knight Foundation.

Rethinking Public Media: More Local, More Inclusive, More Interactive

A White Paper on the Public Media Recommendations
of the Knight Commission on the Information Needs of
Communities in a Democracy

written by
Barbara Cochran



THE ASPEN INSTITUTE
Communications and Society Program
December 2010

The Aspen Institute and the John S. and James L. Knight Foundation invite you to join the public dialogue around the Knight Commission's recommendations at www.knightcomm.org or by using Twitter hashtag #knightcomm.

Copyright 2010 by The Aspen Institute

The Aspen Institute
One Dupont Circle, NW
Suite 700
Washington, D.C. 20036

Published in the United States of America in 2010 by The Aspen Institute
All rights reserved

Printed in the United States of America

ISBN: 0-89843-536-6
10/021

Individuals are encouraged to cite this paper and its contents.
In doing so, please include the following attribution:

The Aspen Institute Communications and Society Program, *Rethinking Public Media: More Local, More Inclusive, More Interactive*, Washington, D.C.:
The Aspen Institute, December 2010.

For more information, contact:

**The Aspen Institute
Communications and Society Program**

One Dupont Circle, NW
Suite 700
Washington, D.C. 20036
Phone: (202) 736-5818
Fax: (202) 467-0790
www.aspeninstitute.org/c&s

To purchase additional copies of this paper, please contact:

The Aspen Institute
Publications Office
P.O. Box 222
109 Houghton Lab Lane
Queenstown, MD 21658
Phone: (410) 820-5326
Fax: (410) 827-9174

Cover background graphic was created in part at www.wordle.net.



A project of the Aspen Institute Communications and Society Program
and the John S. and James L. Knight Foundation.

Contents

FROM REPORT TO ACTION	v
EXECUTIVE SUMMARY	vii
RETHINKING PUBLIC MEDIA:	
MORE LOCAL, MORE INCLUSIVE, MORE INTERACTIVE, <i>Barbara Cochran</i>	
Knight Commission Recommendation.....	11
Knight Commission Analysis.....	11
Information Needs of Communities: A Case Study.....	12
Models for Transformation.....	14
The Opportunity.....	16
The Challenge.....	18
Who Should Do What.....	47
Conclusion.....	50
Endnotes.....	51
APPENDIX	
About the Author.....	57
About the Communications and Society Program.....	59

From Report to Action

Implementing the Recommendations of the Knight Commission on the Information Needs of Communities in a Democracy

In October 2009, the Knight Commission on the Information Needs of Communities in a Democracy released its report, *Informing Communities: Sustaining Democracy in the Digital Age*, with 15 recommendations to better meet community information needs.

Immediately following the release of *Informing Communities*, the Aspen Institute Communications and Society Program and the John S. and James L. Knight Foundation partnered to explore ways to implement the Commission's recommendations.

As a result, the Aspen Institute commissioned a series of white papers with the purpose of moving the Knight Commission recommendations from report into action. The topics of the commissioned papers include:

- Universal Broadband
- Civic Engagement
- Government Transparency
- Online Hubs
- Digital and Media Literacy
- Local Journalism
- Public Media
- Assessing the Information Health of Communities

The following paper is one of those white papers.

This paper is written from the perspective of the author individually who gathered her research through numerous interviews with key players. The ideas and proposals herein are those of the author, and do not necessarily represent the views of the Aspen Institute, the John S. and James L. Knight Foundation, the members of the Knight Commission on the Information Needs of Communities in a Democracy, or any other institution. Unless attributed to a particular person, none of the comments or ideas contained in this report should be taken as embodying the views or carrying the endorsement of any person other than the author.

Rethinking Public Media: More Local, More Inclusive, More Interactive

Executive Summary

The Knight Commission sees a major role for public service media in meeting community information needs. Building on a strong base of trust, public media should become more local, more inclusive and more interactive, the commission said. To accomplish this, the commission recommends increased support from Congress.

This paper proposes changes in leadership, structure and funding to meet these goals. It addresses the context in which public media operate and the strategic openings created by broadband expansion. It recommends building on existing models of innovation, making a virtue of the decentralized structure of public broadcasting and redefining what is included under the umbrella of public service media.

The paper begins with a tale of two communities. Akron, Ohio, is home to the first newspaper owned and edited by John S. and James L. Knight, but the newspaper is losing circulation and staff, leaving its 200,000 citizens with few alternatives for local news and information. Meanwhile, in nearby Cleveland, a bold venture in rethinking public service media has broken down barriers to serve its community on air and online.

For public service media “this is potentially a 1967 moment,” said Ernest J. Wilson, chairman of the Corporation for Public Broadcasting (CPB), referring to the legislation that transformed educational television and radio into a national public broadcasting service. Public service media can take advantage of the digital revolution to remake itself. But current structures, laws and a shortage of funds pose challenges. While National Public Radio (NPR) and Public Broadcasting Service (PBS) have developed strong news and information programming at the national level, capacity among local stations is uneven and very limited at a majority of local stations.

To become more local, this paper recommends identifying and scaling up successful models. The most successful public radio stations emphasize news and information programming, operate multiple stations to serve a variety of audience interests and are licensed to community boards rather than institutions. At the national level, CPB and NPR are helping to strengthen local news capacity through Local Journalism Centers and Project Argo, projects that could be expanded.

The paper proposes creating a fund of at least \$100 million to add 1,000 new public media reporters, an increase of 50 percent. One approach would be to focus on the top 25 markets with a goal of raising more than \$400 million annually to

fund 160 new reporters in each market. New staff should create a more diverse work force with expertise in digital media and content areas in need of attention. To ensure public media retain credibility, managers should also dedicate funding to professional development and editorial oversight. Public media should bolster capacity through partnerships with other media outlets, including community and investigative websites.

Public television stations, which for the most part produce little local news and information programming, should form a study group to develop a strategy for more news content and community engagement.

To become more inclusive, public service media should make inclusiveness a priority. This means increasing diversity in news and information staff at both the national and local levels, engaging a wider variety of communities, partnering with journalism schools to engage young people and creating a Public Media Corps to promote digital literacy.

To become more interactive, public media should follow up and expand on projects such as the Public Media Platform, an open application programming interface that will allow networks and local stations to share content online, and Public Insight Network (PIN), a database of experts drawn from public radio audiences. Managers should invest in professional development to help staff acquire digital skills, should promote staff use of social media and should purchase digital gear to add video to websites and on-air productions. Public media should also develop metrics to measure performance at the local level.

Public media leaders should become more active and involved in the development of the nation's broadband policy. They should seek a broadband reservation similar to the spectrum reservation that would guarantee access, reduce costs of streaming and other technology and overcome copyright roadblocks.

To achieve these changes, the Corporation for Public Broadcasting should become the Corporation for Public Media. All license-holders, including universities and state and local governments, should form community governance structures. Stations should get support to create successful boards.

The Public Broadcasting Act should be overhauled to reflect the reality of digital media, and funds should be redirected from outmoded broadcasting infrastructure and duplication of service to building digital capacity. Congress should authorize new funds to enable public media to participate in broadband build-out. The Federal Communications Commission should make it easier for stations to acquire other stations and merge or enter into operating agreements. Philanthropic organizations at the national, regional and local levels should support investments in public media.

Above all, public media leaders need to embrace a new definition that is more local, more inclusive and more interactive. Only public media leaders can convince government and philanthropic supporters that they have a new vision worthy of their investment.

**RETHINKING PUBLIC MEDIA:
MORE LOCAL, MORE INCLUSIVE,
MORE INTERACTIVE**

Barbara Cochran

Rethinking Public Media: More Local, More Inclusive, More Interactive

“Increase support for public service media aimed at meeting community information needs.”

— Recommendation 2, *Informing Communities: Sustaining Democracy in the Digital Age*

Knight Commission Recommendation

Recommendation 2 of the Knight Commission on the Information Needs of Communities in a Democracy is to “[i]ncrease support for public service media aimed at meeting community information needs.”¹ This paper analyzes the Knight Commission’s goals and proposes steps to achieve them.

Knight Commission Analysis

The Knight Commission report makes note of the high level of trust earned by public broadcasting in the 43 years since its creation. But the commission also points to failings of the service to provide local news of significance in most of its communities or to reach audiences that reflect the diversity of the American population. Nor does the report see a widespread embrace of digital media at the local level of public broadcasting.

The commission says the current public broadcasting system should “move quickly toward a broader vision of public service media, one that is more local, more inclusive and more interactive.”

The report acknowledges the financial exigencies that have limited public broadcasting’s capacities. Most western democracies support public broadcasting through substantial government funding, but that is not true in the United States. United Kingdom pays \$80.36 per capita for its public broadcasting service. In the United States, core federal funding amounts to \$1.35 per capita and is only 15 percent of the entire public broadcasting budget.

A solution recommended by the commission is to increase taxpayer support. “Congress should increase the funding available for the transformation and localization of America’s public media,” the report says.

Exhibit 1: Global Spending on Public Media



Source: Free Press, "Changing Media: Public Interest Policies for the Digital Age," 2009, p. 267.

The report also addresses the question of whether government-supported journalism is in keeping with the First Amendment guarantee of a free press. But, the report says, "public broadcasters in the United States have demonstrated their capacity to deliver high-quality, fair and credible news and information programming free of government interference."

This paper offers proposals for meeting the Knight Commission's goals of public media that are more local, more inclusive and more interactive. It proposes changes in leadership, structure and funding to help public media meet these goals. The paper addresses the context of the information needs of communities and the strategic openings created by broadband expansion. It recommends building on existing models for innovation, making a virtue of the decentralized structure of public broadcasting and redefining what is included under the umbrella of public service media.

Information Needs of Communities: A Case Study

Akron, Ohio, is the birthplace of the newspaper chain founded by John S. and James L. Knight. In many ways, the state of news media in this city of more than 200,000 typifies the problems facing communities where traditional sources of journalism are increasingly imperiled.

Once known as the rubber capital of the world, Akron has seen its population and economy shrink like those in many Rustbelt cities, but it has remade itself as a high-tech and biomedical center. Just 39 miles south of Cleveland, the city has its own identity, its own governmental structures and its own issues.

The *Akron Beacon Journal* was the seed that blossomed into the Knight-Ridder chain that embraced 32 daily newspapers in communities including Miami, Charlotte, Philadelphia, Detroit, Fort Worth and San Jose. The *Beacon Journal* covered local issues closely and never shied away from taking on powerful local interests. The paper won four Pulitzers, including one for an expose on failures in Firestone's radial tires and another for a deep look at the city's racial divisions.

When The McClatchy Company acquired Knight-Ridder, executives decided to sell the properties in cities with declining advertising bases. The *Beacon Journal* was acquired by Black Press Ltd., a Canadian publishing company. The story at the *Beacon Journal* has been the same as elsewhere. Circulation penetration has fallen, ad revenue has plunged and staff has been cut. Today the *Beacon Journal* employs about 90 people in its newsroom, half the number of 10 years ago.

The *Beacon Journal* is one of only a few journalistic voices devoted exclusively to Akron. While Akron falls within the Cleveland television market, it gets little coverage from Cleveland news stations. Only one commercial broadcast newsroom remains, WAKR-AM, owned by the Rubber City Radio Group. With a newsroom of eight full-time and two part-time staff, large by commercial radio standards, WAKR also supplies news to the music-formatted stations in the group. It operates a website, Akron News Now (www.akronnewsnow.com), which competes aggressively with the *Beacon Journal's* Ohio.com site and has won national awards for excellence in local news coverage.

Akron is served by public media headquartered outside the city limits. National Public Radio (NPR) member station WKSU-FM is licensed to nearby Kent State University and combines a classical music format with NPR flagship news and information programs. It has a local news department of seven, who produce newscasts and occasional documentaries. Public television station WEAO is licensed to Akron and has a small studio there used for a weekly news roundtable, but is headquartered along with sister station WNEO in Kent.

The other public media entity serving Akron is ideastream (www.ideastream.org). With offices and studios in Cleveland, it includes news and information about Akron in its regional coverage. As will be discussed in the next section of this paper, it also could be a model for the kind of public media that will serve Akron in the future.

In a sign of what the future could hold, Akron has established free wireless service in the downtown area through the Connect Akron project. It is about to launch a citizen journalism website. A joint project of the John S. and James L. Knight Foundation, the Akron Community Foundation, the Akron Digital Media Center, the *Akron Beacon Journal* and Ohio.com, the website will allow individuals and groups to share hyperlocal news and information with an online audience.

The Akron Digital Media Center is offering workshops to train citizens in the tools and skills needed to produce content for the website.

The situation in Akron epitomizes the state of media at the community level: a struggling newspaper, one commercial broadcaster providing local news, a nascent digital information presence and public media licensed elsewhere and limited by funding. If the newspaper were to cease publication, or the locally owned radio station were to be sold and lose its newsroom, where will the 200,000 citizens of Akron turn for reporting that holds officials accountable, for information that helps them live full lives, for a common understanding that ties a community together? And who is serving new generations whose media preferences are for content available on demand over online or wireless devices?

As Leonard Downie Jr. and Michael Schudson asked in their report, “The Reconstruction of American Journalism”:

What is going to take the place of what is being lost, and can a new array of news media report on our nation and our communities as well as—or better than—journalism has until now? Most importantly...what should be done to shape this new landscape, to help assure that the essential elements of independent, original and credible news reporting are preserved?²

Yet Akron also offers incredible opportunities for transformation. Projects like the citizen journalism website are a promising beginning. Public media can play a major, transformative role. With visionary leadership, a shift in mission and priorities, greater financial and technological resources, a modernized structure and a revitalized system of governance, public media can be part of the solution, not only for Akron, but for communities across the country.

Models for Transformation

Thirty-nine miles to the north is an example of a local public media entity that could be a model for Akron and other communities. It is an organization that has broken down the silos between platforms and embraced interactivity and the digital space. It sees its mission not as broadcasting but as community service.

Created in 2001, ideastream is the public media organization in Cleveland that combines public television station WVIZ-TV, public radio station WCPN-FM, the statewide Ohio Network and four other educational media organizations into one. The founders seized the opportunity presented by digital convergence to become a seamless multiple media public service organization housed in a new facility in the heart of Cleveland’s Playhouse Square.

A Carnegie Reporter article on ideastream advises, “Think of ideastream as a digital community center or a virtual YMCA, seeking to draw together the resources of ‘heritage institutions’ (museums, theaters, colleges, libraries, medical centers, government agencies, etc.) and make them digitally available on demand to patrons, clients and students.”³

The mission of ideastream is to strengthen communities. The organization serves many communities in northeast Ohio, including Akron, with both a regional approach and a local focus. Both the television and radio stations can be accessed in Akron, and ideastream devotes air time and online resources to coverage of Akron news, information and cultural events.

Instead of a newsroom, there is a content center, where a staff of 18 prepares news and information and educational content for television, radio and the web, with support from another dozen technical and support staff. CEO Jerry Wareham, the former president and general manager of WVIZ-TV, and COO Kit Jensen, the former president and general manager of WCPN-FM, share a vision of multimedia community service. “I think this radio and TV stuff is so 20th century,” says Wareham, speaking of the traditional separate organizational structures of the services. Their numerous collaborations include Cleveland’s newspaper, *The Plain Dealer*, which partnered with ideastream on a four-year multimedia project “The Quiet Crisis” on the economic downturn in northeast Ohio.

In addition to the television and radio stations, five other educational, news and public service media programs that had been housed by various organizations became part of ideastream. They include two Columbus-based operations managed by ideastream on behalf of all public broadcasters in Ohio, the Ohio Public Radio and Television News Bureau and the Ohio Channel, which provides coverage of the Ohio state legislature and state supreme court and carries local programs from public broadcasters throughout Ohio.

With more resources, ideastream could address in depth the information needs of Akron and surrounding communities, possibly in partnership with other public media entities such as WKSU or the new citizen journalism website. Akron could become a laboratory for experimentation in how best to serve communities in the digital age.

ideastream: A New Approach to Public Media

“ideastream is public broadcasting and a whole lot more.” So says the home page of the web site for Cleveland’s unusual consortium of public television, public radio, a statewide cable network, educational and service channels and interactive and digital media. COO Kit Jensen points to “BackStage With...” as a project that utilizes ideastream’s versatility. Hosted by NPR’s Scott Simon, the program originates as an interview of a major artist (John Lithgow and Patricia Heaton, for example) conducted live in ideastream’s studio in Playhouse Square before an audience of students. The program is disseminated live through interactive video and audio to schools throughout the state. Recordings are used for a segment in the daily arts program on the public radio station, for the weekly arts program on public television and are posted online. A 30-minute special is distributed to the PBS system and Scott Simon uses the edited interview on NPR’s Weekend Edition. Online curriculum is supplied to teachers for use in the classroom.

The success of ideastream comes from five ingredients that will prove key to the ability of public media to transform: leadership, a mission rooted in community service, structure, governance and finances. The leaders in the creation of ideastream shared a vision, were willing to break down silos, mobilized support from the community and garnered resources through partnerships and diligent fundraising.

These same ingredients have been key for other successful models that will be described in this paper, models such as Minnesota Public Radio, New York Public Radio, KQED Public Media, Southern California Public Radio, KETC in St. Louis and KPBS in San Diego. Because they are community-based, they are evolving to meet local needs drawing on local resources. There is no one-size-fits-all model, but all have the essential ingredients in common.

The Opportunity

With the business models for traditional media crumbling and the digital revolution disrupting the relationship between news organizations and communities, public broadcasting finds itself at a crossroads. “This is potentially a 1967 moment,” said Ernest J. Wilson III, chair of the Corporation for Public Broadcasting and dean of the Annenberg School of Communication at the University of Southern California. “Just as the Public Broadcasting Act moved us from educational television to public broadcasting, now we need to move to public service media.”

What is meant by public service media? John S. and James L. Knight Foundation vice president Eric Newton told the Federal Communications Commission’s (FCC) Future of Media study that he defines news in the public interest as “the news people need to run their communities and their lives.” He would expand the definition to include not only the existing public broadcasting stations and national systems, but also an entirely new non-profit media landscape that includes entities such as Wikipedia, online magazines such as *Consumer Reports* and locally focused websites such as Texas Tribune, Voice of San Diego and the St. Louis Beacon. He argues that such sources should be included in the new public media ecology and receive federal funding.⁴

What is Public Service Media?

Since the creation of the Corporation for Public Broadcasting in 1967, the term public media has been virtually synonymous with public broadcasting. Public media are commonly defined as non-commercial, publicly funded broadcast outlets with a mission to meet the civic and educational needs of the community or broader public. In practice, this has meant television and radio stations eligible for CPB funding.

There is broad agreement that public media include:

- CPB-funded networks such as NPR, PBS, American Public Media (APM) and the many affiliated broadcast stations, program producers and funders that belong to these networks (e.g., WGBH, KQED, Public Radio International, Independent Television Service, Radio Bilingüe, etc.)
- Community radio
- Low Power FM Stations
- Public Access or PEG TV (local cable public access, education and government programming)

With the explosion of new digital platforms and delivery mechanisms, this definition is beginning to expand. New conceptions of public service media place greater emphasis on the function or mission of the organization (e.g., to inform and engage people around shared issues and civic concerns) than the type of organization or its affiliations. Patricia Aufderheide of American University's Center for Social Media has defined it this way: "Public media isn't something you are. It's something you do."ⁱ

In this expanded view, the primary aim is still serving the public, not making a profit. However, some people would broaden the definition of public media to include a range of publicly funded, not-for-profit, professional and nonprofessional, and potentially even commercial media. The following media have been suggested as part of an expanded definition of public mediaⁱⁱ:

- Wikipedia and other collaborative media
- Bloggers and podcasters
- Independent publications (e.g., Consumer Reports)
- Professional journalist sites (e.g., ProPublica)
- Citizen news sites covering local to international (e.g., Global Voices)
- Consortia of niche media (e.g., New America Media)
- Metro news sites (e.g., Texas Tribune, Voice of San Diego)
- State investigative news sites
- University-led community news sites
- "Soft advocacy" sites (e.g., Sunlight Foundation, Common Sense Media)
- Online mappers
- Viewer-supported satellite channels

In this paper, the assumption is that with the current climate of scarce resources, the best way to proceed toward implementing the public media recommendation of the Knight Commission would be to allow public broadcasters to redefine themselves as public media centers that would include online, mobile and other digital communication.

i Jeremy Egner, "Beyond Broadcast: Maps of public media plus maps as public media," Current.org, June 23, 2008. Retrieved from <http://www.current.org/web/web0811beyondbroadcast.shtml>

ii See remarks by Jan Schaeffer to the FCC Hearing, Preserving Public and Other Noncommercial Media in the Digital Age, April 30, 2010, (at http://www.j-lab.org/speeches/fcc_public_and_noncommercial_media_in_the_digital_era/); Henry Jenkins, "Where Citizens Gather: An Interview with The Future of Public Media Project's Jessica Clark (Part I)," MediaShift IdeaLab, March 31, 2009, (at <http://www.pbs.org/idealab/2009/03/where-citizens-gather-an-interview-wh-the-future-of-public-media-projects-jessica-clark-part-one090.htm>)

Like other media, public broadcasting is profoundly impacted by the digital revolution. Competition is burgeoning. Public broadcasting's best-known brands are being challenged by cable channels that offer children's, educational, cultural and documentary programming and by websites that offer news and information instantly, globally, on demand.

News and information consumers are no longer content to wait for the morning newspaper or the evening newscast. They want to interact, to share, to comment and to provide original information. In many breaking news stories today, citizens are the first to provide eyewitness accounts and disseminate video and audio to a worldwide-networked audience.

Digital technology offers amazing opportunities for those who want to create and distribute content. Cost is no barrier. You do not have to own a printing press or a transmission tower. Universal broadband will expand opportunities exponentially for media makers and consumers. Technology can have a multiplier effect. Eric Newton said, "Technological breakthroughs allow one well-trained journalist to do things that used to require dozens if not hundreds of old-school, shoe-leather reporters.... For the first time having only two reporters at a public radio station need not be an impossible editorial challenge."⁵

The new technology enables public media to transform from the one-to-many broadcast model to a distributed, networked model. Existing stations can transform into hubs that bring communities together, facilitate dialogue and curate vital information.

Laura Walker, president and CEO of New York Public Radio, wrote of her organization's mission to make government and institutions accountable to the people they serve. "We'll create new, far-reaching tools to reflect and reach diverse audiences and to establish a variety of communities across interests, heritage, neighborhood, and demographics," she said. "We seek to create active, rather than passive, consumers of information, increased opportunities for participation by news consumers and marginalized communities, and more transparent, more effective, and more accountable civic and government agencies."

The Challenge

This vision of public service media in the digital landscape resonates with the aspirations more than 40 years ago that led to the transformation of educational television and radio into a national public broadcasting service. In a 1966 letter to the Carnegie Commission on Educational Television, E.B. White wrote, "It should be our Lyceum, our Chautauqua, our Minsky's, and our Camelot. It should restate and clarify the social dilemma and the political pickle. Once in a while it does, and you get a quick glimpse of its potential."⁶

Growing out of the Carnegie Commission's recommendations, the 1967 Public Broadcasting Act created the independent, non-profit Corporation for Public

Broadcasting and authorized federal funding to support existing stations. The act calls for services that will “be responsive to the interests of people both in particular localities and throughout the United States, and will constitute an expression of diversity and excellence....” Specifying a role for the federal government, the act said that “it is necessary and appropriate for the Federal government to complement, assist and support a national policy that will most effectively make public telecommunications services available to all citizens of the United States.”⁷

Three years after the act became law, the Public Broadcasting Service and National Public Radio came into existence to provide national organizations for educational television and radio stations.

Public broadcasting remains decentralized, with individual stations at the core. A decentralized public broadcasting has been able to survive occasional intrusive political pressure, but has been less successful in adopting a unified strategy. “The structure of U.S. public broadcasting cripples any kind of coherent national planning,” said Pat Aufderheide and Jessica Clark of the Center for Social Media. “It has provided remarkable stability over the years, but this stability at a time of rapid change is itself becoming a liability.”⁸

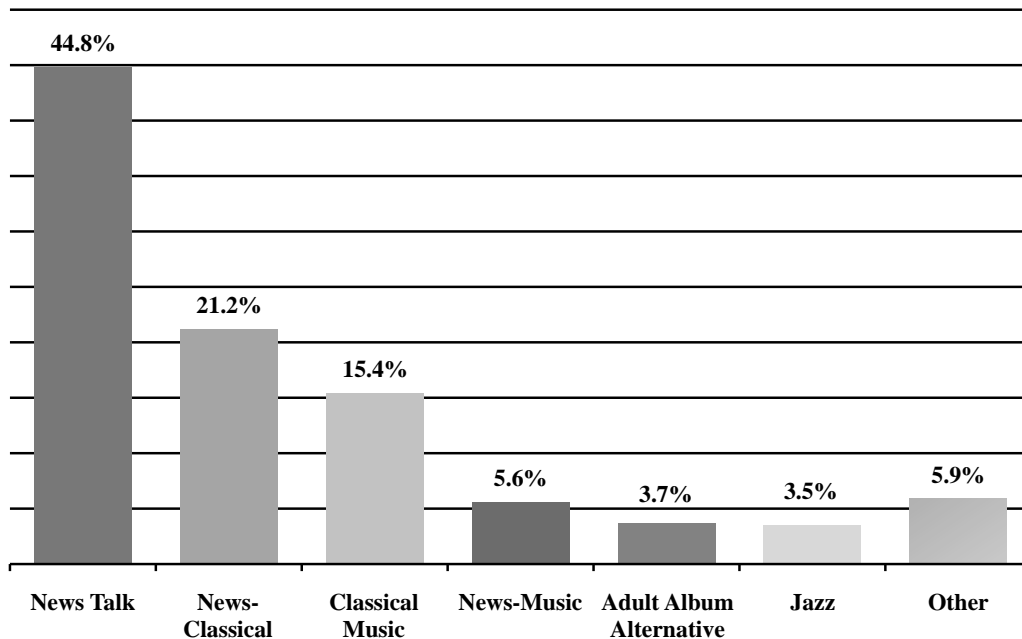
A total of 365 television stations are members of PBS. About 800 of 900 public radio stations, operated by about 400 entities, are members of NPR. According to the CPB-PBS-NPR filing in the Federal Communications Commission’s Future of Media inquiry, these stations can be accessed by more than 98 percent of the U.S. population.⁹ Public television says it has 61 million viewers weekly as of May 2010 and public radio says it has 30 million listeners.¹⁰

But the audiences for public television and public radio are on opposite trajectories. While public television has lost viewers, public radio’s audience continues to grow. Arbitron figures provided by NPR show the total audience for NPR member stations has grown 176 percent over 20 years, and by 9 percent in the past five years.¹¹

News programming has spurred public radio’s audience growth. Anchored by the two daily NPR news magazines, *Morning Edition* and *All Things Considered*, radio stations also acquire news and information programming from two other national services, American Public Media and Public Radio International. Between spring 2005 and spring 2008, overall public radio listening grew by 2.3 percent, but listening to news programming grew by 6 percent, according to “Grow the Audience,” a report on public radio produced by the Station Resources Group for CPB.¹²

The strong performance of nationally produced news programming has enabled public radio stations to establish identities in their communities as news and information sources even though the majority of stations have news departments of one or none. The “Grow the Audience” report found the most successful stations carry NPR news programs, the all-news-talk format is the most popular format where it is offered, and news is the most-listened-to programming on stations with a mixed format.¹³

Exhibit 2: Public Radio Formats, Ranked by Audience Share



Source: Arbitron, "Public Radio Today 2010: How America Listens to Radio," p. 59.

Public radio stations also benefited from a vacuum created by declining investment in news among commercial radio stations. Between 1994 and 2001, during which the 1996 Telecommunications Act eased radio ownership rules, local radio newsroom staffing declined 44 percent, according to Bob Papper, then of Ball State University.

"Our biggest success in public media is NPR," said Bill Kling, president and CEO of American Public Media. "However, the primary gateways to NPR—in fact, the retail face of NPR in most communities—are the public radio stations and public media companies. Often those local stations are considerably less successful than the national networks. Sometimes that is because of the structure they are a part of (university, municipality, school board), in part because it is the result of a lack of direct governance. Most often it reflects leadership deficiencies. And of course, it results from a lack of resources."

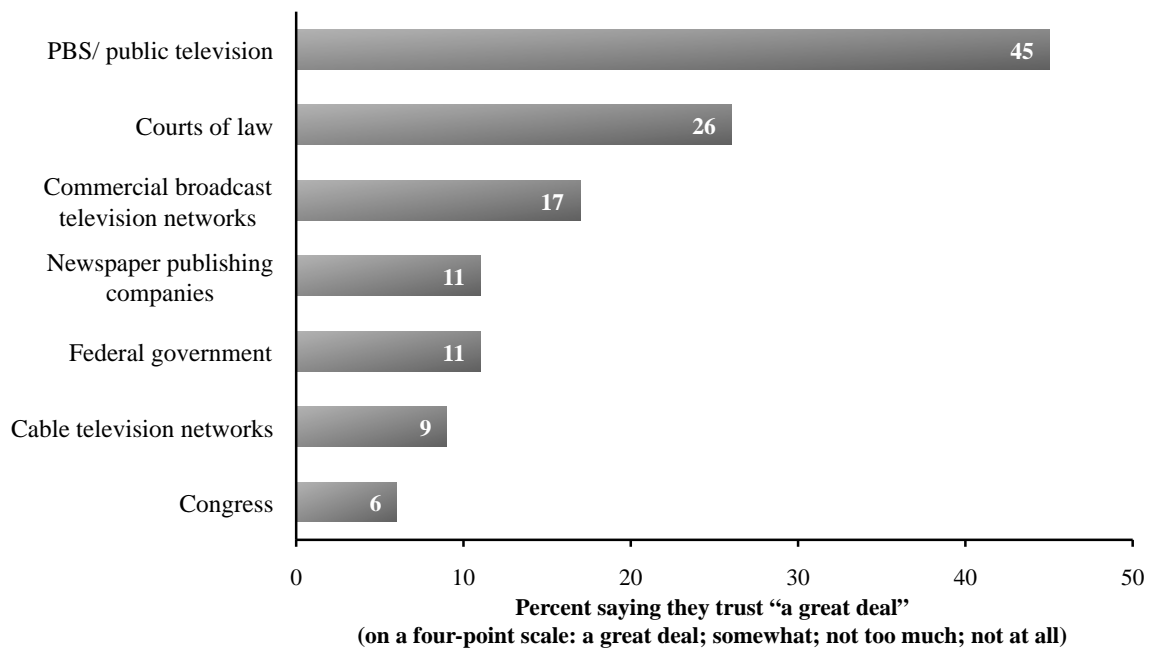
PBS's news and information programming includes the award-winning *PBS NewsHour* and *Nightly Business Report*. The weekly documentary program, *Frontline*, recently received funding to produce programming year-round, instead of taking a summer break. A new weekly program, *Need to Know*, launched in May to replace *Now on PBS* and *Bill Moyers Journal*. *Washington Week in Review* is a staple of the Friday night line-up.

Exhibit 3: News Organization Believability

	<i>Believe all or most</i>		<i>Believe almost nothing</i>	
	4 %	3 %	2 %	1 %
60 Minutes	33	34	22	11
Local TV News	29	40	23	8
CNN	29	36	22	13
NPR	28	32	25	16
Fox News	27	29	22	22
Wall Street Journal	25	37	23	14
C-SPAN	23	35	25	17
MSNBC	22	38	21	19
ABC News	21	43	23	13
CBS News	21	41	24	15
Your Daily Newspaper	21	38	27	14
NBC News	20	43	23	14
New York Times	20	38	21	21
USA Today	17	39	28	15

Source: Pew Research Center, "Americans Spending More Time Following the News," September 12, 2010.

Exhibit 4: Public Trust in Major Institutions



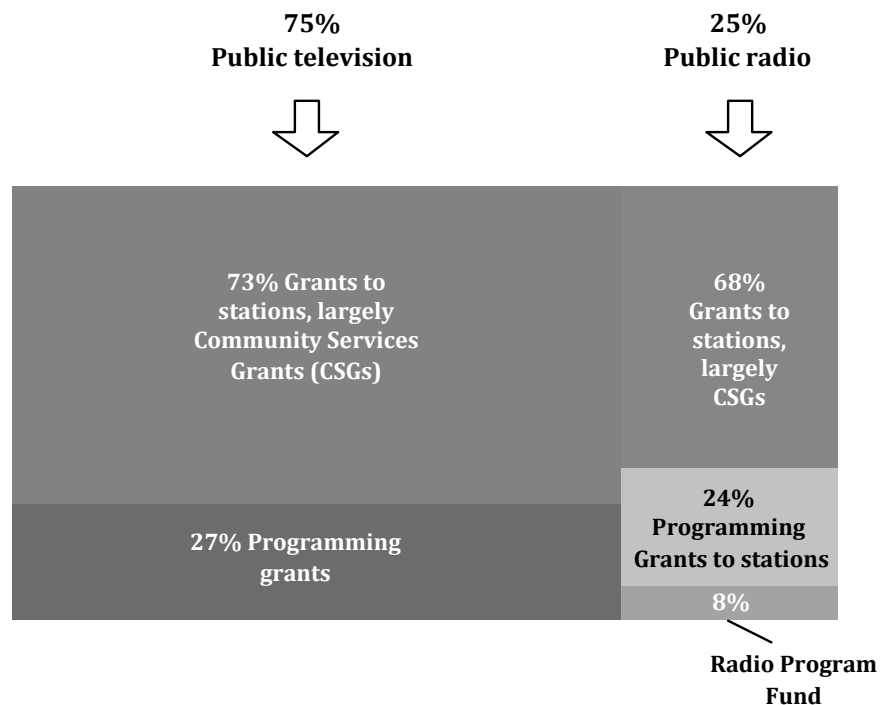
Source: PBS Research, GfK Roper Public Affairs & Media Surveys, 2010.

Because of PBS's structure, the national news and information programs are not produced by a single entity but by production companies or member stations in Washington, New York, Boston and Miami for distribution to other stations. Up to now, this has made it more difficult for the program producers to coordinate their efforts and bring their collective strengths to bear on major news stories such as elections or the economic crisis.

Very few public television stations produce local news. At most, they may offer a weekly news roundtable using reporters from other organizations or the occasional local or regional documentary. Some are beginning to partner with public radio stations to produce local and regional news and information programming, an effort that comes more easily to joint licensees.

Federal funding for public broadcasting has never reached the levels expected when Congress enacted the legislation in 1967. For the past several years, federal funding has remained flat, at about \$400 million a year. Moreover, the distribution of most of that money is mandated by Congress, going to stations in the form of community service grants and split 75/25 between television and radio.¹⁵

Exhibit 5: CPB Budget Allocation Formula



Above chart represents 89% of CPB budget. The additional 11% goes to CPB administrative and system support costs (satellite system, copyright fees).

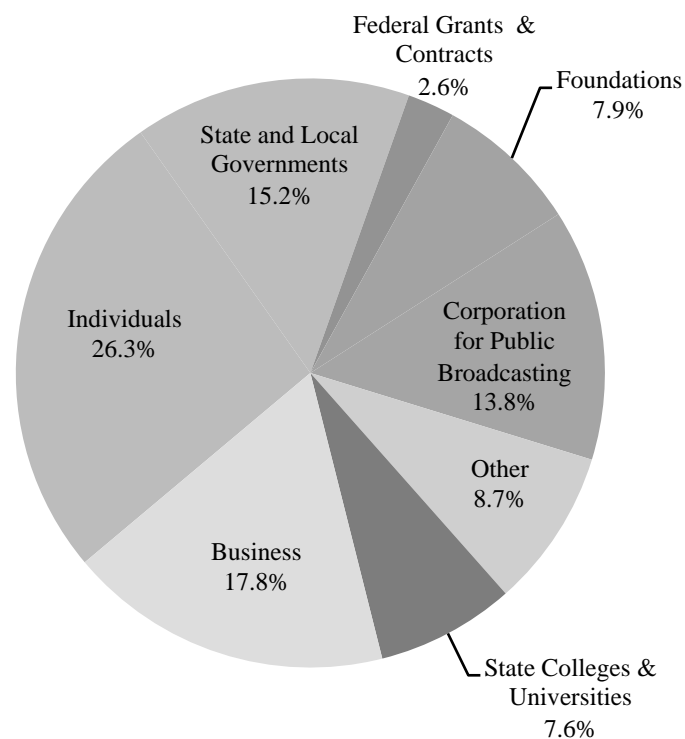
Source: www.current.org/pbpb/statistics/CPBformula.html

While federal funding provides only about 15 percent of the services' annual budgets, public broadcasting has also seen declines recently in other sources of funding, such as state and local support, university funding, corporate underwriting, foundation grants and individual giving.¹⁶ These financial pressures have led to reductions in services, staffing and programming at all levels and come just at a time when public broadcasting needs to make investments in digital media.

Financial pressures were the reason given by management of KCET-TV in Los Angeles when the most-watched public television station in the second largest market in the country declared it was leaving PBS because it felt the dues it paid for programming and other membership benefits were too high.¹⁷

Government funding quickly became an issue in the wake of NPR's firing of analyst Juan Williams over comments he made during an appearance on Fox News Channel's *The O'Reilly Factor* in late October 2010. Conservatives, including members of Congress, called for an end to federal funding for NPR and the rest of public broadcasting. While the percentage of federal funds in public broadcasting budgets is relatively small, it is, as PBS president Paula Kerger characterized it, "a critical 15 percent."¹⁸ The episode revealed the precarious state of official support for public broadcasting more than 40 years after its creation.

Exhibit 6: Public Broadcasting Revenue by Source of Revenue, 2008



Source: 2008 Public Broadcasting Revenue Reports, Table 2, September 2009, <http://www.cpb.org/stations/reports/revenue/>

There is no shortage of challenges to public media—the digital revolution redefining the players and audience expectations, a decentralized public broadcasting structure, declining public television audience and stagnant federal funding.

Yet the opportunity is huge. Public media can become an essential element in our democracy by better serving the information needs of communities. It can do so, as the Knight Commission recommends, by becoming more local, more inclusive and more interactive.

A. More Local

Local communities are ground zero for the changes in how citizens are getting information. Local newspaper audiences have declined by 25.6 percent in the past 10 years and one-third of newspaper jobs have been lost since 2001.¹⁹ Public media are poised to fill the gap, but to do so, steps must be taken to

- Encourage innovation
- Strengthen leadership and resources devoted to local news and information
- Promote internal and external partnerships
- Engage communities on all platforms

Public radio stations have built on the strong audience appeal of the national programs to create a local news presence. It is relatively easy to provide local headlines, weather and traffic during predictable breaks in *Morning Edition* and *All Things Considered*. Stations that might not have the reporting talent to produce a longer news magazine can still produce short packages that can be incorporated into the national programs. This also guarantees that local content, by appearing within the national programs, gets maximum exposure, since purely local programs draw fewer listeners than the national programs. *Morning Edition* gets the most listeners of any national program, capturing as much as 25 percent of all listeners at some stations.²⁰

Some radio stations have built the news and information identity into a strong local brand with a reporting staff and local news programming. But closer examination shows local news capacity is uneven and very limited at the majority of local stations. NPR's Local News Initiative and CPB's Grow the Audience project have both studied local news capacity in detail.

The Local News Initiative found only 15 percent of NPR's member stations have more than four people reporting full time and another 30 percent had two to three. A majority of stations had only one (22 percent) or none (33 percent).²¹

CPB commissioned a “Census of Journalists in Public Radio and Television” this year. Michael Marcotte, who conducted the survey for Public Radio News Directors International in August 2010, said his team found about 2,000 paid news professionals in public radio, including non-NPR member stations. In addition, another 2,000 work as volunteers performing journalistic functions.²²

Tom Thomas of the Station Resource Group, which conducted the Grow the Audience project, says there are five stations that invest more than \$20 million in their broadcast operations, have newsrooms of more than 20 and reach more than 500,000 listeners weekly. About a dozen more spend more than \$10 million, have 10 to 20 in the newsroom and reach more than 250,000 weekly. Below those tiers, the investment, staffing and audience are much more modest.

With more investment, the strongest stations could make a leap to the next level of excellence. These stations could serve as models for building local news and information capacity around the country. Here are recommendations for making that vision a reality.

1. Encourage innovative models for public media local news initiatives and look for opportunities to scale up such ventures.

The five community-based public radio organizations with the strongest news operations and biggest audiences are New York Public Radio, Minnesota Public Radio (MPR), Chicago Public Radio, KQED Public Media (Northern California) and Southern California Public Radio in Los Angeles. They share characteristics: except for MPR, they are located in the largest markets in the country, they are licensed to community boards rather than institutions, they operate multiple stations and only KQED-FM in San Francisco is a joint licensee with a television station. They are led by visionaries who have staked success on making a mark in news and information. They are among the top-rated stations in the system and the most successful fundraisers.

None of these stations is resting on its laurels. All have ambitious plans to expand their reporting strength, to create new areas of expertise and to greatly expand their engagement with digital media. Laura Walker of New York Public Radio said, “I’m quite concerned about the tone of journalism. It’s imperative to provide in-depth reporting, not just recreate the newspaper. We need to look forward.”

Among these stations' initiatives:

- New York Public Radio has developed plans to “dive deep” by significantly strengthening efforts in three content areas: New York government and politics, the New York economy and New York culture. NYPR plans to add \$30 million over five years to the \$20 million it already spends on content to grow its editorial staff to more than 100 and to build a digital news platform. It also will seek ways to program WNYC-AM 24/7 to support its mission. Walker said, “This combination of local news, online information, curating online and radio civic engagement is, we believe, the ultimate statement of our local news/information mission.”
- KQED is increasing local news content and integrating radio and online formats. It is adding 8 new positions to its newsroom staff of 45 and 10 regional newscasts to the daily schedule. The newly launched website is called KQED News (KQEDnews.org) and will stream the new newscasts. KQED president and CEO John Boland said, “We’re transforming what was a very successful 20th-century broadcasting organization into the model for 21st-century digital media.”²³
- Minnesota Public Radio has long been a leader in innovation. Among its latest efforts is Public Insight Network (PIN), a database of 89,000 experts in a wide range of subjects. The database is being shared with dozens of other public radio stations. PIN will be described in detail in the Interactive section of this paper.

Many of these station initiatives, like Public Insight Network, are being shared with other stations. One of NYPR’s content specialties is transportation and infrastructure, a natural for New York City. NYPR has extended its expertise by forming a hub for reporting on transportation and infrastructure with reporters embedded at local stations WDET/Detroit, Minnesota Public Radio, KALW/San Francisco, WAMU/Washington, D.C., Yellowstone Public Radio/Montana, and KUHF/Houston, as well as at American Public Media’s Marketplace. With hopes to add stations in Seattle, Atlanta and Arizona soon, the project will deepen its coverage with looks at transportation and civil rights, transportation and climate change and connections between development, housing and social equity.

At the national level, efforts are being made to strengthen the news capacity of local stations. Although some station managers privately express fears that podcasting and online delivery will change the relationship among network, stations and audience, NPR president Vivian Schiller believes the national organization

needs to maintain its ties to local stations. “People listen to stations, not NPR,” she said in an interview. “Our fate is tied to local stations. How can we cover news in 800 (NPR member station) markets?”

As digital media open possibilities for national producers such as NPR to reach audiences directly, it is important that NPR keep this commitment to develop local stations. APM president Bill Kling said, “As the strongest national producer, NPR has the dual obligation to (a) become an important national institution and (b) assist its member stations in becoming important community institutions.”

National organizations have launched two significant projects to strengthen local news capacity. They are:

- CPB’s Local Journalism Centers (LJCs). The \$10.5 million initiative was launched this spring with the goal of creating seven centers across the country partnering several stations in each region to focus on a relevant topic. For example, the Southwest consortium, titled *Fronteras*, brings together stations in California, Arizona, New Mexico, Nevada and Texas where a bilingual reporting team will report on cross-cultural issues. Seven reporters, two editors and a social media editor will staff the project. However, the local journalism centers are expected to become self-sustaining in two years.²⁴
- NPR’s Project Argo. The collaboration between NPR and 12 member stations, including some television/radio joint licensees, funds one content creator who focuses on a topic of local importance, such as politics, health care, the environment and criminal justice. For example, Oregon Public Broadcasting “will track policy developments that affect...natural resources, and host a conversation about how they should be managed.” NPR staff is assisting with construction of Argo websites and tracking metrics for website use and engagement. The sites are to be incorporated into NPR’s content management system and utilize PBS’s embeddable video player. The project is funded with \$2 million from CPB and \$1 million from the John S. and James L. Knight Foundation.²⁵

Local Journalism Centers

CPB is funding local journalism centers (LJC's) for a new approach to newsgathering and distribution. The centers are forming teams of multimedia journalists, who focus on issues of particular relevance to each region.

Southwest

KJZZ (Phoenix, AZ), KPBS (San Diego, CA), Nevada Public Radio, KRWG (southwest New Mexico and far-west Texas), Texas Public Radio, KUAZ (Tucson, AZ), KNAU (Flagstaff, AZ). The LJC is called "Fronteras: The Changing America Desk." A bi-lingual reporting team looks at cultural shifts, including Latino, Native American and border issues.

The Plains

KCUR (Kansas City, MO), Iowa Public Radio, NET Radio and Television (Nebraska), KBIA (Columbia, MO), High Plains Public Radio (Garden City, KS), Kansas Public Radio. The LJC focuses on agribusiness, including farming practices, food and fuel production.

Upstate New York

WXXI (Rochester), WMHT (Schenectady), WNED (Buffalo), WRVO (Oswego), WSKG (Binghamton). The LJC focuses the regional economy and innovation technology.

Upper Midwest

Michigan Radio, WBEZ (Chicago), ideastream (Cleveland). The LJC focuses on the economy and reinventing the industrial heartland.

Central Florida

WUSF (Tampa), WEDU (Tampa), WGCU (Fort Meyers), WMFE (Orlando), WMNF (Tampa), WUFT (Gainesville). The LJC focuses on healthcare issues.

Northwest

Oregon Public Broadcasting, Puget Sound Public Radio (KUOW), KCTS Television Seattle, Northwest Public Radio/Television, Boise State Public Radio, Idaho Public Television, and Southern Oregon Public Television. The consortium covers regional environmental issues, including renewable energy, natural resources, sustainability, and environmental science.

The South

Georgia Public Broadcasting, Alabama Public Television, WBHM-FM, (Birmingham, AL), Louisiana Public Broadcasting, KEDM-FM, (Monroe, LA), Mississippi Public Broadcasting, WNPT-TV, Nashville Public Television and WUOT-FM, (Knoxville, TN). The LJC focuses on education challenges.

Gulf Coast Coalition

Louisiana Public Broadcasting, Alabama Public Television, Mississippi Public Broadcasting, WEDU-TV/FM (Tampa, FL), WUSF-TV/FM (Tampa, FL), WWNO-FM (New Orleans, LA), WBHM-FM (Birmingham, AL), WSRE-TV/FM (Pensacola, FL), WVAS-FM (Montgomery, AL) and KRVS-FM (Lafayette, LA). The consortium will provide expanded reporting on the Gulf Coast oil spill for the next year.

Argo Member Stations

Boston/WBUR

CommonHealth: Where reform meets reality

Boston/WGBH-WCAI

Climatide: Oceans, coasts, and climate change on Cape Cod

Minnesota Public Radio

On Campus: Everything higher education in Minnesota

Oregon Public Broadcasting

Ecotrope: Covering the Northwest's environment

New York/WNYC

The Empire: Everything you need to know about New York state politics and governance

Philadelphia/WXPN

The Key: Discover Philly's best local music

San Diego/KPBS

Home Post: The military in San Diego

San Francisco/KALW

The Informant: Cops, courts and communities in the Bay Area

San Francisco/KQED

MindShift: How we will learn

Seattle/KPLU

Humanosphere: Covering the fight to reduce poverty and improve global health

Southern California Public Radio

Multi-American: Immigration and cultural fusion in the new Southern California

Washington, D.C./WAMU

DCentric: The changing face of the District

These projects are a good beginning, but represent a tiny fraction of the budgets of CPB and NPR. Much more support will be needed, both conceptual and financial, to have an impact on the larger system. Much of that support should go to station-to-station sharing so that the successful models can be replicated in more communities.

2. Strengthen leadership and resources devoted to local news and information, and invest \$100 million to add 1,000 public media reporters.

Journalism requires boots on the ground. A major criticism of the blogosphere is that it is derivative of original reporting. Investigative reporting particularly requires time that only comes when there is enough staff to free reporters from daily demands.

Public media are not even close to having enough staff to replace what is being lost from newspapers. Even newspapers hit by drastic cutbacks, such as the *Akron Beacon Journal*, still have newsroom staff that number close to 100. More than half of public stations have one reporter or none.

Some far-reaching proposals suggest dramatic increases. Tom Thomas proposes investing \$100 million to hire, equip and support 1,000 additional news staff, increasing the size of the current professional local news force by 50 percent. The funds would cover annual salary and benefits plus editorial, technical and administrative support. While the seed money would need to come from national sources, both governmental and philanthropic, he believes sustaining money could come from foundations and major donors at the local and regional level who are interested in facilitating civic engagement.

Still, 1,000 new reporters amount to only about three per market. APM's Kling proposes focusing on public media's journalistic strength in the top 25 markets. He proposes to demonstrate the full potential of local public media by raising philanthropic funding to create four to six model public media centers, built on the foundation of public radio stations, with 100 journalists and editors, strong governance and company leadership. In the case of his own Minnesota Public Radio, which has 80 news department staff, including 30 reporters, he would like to see 100 reporters to begin to match staffing levels at the local newspapers. APM's Southern California Public Radio would also be a candidate by building on its 20 reporters to bring its reporting and editorial staff to the 100-person level. New York's NYPR and Chicago's WBEZ are the other initial partners in this venture.

The fund for more reporters could be created at the national level, with reallocated and new government funds and a bold commitment from philanthropic organizations. Stations and independent journalists would apply for the funding by submitting proposals to demonstrate how their coverage would enrich local information capacity.

This influx of new talent should bring new attributes. In addition to excellent reporting skills, they would need to know how to prepare material for all platforms

and be digitally fluent. Such requirements are becoming the industry norm. At the commercial network level, ABC News moved this year toward replacing traditional reporting teams of correspondent, producer and camera crew with digital journalists who can master several skills.²⁶

The new staff should contribute to increasing gender, ethnic, religious and other types of diversity in the public media workforce. They should have a variety of content expertise in areas most in need of attention now—in economics, the environment and science, for example.

To promote continued high quality, to adjust to changing information demands and to keep pace with technological changes, public media leaders and managers should invest in professional development opportunities for their journalists, current and new. For example, 22 local journalists from 19 states gained expertise in covering business and economics through the NPR News Economics Training Project, a CPB-funded initiative.²⁷

Public media cannot afford to squander its reputation for accuracy and fairness with sloppy journalism. As more reporters are added, it is also important to add editing and producing capability to ensure quality. In its local news survey, NPR found that only 37 percent of reporters said their work was always edited by someone, while 20 percent said their work was never edited. Only 24 percent of stations reported having full-time editors.²⁸ It is vital to strengthen editing and producing ranks to protect the credibility of public media.

3. Promote internal and external partnerships.

CPB's Local Journalism Centers are a good first step to creating regional sharing of reporting efforts and content. Some regional networks are succeeding, such as the Northwest News Network. This should be encouraged.

Collaborations around content are also important, as demonstrated by NYPR's transportation and infrastructure hub. Public television station KETC in St. Louis developed web resources on the mortgage crisis that proved to be just as valuable in Tampa and Las Vegas. Communities of interest should be fostered, something done easily with digital media.

The technical means to make this happen should continue to be developed. NPR's application programming interface is serving that need and the Public Media Platform will expand that effort exponentially. Public Radio Exchange (PRX) also provides that opportunity. PBS is developing a "supervertical" for news content from all programs, local as well as national, and will participate in the Public Media Platform. These projects will be described further in the Interactive section, below.

Public media organizations are not only partnering with other public media, they are also looking externally for partners. Jo Anne Wallace, general manager of KQED-FM, said, "As we watch what's happening to local newspapers,

we can't duplicate the breadth of coverage unless we partner. We're looking for partnerships of all sizes, large and small." KQED partners with more than 25 organizations, including the San Francisco Chronicle, the Center for Investigative Reporting, Youth Radio and ProPublica.

Almost all of the most talked-about non-profit journalism web ventures, such as Voice of San Diego, Texas Tribune, the St. Louis Beacon and the Chicago News Cooperative, have a connection to local public media. The new sites have captured a lot of attention, but are still limited in reach and pose questions about sustainability. By partnering with public media, with an established track record in news, the new ventures can benefit from stability and a larger audience, while public media can benefit from the new ventures' increased reporting heft. The Beacon, for example, has 13 news staff, while the St. Louis public radio station has seven in its news department.

4. Define the role for public television stations in meeting information needs of communities.

Jim Lehrer, the best-known news figure in public broadcasting, sees a gap to be filled. "There's a crying need for serious reporting at the local level," he said in an interview. "Public media has a responsibility to meet that need."

His proposal is a simple one: to build on what newspapers are already doing. "Newspapers already have beat reporters covering local issues," he said. They can collaborate with the local public television station to start a news program. As he travels the country, he is urging public stations to find a way to mount such programs, a daily one if possible. In San Antonio he hit on success by bringing together KLRN with the San Antonio Express News, which are now planning a program on Friday night to be hosted by the newspaper's editor. If he can get four or five such programs started, he believes he will have a model to show to others.

Up to now, local news programming has not been a high priority for public television stations and there is little original reporting done by most public stations except for occasional documentaries. There are a number of reasons for that, including the competition with commercial stations for local news viewers. News is an important profit center for commercial stations and with three or more stations in a market, competition is fierce. The number of commercial stations offering news in a market grew through the 1990s and has declined in the past two years by only eight stations nationwide. In the local news arena, public radio faces less competition while public television faces more.

There is also the matter of expense. The budget for a commercial television newsroom in a mid-size market is about \$4 million to \$5 million annually, one-third to one-half of the entire budget for public stations in comparable markets.

Some public television stations are venturing deeper into news and public affairs, sometimes by partnering with one of the new non-profit news websites. In St. Louis, KETC is providing office space for The Beacon, a website founded by former staffers for the *St. Louis Post-Dispatch*, and sharing content. In San Diego, KPBS has launched Project Envision, a multi-platform effort with deep reporting on local issues that appears on television, radio and online and that engages the community in contributing information to the project.

While it may be natural for public television and radio stations to pair up when they share a license, PBS president Paula Kerger sees a role for those television stations that do not have that benefit. Public television stations can expand upon existing public affairs work and form partnerships with their local radio stations, Kerger said. “Even if a station doesn’t have its own newsroom, it still has a vital role to play. Local PBS stations have always served as community conveners—places where citizens come together to engage in civil discourse—and that will continue in the digital age,” she said.

Rather than producing newscasts or staffing a full newsroom, public television stations can partner with other news organizations, such as public radio stations, local newspapers and non-profit websites to give those reporting efforts wider distribution. They can also serve as conveners meeting community needs, as KETC did in St. Louis with its “Facing the Mortgage Crisis” project, which combined town hall meetings with an interactive web resource where citizens could post questions and get answers.

Public television should form a study group of general managers and others to develop a strategy for news content and civic engagement. This could be undertaken by CPB as an effort comparable to the Grow the Audience project for public radio. PBS has taken steps to strengthen national news and public affairs programming by building up digital platforms and extending *Frontline* to a year-round schedule. It is urgent for leaders at the local level of public television to examine the future for news and public affairs.

B. More Inclusive

1. Make inclusiveness a priority. Adopt a two-pronged strategy: general and specialized in programming and control.

CPB president Patricia Harrison says her agenda can be called the three Ds: dialogue, digital and diversity.²⁹ Since its inception, public broadcasting has been dedicated to serving all communities. The Public Broadcasting Act says public media should “serve unserved and underserved audiences, particularly children and minorities.” CPB, PBS and NPR have undertaken many projects to improve the inclusiveness of its staffing and its programming. But public media leaders acknowledge more can be done and also note the fact that the country is becoming more diverse, not less.

“If the military can integrate, why can’t public broadcasting do a better job?” asks CPB chairman Wilson. He says beyond the rhetorical commitment there should be active ways to make public broadcasting more welcoming to diverse communities.

Grow the Audience, CPB’s project for public radio, states that inclusiveness is part of the fabric of public media and calls on colleagues to deepen their commitment to pluralism, diversity and inclusiveness.

The diversity goals of public media should start with the audience—that is, are diverse audiences that can be served by public media being served? Inclusiveness can be pursued on two tracks. One is an overall commitment to inclusiveness in organization and content. The other, as the Grow the Audience report recommends, is to encourage differentiated efforts and support of programming and stations developed and controlled by communities of color. These efforts could be developed in partnership with other community resources, including other public media organizations.

In May, CPB launched a Diversity and Innovation Fund of \$20 million over two years to benefit PBS’s program service. The goal is to attract younger and more diverse viewers and media makers. But, as Jacquie Jones, president of the National Black Programming Coalition noted, that sum is a fraction of CPB’s over-all budget.

The Juan Williams firing cast an unflattering light on NPR’s efforts to reflect diversity in staff and content. Even before the Williams episode, NPR had adopted goals to improve diversity in content, audience, workplace environment and hiring and recruitment by 2012. Recently, NPR elevated its chief diversity position to the vice president level and hired Keith Woods, the respected dean of the Poynter Institute. On the local level, Minnesota Public Radio has appointed an “editor for new audiences” to build connections among diverse Minnesota communities. NYPR has partnered with CPB on a “Workforce Diversity” program which will add a new community engagement ambassador to its community engagement team.

2. Increase diversity of news and information staff and content at national and local public media organizations.

The people in a newsroom are the key factor in producing programming that is relevant and inclusive, that “sounds like me,” in the words of the Grow the Audience report. Without a diverse staff, a news organization is in danger of appearing insensitive or ignoring important stories.

Recruiting, hiring and retaining a diverse news staff are not issues exclusively for public media organizations. A 2004 summit of network and local broadcast news executives and the presidents of five minority journalism organizations enumerated these best practices:

- Develop a pool of candidates for potential openings and build relationships over time.
- Be willing to wait longer and look harder to find well-qualified, diverse candidates.
- Hold managers accountable for hiring diverse staff.
- Develop partnerships to increase your applicant pool by linking with UNITY and its partner organizations, professional associations and university journalism programs.
- Be aware of whether your newsroom climate is welcoming to new recruits and make improvements if needed.
- Help new hires make the transition to the newsroom and the community.
- Use internships to find new talent.
- Establish mentoring programs to aid advancement.³⁰

Content efforts should include both general and differentiated programming. Stations should audit content frequently to track progress and gaps. Inclusiveness should be defined to encompass age, education, income level, political and religious identity as well as gender, race, ethnicity and sexual orientation. Investing more in digital engagement can reap benefits in reaching an audience that is younger and more multicultural.

The CPB/PBS Diversity and Innovation Fund will provide resources for more diverse programming. CPB has funded Independent Television Service to create documentaries diverse in content and production. CPB also supports a number of ethnic radio production organizations.

NPR recently canceled a program for diverse audiences for budget reasons, but still produces *Tell Me More*, a daily talk show hosted by Michele Martin and designed to “capture the headlines, issues and pleasures relevant to multicultural life.” As part of its diversity initiative, NPR is conducting audience research and undertaking efforts to broaden its list of experts to discuss issues such as national security, politics and the arts.

Keeping track of the diversity of voices is essential. NPR’s ombudsman recently analyzed its on-air sources and commentators and found that only 26 percent of sources and one of 12 commentators were women.³¹ The media watchdog group, Fairness and Accuracy in Reporting (FAIR) reported in October that PBS’s public affairs program guests are “strongly dominated by white, male and elite sources.”³²

Most of the top-performing public radio news and information stations are located in markets with diverse populations and are making efforts to reach out to them more. *The Takeaway* is a four-hour per weekday national program currently heard in 60 markets. It is jointly produced by New York Public Radio and Public Radio International, with editorial collaboration from The New York Times and the BBC. One of its goals is to reach a more diverse audience. In New York, *The*

Takeaway has more black listeners than *Morning Edition*, according to NYPR president Laura Walker. She said the staff of, and contributors to, *The Takeaway* are among the most diverse in public radio.

Among public television stations, WNPT won recognition for its documentary series, “Nashville Nextdoor Neighbors,” on immigrant communities from Bhutan, Kurdish Iraq, Somalia and Spanish-speaking countries.

The Takeaway

An alternative to NPR’s *Morning Edition* is *The Takeaway*, a four-hour weekday program produced by New York Public Radio and Public Radio International. One of the goals of the program is to reach a more diverse audience. It is now heard in 60 markets, many of which are urban centers with diverse populations. In New York, where the program is heard on WNYC-AM, the listening time among African Americans has increased fivefold and the weekly cumulative rating has increased 2.5 times, according to Laura Walker, NYPR president and CEO. In New York, she says, *The Takeaway* has more black listeners than *Morning Edition*. Hosted by John Hockenberry and Celeste Headlee, the program has one of the most diverse staffs and roster of contributors in public broadcasting.

3. Engage communities in gathering information, offering viewpoints, highlighting priorities and bringing issues to the surface.

Digital platforms make it possible to engage communities in new ways. American Public Media’s Public Insight Network database is a superb tool for bringing in a wider diversity of expertise.

NYPR’s *Brian Lehrer Show* incorporates the audience directly into content production and delivery, using call-ins, live events, social media and crowdsourcing. In the wake of the economic crash, the *Brian Lehrer Show* launched a multiphase, multimedia project, called Your Uncommon Economic Indicators, focused on the human, and more tangible, realities of the economic collapse, asking the audience to share in words, images, and video how the economic crash was impacting their local neighborhoods. This was followed up in two other phases, “Recovery Road” and “Help Wanted.” As an example of crowdsourcing, the show asked listeners to post the cost of a marketbasket of goods at local shops to examine pricing disparity across the city. With help from CPB, NYPR has launched the project at other public radio stations.

4. Partner with journalism schools to engage young people in public media.

About 47 percent of public media licenses are held by universities and other educational institutions.³³ They are well positioned to connect with young people on campus, especially where there are journalism and communications programs.

Yet many university stations do not encourage student internships or have no relationship with the journalism department. University licensees should be required to establish internships for students.

The New America Foundation, in a policy paper “Journalism Education in Flux,” recommends partnerships between public media and journalism programs as part of its vision of seeing journalism schools become “anchor institutions” in communities as producers of news and information.³⁴ A more engaged role for journalism schools in what the paper calls the “emerging information ecosystem” is an obvious fit where the schools or their parent institutions hold public media licenses.

5. Create a corps to promote digital literacy in underserved communities.

One of the most intriguing ideas launched this summer by the National Black Programming Consortium with support from CPB is Public Media Corps. Like Teach for America, the program would recruit new college graduates to go into communities to teach digital skills. The corps will employ fellows with technical and media skills to “promote and extend broadband adoption in underserved communities.” By serving as residents in public broadcast stations, libraries, high schools and non-profit community centers, the fellows will develop web-based and mobile applications on topics of community interest, train community members in the use of digital media and document that use for further study. The pilot program is serving African American and Latino communities in Washington, D.C., and is being operated in partnership with public television stations WHUT and WETA and public radio stations WEAA and WPFW. If the pilot program is successful, it could serve as the basis for a broader program.

C. More Interactive

1. Incorporate digital media into every aspect of public media at all levels. Support the creation of a platform to share all public media content. Include mobile platforms in planning.

Public media is embracing digital technology and using it to advance its mission of service to communities. The national organizations are developing strategies that will not only strengthen their digital presence but will also help stations develop their capabilities.

In her paper “Public Service Media 2.0,” Ellen Goodman writes, “Public broadcasting entities have gone a long way in recent years to diversify their offerings. PBS and local stations now have significant presences on the web and other digital distribution platforms....”³⁶

NPR president Schiller said recently, “NPR is radio at the core, and using digital media as a tool to advance the mission.” She said NPR looks at each platform in its own terms and rather than saying they are platform agnostic, they say they are “platform embracing.”³⁷

The most expansive effort in digital technology to date, announced in June, is a collaboration of PBS, NPR, American Public Media, Public Radio International and Public Radio Exchange to develop the Public Media Platform with \$1 million in support from CPB.³⁸ The Public Media Platform will use an open application programming interface (API) to allow public media producers to share content on a single platform and “make it available for uses from news websites to educational curricula,” the announcement said. The platform will be made available to non-public media producers as well. Among the potential uses are to feed the websites of not only stations, networks and producers but also other non-profit media. The platform will support partnerships with a rights-management system that would enable a local station to distribute content to a regional newspaper or non-profit news website. The platform will allow local stations to use national material, national programs to use local material and local stations to use material from other local stations.

The Public Media Platform is a logical next step in efforts already under way at NPR and PBS. NPR introduced its API in 2008, which allows stations to present NPR material on their own websites and now supports traffic for large member stations. This year PBS rolled out COVE, its video player, which can be incorporated into local station websites, Mike Kelley, PBS vice president, strategy and operations, said in an interview. PBS is also developing a supervertical to aggregate all PBS news content and allow for content verticals. This will bring together, for example, coverage of the war in Afghanistan from the *NewsHour*, *Frontline* and *Need to Know*, coverage that previously existed only on the individual websites of each program. Another PBS project is Project Merlin, a re-architecture of PBS.org that will bring local content to the surface and drive users to local websites.

PBS’s flagship news program, *NewsHour*, incorporated interactivity in its roll-out of a new program format late in 2009. The website was redesigned to be more inviting and includes interactive features such as “The Rundown,” where *NewsHour* correspondents can engage with the public. The *NewsHour* hired Hari Sreenivasan to give the site a “face.” He appears twice in the program, once with headlines and a second time to highlight online content. In a regular feature, “NewsHour Connects,” he interviews local public media reporters about stories in their communities. The reporters are able to send video to the program via the web, an action that previously would have required expensive satellite transmission.

NewsHour staff members say their most successful venture has been the “oil widget,” an embeddable player that showed BP footage of the Gulf oil leak with a variety of counters that the user could select from to calculate how much oil was flowing. The oil widget went viral, with 12 million page views by the end of June, and was embedded on 6,000 web pages. Thanks to the interest in that, *NewsHour* website traffic in summer 2010 ran 40 percent above the previous year. The widget has been embedded in local public station websites, helping to bring traffic to those sites as well.

NPR and partners such as PRX have had great success in the past year with mobile platforms. The NPR News app for iPhone was launched in August 2009 and downloaded more than 1 million times in the first five weeks. It has consistently ranked in the top three news apps and in early July 2010 was number one. The NPR iPad app is second among free news apps, and recently topped 400,000 downloads. NPR also has an app for Android phones. NPR's mobile website was relaunched last summer and now achieves 1 million monthly visitors.³⁹ NPR says its overall web traffic is 11 million visitors a month.

Podcasts have been another area of success for public radio, with NPR reporting 14.7 million downloads in December 2009. The most recent iTunes ranking has local public station-produced podcasts at number one overall ("This American Life" from WBEZ) and number nine overall ("Radio Lab" from WNYC). Two other programs, NPR's "Wait, Wait Don't Tell Me" and WHYYY's "Fresh Air" (distributed nationally by NPR) are number three and number seven, respectively.

Among local stations, the use of digital platforms varies widely. The Grow the Audience report says, "It is clear that public radio has an enormous distance to travel."⁴⁰ In this report, only one public radio station website (Minnesota Public Radio) achieved as many as 400,000 monthly visitors in 2008, with the other measured stations lagging farther behind. Seventy percent of station website visitors come once a month, while the typical listener tunes in a half-dozen times.⁴¹

But progress is being made. Laura Walker of New York Public Radio says since the Grow the Audience report was issued, NYPR's web audience has nearly doubled, reaching 400,000. And the promise is there. Tim Eby, general manager of KWMU-FM in St. Louis, discussed his hopes for partnering with the Beacon and said, "The web is the perfect point to come together and get over the ambitions of each organization." The shared platform being developed for all of public media would go a long way toward helping existing institutions make the transition.

2. Use digital means to engage communities.

The Center for Social Media advises public media to direct funds and attention away from making top-down content and toward "directly mobilizing users around issues and news in collaborative spaces. Such a change would reflect the shift from *producing* public broadcasting content for delivery to *doing* public media with networks of publics. Such activities would include acting as guides to and curators of the mass of high-quality news and information that's now available online; working with users on participatory platforms to shape and generate high-quality, pro-am coverage; and engaging publics around shared civic problems."⁴²

A number of ongoing projects could serve as models to accomplish the goal of greater community engagement. One of the most interesting efforts is Public Insight Network, developed by American Public Media and Minnesota Public

Radio with support from the John S. and James L. Knight Foundation. The project has created a database of 89,000 experts in various subjects. Journalists serve as analysts trained to search the database to tap into the insights and expertise of the public radio audience in order to efficiently deepen their reporting and make it more relevant. The system, which represents a significant open source platform that can undergird a number of applications for engagement and network collaboration, is now in use at more than 20 public radio stations and one newspaper (*The Miami Herald*). Examples of reporting utilizing the resources of PIN include a series on California prisons produced by Southern California Public Radio after the Chico riot and a Peabody-Award-winning series called “Hard Times,” produced by Oregon Public Broadcasting, on the impact of the economic crisis on Oregonians. In the first hours after the Minneapolis bridge collapse in 2007, Minnesota Public Radio (MPR) used the database to contact structural engineers and others with expertise in bridges. While other media were speculating about a terrorist attack, MPR was reporting on the structural deficiencies later identified as the cause of the disaster.

Public Insight Network

Public Insight Network (PIN) harnesses the expertise of more than 89,000 public radio listeners to contribute to broader and deeper journalism. Created by American Public Media, PIN began at Minnesota Public Radio (MPR) and is now used in more than 20 newsrooms around the nation. Listeners are invited to join the network and to list their occupations, education and expertise. Each newsroom has a trained analyst who culls the network for the desired expertise and connects network members with reporters. Participants are promised that their information will be used only for journalism, and they are invited to contribute their observations and ideas about stories that should be covered. In the first hours after the collapse of the I-5 bridge in Minneapolis, MPR used the database to identify structural engineers and other experts. While other media were speculating about a terror attack, MPR was reporting on the structural deficiencies later identified as the cause of the collapse.

Other examples of community engagement include the St. Louis mortgage crisis project that later spread to other communities, the San Diego Envision project that invites citizens to contribute their ideas about the community’s future and Cleveland’s ideastream. Kit Jensen, the ideastream COO, said, “We measure our success by the success of the region.”

Such an approach requires negotiation with journalists’ notions of themselves as observers, not activists. The use of a database of experts fits with traditional journalistic practice. Using public media to mobilize support for a particular plan of action could cause problems. Stations need to carefully delineate the boundaries between engagement and the credibility of their news operations.

3. Invest in professional development to help staff stay current and acquire new skills. Promote use of social media by news and information staff. Purchase digital gear to add video to websites and on-air productions.

Investing in professional development for staff is essential to make digital adoption work. With a Knight Foundation grant, NPR trained more than 300 employees in digital technology. NPR president Schiller and the Grow the Audience report noted the inconsistency among staff at member stations in digital knowledge and skills. Among the skills staff need is knowledge of social media to extend reach, engage new audiences and acquire new sources for journalism.

With less expensive, more portable digital equipment, acquiring video will become a less difficult proposition. Radio stations can add video to their websites and television can consider news programming that does not require a studio and expensive gear. Of course, staff must be trained to use the gear. In many cases, younger staff may be able to train veterans. Ideally, new employees should possess such skills already.

4. Develop metrics to assess success and areas for improvement in digital media.

Progress cannot be made in digital media without developing metrics to measure success. At the moment, the national organizations track trends in engagement on various platforms, but few local stations do the same. Also important is an analysis to identify areas for growth. The Grow the Audience study analyzed differences between on-air and online users and suggested strategies to turn web users into public radio listeners.

5. Ensure that the national broadband plan promotes a strong public media.

None of these dreams of public media that flourish in the digital realm can be realized without including public media in the nation's plans for universal broadband. The FCC's National Broadband plan devotes a section to the importance of broadband in promoting civic engagement and the role public media should play.

"As the Internet increasingly becomes the standard platform for receiving information, those who do not have high-speed access to the Internet will be left completely out of the civic dialogue," the FCC's report said. "Public media will play a critical role in the development of a healthy and thriving media ecosystem," the plan continues, "public media must continue expanding beyond its original broadcast-based mission to form the core of a broader new public media network that better serves the new multi-platform information needs of America.

"To achieve these important expansions, public media will require additional funding," the report concludes.⁴³

The FCC report proposes funding online public media content from a trust fund to be endowed by revenues from a voluntary auction of spectrum licensed to public

television. It also recommends copyright law revisions to give online public media exemptions similar to those previously won for broadcast content and to give public media the necessary clearances from intellectual property rights holders to build an accessible archive such as the one contemplated in the Public Media Platform.

Ellen Goodman and Anne H. Chen, who call public media “the original broadband infrastructure,” forecast the consequences of not including public media in planning broadband policy. “Without better broadband infrastructure,” they write in “Modeling Policy for New Public Media Networks,” “public media cannot deliver mission-driven services to everyone.” They cite the lack of universal access to broadband and the high cost of streaming as barriers to reaching diverse, underserved and young audiences.⁴⁴

Some have suggested a broadband reservation for public media, akin to the spectrum reserved for public radio and television broadcasts. This recognition of public media’s unique role could afford guaranteed accessibility and reduced streaming costs from Internet service providers and special consideration and reduced rates from copyright holders.

Public media stations should also be included among the “anchor institutions” eligible for infrastructure grants under federal stimulus spending to achieve universal broadband. These proposals complement the plan laid out by Blair Levin in his white paper for this series, “Universal Broadband: Targeting Investments to Deliver Broadband Services to All Americans.”⁴⁵

To secure a place for public media in the shaping of broadband policy, public media leaders should become more involved and more active as advocates for their organizations. During the FCC’s deliberations on broadband policy, public media leaders privately supported some of the recommendations but never united and took a stand publicly. The creation of universal broadband is too great an opportunity to be squandered.

D. Structure

To make public media more local, more inclusive and more interactive, steps should be taken to align the structure and funding of public media to meet these goals. Here are recommendations:

1. Restructure the Corporation for Public Broadcasting as the Corporation for Public Media. Break down barriers between television and radio and consider a new structure based on strengths in types of content.

Some argue that the Corporation for Public Broadcasting has outlived its usefulness and that a new entity is needed to transform public media for the digital age. That is not the recommendation of this paper. On the contrary, in spite of some episodes of political meddling, CPB has functioned well as the firewall between government and independent media. Such a firewall will be even more

important in a distributed media environment with multiple sources and entry points for media makers and consumers.

Under its current leadership, CPB is taking steps to encourage its constituencies to plan for the future with its funding of the Public Media Platform, the Diversity and Innovation Fund, the Local Journalism Centers and the Grow the Audience project. Although hamstrung by legislation that dictates where federal funds will go, CPB still has \$36 million in annual discretionary funds to use to promote change. CPB itself has discussed whether it should be renamed the Corporation for Public Media, which would make a powerful statement about its new direction.

To make true change, public television and radio entities need to move further and faster in breaking down the silos that create a yawning chasm between practitioners in two media. In the course of the interviews conducted for this paper, station managers talked repeatedly about the lack of interest in partnership on the part of the other public media station in town. Within the public television and radio worlds, old rivalries persist and hinder cooperation that would benefit the public.

It would seem that digital platforms would be the perfect place to meet and march forward. The Cleveland stations that decided to merge have seen the benefits. Joint licensees like KQED are making progress. But these examples do not prevail in the majority of communities.

One approach could be to abolish the structural divisions along platform lines. What if public media were instead organized by content type? Instead of television and radio, there would be a news and information division, an arts and culture division and a children and education division. Such a structure would utilize existing and complementary strengths, avoid duplication of effort and expertise and allow public media to develop depth across platforms. Some local public media organizations are already making changes along these lines. Cleveland's ideastream is promoting cross-platform expertise in several areas, including education and local arts and culture as well as news. Its content producers are expected to create specialized material for television, radio and digital platforms.

2. Improve community governance structures.

Bill Kling, the highly successful founder of Minnesota Public Radio and Southern California Public Radio, argues that the public media system has been allowed to underperform by regulators and federal funders and is held back in large part by the structure of its stations, 65 percent of which are licensed to universities, state and local governments, libraries, boards of education and other institutions whose primary mission is not public engagement through media. Many of the most successful stations are licensed to independent community organizations. NYPR has thrived after a community group was able to purchase WNYC from the City of New York.

Yet there are also universities that incorporate public stations into their teaching and service mission and provide high-quality news and cultural programming in communities where such fare would otherwise not exist. A solution would be to require all license holders to have a community board, which would be charged with supporting the mission of the station. Such a requirement would provide important outside feedback and developmental support.

Stations should get help in building successful boards. Numerous stations can serve as models, including those named in this paper. Resources, including written best practices, conferences and professional development, should be made available to stations to help them recruit community boards that can support their mission. CPB/CPM could offer these capacity-building services, perhaps with help from charitable foundations.

Even stations with community boards may be lacking digital expertise. Digital expertise among board members is no substitute for the knowledge and skills needed among staff. But boards need that expertise to set effective policy for the digital age. Efforts should be made to encourage both national and local organizations to recruit board members with digital knowledge and a system should be set up to help them identify candidates. CPB, whose members are appointed by the president, should include digital experts.

E. Funding

To accomplish the transformation needed to enable public media to help fulfill the information needs of communities in a democracy, funding should be redirected and increased. Here are recommendations for increasing the funding for public media:

1. Public media must demonstrate the desire to change in order to encourage investment from government, foundations and corporations.

“We need to be willing to recognize the need to change,” said CPB chairman Wilson. “To get others to support us, we need to get our own house in order.”

There is universal agreement that funding sources—whether government, philanthropic or corporate—will not provide more money to support the status quo. Many recognize that some of the funds now going to public media could be redirected for greater efficiency and less duplication. Some believe public media missed an opportunity to bring new ideas to the table when the FCC’s national broadband plan was under discussion.

There is also the hope that the crisis in journalism coupled with public media’s avowed desire to move into the digital space will inspire funding sources to make big investments.

Public media leaders need to be prepared and united in making that case.

2. Increase congressional support through special appropriation and restore reauthorization.

Public broadcasting's federal funding is appropriated by Congress and distributed by CPB. Until the last decade, Congress reauthorized public broadcasting for three years in advance to give broadcasters the opportunity to plan for their programming and equipment needs. For the past 10 years, Congress has been unable to agree on reauthorization (and in the past the appropriation often turned out to be less than the authorization), and has appropriated an annual amount that has remained flat for several years.

The Public Broadcasting Act specifies with exactitude how federal funds are to be divided among public media entities, with 70 percent going to community service grants given directly to stations and a 3/1 split between television and radio (see Figure 5). Any effort to reposition public media for the future requires a substantial overhaul of the priorities laid out in the act. "The statutory funding allocation creates an over-investment in broadcast infrastructure, and under-investment in content and an anachronistic bundling of network functions," said Ellen Goodman and Anne H. Chen.⁴⁶ Public media leaders and Congress should work together to amend the act so that it provides more flexibility and embraces a wider range of technology and broader concept of public service.

Given today's financial situation, federal budget pressures and political realities, it is unlikely that the overall appropriation will increase. However, in the past, Congress has approved a special appropriation for one-time expenditures, such as the mandatory conversion to digital television transmission. Public broadcasters should ask for a special appropriation to begin offering content more broadly on digital platforms as part of the national broadband plan. They should also attempt to restore the reauthorization process, since expenditures for broadband will continue over a number of years.

This may seem like a tall order in the face of calls from Republican members of Congress to end federal funding for public broadcasting in the wake of NPR's firing of analyst Juan Williams. Such calls are nothing new, however, dating to the first debates on the Public Broadcasting Act. During the Reagan administration and again in 1994 when Republicans won control of the House and Senate, there were moves to curtail and even zero out funding. Those efforts were eventually modified or defeated. The net effect, according to public broadcasters, was a boost in fundraising from foundations and individuals.

By emphasizing to Congress that support is going to strengthen local stations, public broadcasters may be able to avoid getting caught in partisan attitudes about national programming.

Some have suggested other sources for federal revenue, such as a tax on commercial broadcasters for spectrum use, a tax on advertising or a tax on the sale of digital devices. Any of these would place a burden on one sector for a service meant to be utilized by all. Just as funds for the National Endowments for the Arts

and the Humanities come from general tax revenues, it is fairest for public media to be funded by general revenues.

There have also been proposals to create a fund for public interest journalism from fees collected by the FCC, comparable to the national endowments. Such a fund would be duplicative of processes developed by CPB and would siphon off some revenue to create a new bureaucracy. Any new federal funds from the FCC or elsewhere should go to a reconstituted CPB/CPM.

3. Redirect resources to support the public media mission. Make it easier for stations to consolidate and merge.

In its filing with the FCC's Future of Media inquiry, CPB, PBS and NPR said, "We recognize further efficiencies are possible and are eager to make improvements. Additional economies of scale can be achieved in back-office functions, unnecessary duplication of services can be reduced, and infrastructure can be rationalized. This will free some resources for investment in new outlets and technologies and in enhanced service. The challenge is to identify and create incentives to achieve these additional efficiencies while not reducing Public Media's local service, diversity of content offerings, and presence in communities throughout the country."⁴⁷

Some in public media go further, saying there are too many organizations with too much overhead in the system. Public media should pursue these strategies and be prepared to detail the potential savings to Congress and the FCC.

Efficiency can be achieved through station acquisition, merger and operating agreements. Acquisition of a station license requires financing and has been successful in only a few cases. Public Radio Capital has helped in acquisitions and could use much more substantial backing. The FCC should clarify the status of public service operating agreements to make it easier for one organization to run several outlets. Mergers depend on the willingness of two or more parties, but the places where it has worked can serve as models.

Public television could realize new income if the FCC were to allow stations to lease excess digital capacity, as proposed in the CPB-PBS-NPR filing. Public radio could also make use of excess digital capacity with the FCC's clearance.

4. Seek foundation partners to jump-start the process. Engage community foundations to support fulfillment of community information needs.

The Carnegie Corporation and Ford Foundation were invaluable to the launch of public broadcasting. The Knight Foundation is playing a key role in today's discussions of the information needs of communities, which include the role of public media. Major philanthropic organizations, which have a stake in preserving the fabric of American democracy, can help transform public broadcasting into public media.

Local and regional foundations have a stake as well in supporting public media close to home. It may take a refocusing along the lines of Cleveland's ideastream to engage that support.

Some feel the dollars are too small, but others, including APM's Bill Kling, believe this is an untapped source that needs to be approached with big ideas. "According to our internal analysis," Kling said, "if the top 25 markets all raised (funds) at the same rate as the top performer, they'd raise \$410 million a year more—or enough to pay for 160 reporters in each of those cities." That amount would be more than the entire annual federal appropriation to CPB.

5. Keep digital content free.

In commercial media circles the debate is raging about where and how to put content behind a pay wall. The reasoning is that, by giving away content for free, legacy news organizations are courting disaster.

No matter what decisions legacy media make regarding paid content, for now public media leaders are promising to keep public content free and accessible to all. This is the premise behind the Public Media Platform: content produced on behalf of the public belongs to the public. That conclusion is in keeping with the history and mission of this country's public media.

Still, public media should also be able to experiment with aftermarket sale or license of content they create in order to create new revenue streams. Revenue that sustains public media is also in the public interest.

Who Should Do What

To carry out the proposals in this paper, the organizations involved will need to undertake specific tasks. Here is a plan of action for stakeholders.

Public Media

Leaders of public media at the national and local level face the most important task: to relinquish the status quo and embrace a new definition of public media that is more local, more inclusive and more interactive. Only public media leaders can convince government and philanthropic supporters that they have a new vision worthy of their investment.

This begins with a transformation of the Corporation for Public Broadcasting into the Corporation for Public Media (CPM). It encompasses a new agreement with Congress on the funding mechanism in the Public Broadcasting Act. It includes playing a proactive role in the establishment of national broadband policy and initiating efforts to make public media more efficient. It also means welcoming new players under the public media umbrella, including non-profits providing news, information and community service exclusively in the digital space.

At the local level, public media leaders should develop journalistic capacity by obtaining the necessary funding and hiring journalists who bring digital skills, diversity and content expertise. They should support journalists with strengthened editorial oversight and professional development opportunities. They should create a culture that supports independent, fearless journalism that serves their communities.

Local public media leaders should move full force into digital media and acquire the necessary expertise and resources. They should participate in the creation of the Public Media Platform and foster new relationships with their communities through resources such as Public Insight Network. They should redirect funding from outmoded broadcast infrastructure into digital technology. They should develop metrics to measure progress in creating community.

Local public media leaders should establish close and beneficial ties to their communities. This is essential to developing the level of financial support that will be necessary to sustain stronger local operations. University and other institutional licensees should move to establish community boards to create local support. Local public media leaders should develop partnerships with other public media entities, with non-profit and for-profit journalism enterprises and with journalism schools.

Public television leaders should determine what role they can play in meeting the information needs of their communities. They should convene, under CPM auspices, a working group similar to public radio's Grow the Audience project, to assess options and decide on a plan of action.

At the national level, CPM should lead the transformation by creating new standards and new incentives. It should continue seeding worthwhile projects such as the Local Journalism Centers and the Public Media Corps. It should work cooperatively with Congress to redefine public media for the 21st century. NPR and PBS should build on their progress in making digital tools available to local stations and to the public. They should work to strengthen local stations as sources of news and information for their communities and help build journalism capacity at the local level. They also should continue to improve and strengthen news and information programming at the national level to serve as a model and a beacon.

Federal Communications Commission

The Federal Communications Commission should adopt broadband policies that recognize public media's unique place in our democracy. Policies could include a guarantee of public media access to broadband delivery systems and advantageous rates for streaming video and audio. The FCC should adopt policies that ease station acquisition, mergers and operating agreements. The FCC should clarify the status of public service operating agreements to make it easier for one

organization to run several outlets. The FCC should allow public television stations to lease excess digital capacity and clear public radio stations to make use of excess digital capacity. If the FCC decides to redirect some of the fees it collects to support the information needs of communities, it should consider establishing a fund, similar to Public Radio Capital, to support station acquisition.

Congress

Congress should move swiftly to update the Public Broadcasting Act for the 21st century. It should change the Corporation for Public Broadcasting to the Corporation for Public Media and amend the funding allocations to reflect digital reality. It should appropriate additional monies and enact appropriate laws to enable public radio and television to participate fully in the drive for universal broadband. It should amend copyright law to enable public media to realize its potential in the digital space. It should fund the creation of a national Public Media Corps to promote digital literacy.

Philanthropy

Major foundations should create a fund to seed the ambitious goal of adding more journalists to local public media. Whether the initial goal is 1,000 journalists across the country or 4,000 in the top 25 markets, such an investment would be in keeping with the history of generous philanthropic support for public broadcasting at another transformative time. Likewise, local and regional foundations should invest in public media as one of the pillars of connection and civil discourse in their communities.

Universities and Journalism Schools

As license-holders of 47 percent of public radio and television stations, universities are in a powerful position to support change. Universities should recognize the importance of public media in their communities and allow the establishment of community boards to garner resources for local stations. Universities should forge ties between stations and journalism programs, where they exist on campus. University stations can offer internships and a lab experience for students practicing their journalism skills. Journalism schools should incorporate public media experience into their programs and contribute research and programming skills.

Conclusion

Public media can play a vital role in meeting the future information needs of communities. That will require outside support in terms of more federal and philanthropic funding and regulatory and legislative action. But it will also take leadership on the part of the public broadcasting community to tear down barriers, open up to new non-profit information providers, embrace digital platforms, eliminate duplication and make the case for more resources. By building on existing strengths, replicating successful models, nurturing experimentation and developing leadership capacity, public broadcasting can transform itself into public service media that meet the needs of the American people. Then the words of E.B. White will be just as relevant and inspiring in the 21st century as they were more than four decades ago.

Endnotes

- 1 Knight Commission on the Information Needs of Communities in a Democracy. (2009). *Informing communities: Sustaining democracy in the digital age*. The Aspen Institute: Washington, D.C. (pp. 35–36) Retrieved from <http://www.knightcomm.org/read-the-report-and-comment/>
- 2 Downie, L. Jr., & Schudson, M. (2009). The reconstruction of American journalism. (p. 2) Retrieved from http://www.cjr.org/reconstruction/the_reconstruction_of_american.php
- 3 Zuckerman, M. J. (2008). ideastream: The new ‘public media.’ In Carnegie Corporation of New York (sponsor) *The meeting of two cultures: Public television on the threshold of the digital age*. (p. 43) Retrieved from <http://carnegie.org/fileadmin/Media/Publications/PDF/CarnegieJournalismReport2008.pdf>.
- 4 Newton, E. (2010, May 7). [Letter to Steven Waldman, director, Future of Media Study, Federal Communications Commission, May 7, 2010].
- 5 Newton, 2010
- 6 White, E.B. (1966, September 26). [Letter to Carnegie Commission on Educational Television] Retrieved from <http://www.current.org/pbpb/carnegie/EBWhiteLetter.html>
- 7 Public Broadcasting Act, 47 U.S.C. § 396 (1967).
- 8 Aufderheide, P., Clark, J., & Shapiro, J. (2008). *Public broadcasting and public affairs: Opportunities and challenges for public broadcasting’s role in provisioning the public with news and public affairs*. [Paper for the Berkman Center for Internet & Society, Harvard University] (p. 4) Retrieved from <http://www.comminit.com/en/node/290686/307>
- 9 Corporation for Public Broadcasting, Public Broadcasting Service, National Public Radio, America’s Public Television Stations (2010, May 7). Filing on “The Future of Media and Information Needs of Communities in a Digital Age” (Federal Communications Commission, DA-10-100, GN Docket No. 10-25) (p. 7) Retrieved from <http://www.cpb.org/future/TheFutureofPublicMedia.pdf>
- 10 Corporation for Public Broadcasting, Public Broadcasting Service, National Public Radio, America’s Public Television Stations, 2010, p. 13
- 11 National Public Radio written materials to author, attributed to Arbitron
- 12 Public Radio Audience Growth Task Force. (2010). *Public radio in the new network age*. (p. 22) Retrieved from <http://www.srg.org/GTA/>
- 13 Public Radio Audience Growth Task Force, 2010, p. 22
- 14 Information provided by Bob Papper to the Project for Excellence in Journalism, cited in Project for Excellence in Journalism, *The State of the News Media, 2004*. Retrieved from Journalism.org. http://www.stateofthemediamedia.org/2004/narrative_radio_newsinvestment.asp?cat=6&media=8
- 15 Public Broadcasting Policy Base, CPB Budget Allocation Formula. Retrieved from <http://www.current.org/pbpb/statistics/CPBformula.html>
- 16 Corporation for Public Broadcasting, Public Broadcasting Revenue Report 2008. Retrieved from <http://www.cpb.org/stations/reports/revenue/>
- 17 Collins, S. (2010, October 8). Los Angeles PBS affiliate KCET exits network fold to go independent, *Los Angeles Times*. Retrieved from <http://latimesblogs.latimes.com/showtracker/2010/10/sorry-charlie-rose-los-angeles-pbs-affiliate-kcet-exits-network-fold-to-go-independent-.html>
- 18 PBS’s take on KCET Los Angeles’ defection. (2010, October 31). Retrieved from <http://www.tvnewscheck.com/article/2010/10/31/46647/pbss-take-on-kcet-los-angeles-defection/page/1>

- 19 Pew Project for Excellence in Journalism. (2010) *State of the News Media 2010*. Retrieved from http://www.stateofthemedial.org/2010/overview_key_findings.php
- 20 Public Radio Program Directors Association. (n.d.). *Morning Edition grad school*. Retrieved from http://www.pprd.org/knowledgebase/local_news_initiative/morning_edition_grad_school.aspx
- 21 NPR report to Knight Foundation on Local News Initiative, May 17, 2006
- 22 Michael Marcotte, written comments to author, Oct. 5, 2010, "A Census of Journalists in Public Radio and Television" by Public Radio News Directors Inc, August 2010. Commissioned by CPB.
- 23 Whiting, S. (2010, July 19). KQED expands local news, integrates media. *San Francisco Chronicle*, Retrieved from http://articles.sfgate.com/2010-07-19/bay-area/21988881_1_kqed-president-afternoon-drive-times-top-rated-station
- 24 Corporation for Public Broadcasting. (2010, March 25). Corporation for Public Broadcasting launches new local journalism initiative [News release]. Retrieved from <http://www.cpb.org/pressroom/release.php?prn=814>
- 25 National Public Radio. (2009, October 2). NPR launches new online local journalism venture [News release]. Retrieved from <http://www.npr.org/about/press/2009/100209.Argo.html>
- 26 Stetler, B., & Carter, B. (2010, February 23). ABC News to Cut Hundreds of Staff. *The New York Times*. Retrieved from <http://www.nytimes.com/2010/02/24/business/media/24abc.html>
- 27 Everhart, K. (2009, May 27). Reporters selected for Recession 101 course backed by CPB. Retrieved from <http://current.org/500/>
- 28 NPR "Local News Station Survey Report" to Knight Foundation, May 17, 2006
- 29 Patricia Harrison, president, CPB, interview with author, June 29, 2010
- 30 Radio Television Digital News Association. (n.d.). *Diversity toolkit: Resources*. Retrieved from <http://www.rtnda.org/diversity/toolkit/view/index.html>
- 31 Shepard, A. C. (2010, April 14). Where are the women? [Web log post]. Retrieved from http://www.npr.org/blogs/ombudsman/2010/04/where_are_the_women.html
- 32 Fairness & Accuracy in Reporting. (2010, October 19). Taking the public out of public TV [News release]. Retrieved from <http://www.fair.org/index.php?page=4178>
- 33 Public Broadcasting PolicyBase. (1999, August 28). Number of licensees and stations assisted by CPB. Retrieved from <http://www.current.org/pbpb/statistics/licensees.html>
- 34 Anderson, C. W., Glaisyer, T., & Perez, A. (n.d.). *Journalism education in flux* (unpublished paper). New America Foundation: Washington, D.C.
- 35 Clark, Jessica. (2010, July 23). The Public Media Corps Project Gathers Steam. Retrieved from <http://public-mediacorps.org/pmc/pmc-news/the-public-media-corps-project-gathers-steam/>
- 36 Goodman, E. P. (2008). Public service media 2.0. Retrieved from the Social Science Research Network website: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1299685
- 37 Schiller, V. (2010, June 30). Comments. Council on Foreign Relations Symposium, Washington, D.C. Retrieved from http://www.cfr.org/publication/22595/sustaining_journalism_in_the_digital_age_video.html

-
- 38 National Public Radio. (2010, June 14). American Public Media, NPR, PBS, Public Radio International and Public Radio Exchange partner to create a shared digital content platform [News release]. Retrieved from <http://www.npr.org/about/press/2010/061410.PMPLaunch.html>
- 39 NPR written comments to author, July 2, 2010
- 40 *Public Radio in the Network Age*, p. 49
- 41 *Public Radio in the Network Age*, p. 47
- 42 Aufderheide, P., Clark, J., & Nisbet, M.C. (2009). *Scan and analysis of best practices in new media journalism, both within and outside U.S. public broadcasting*. Retrieved from <http://www.centerforsocialmedia.org/future-public-media/documents/white-papers/scan-and-analysis-best-practices-digital-journalism-and-o> p.4
- 43 Federal Communications Commission. (2010). *National broadband plan: Chapter 15: Civic engagement*. Retrieved from <http://www.broadband.gov/plan/15-civic-engagement/>
- 44 Goodman, E. P., & Chen, A. H. (2010). Modeling policy for new public media networks. *Harvard Journal of Law & Technology*, 24, 16. Abstract retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1569667
- 45 Levin, B. (2010). *Universal broadband: Targeting investments to deliver broadband services to all Americans* [White paper]. Retrieved from <http://www.knightcomm.org/universal-broadband-blair-levin/>
- 46 Goodman & Chen, p. 40
- 47 Corporation for Public Broadcasting, Public Broadcasting Service, National Public Radio, America's Public Television Stations. (2010, May 7). Filing on "The Future of Media and Information Needs of Communities in a Digital Age" (Federal Communications Commission, DA-10-100, GN Docket No. 10-25). p. 18. Retrieved from <http://www.cpb.org/future/TheFutureofPublicMedia.pdf>

APPENDIX



About the Author

Barbara Cochran is the Curtis B. Hurley Chair in Public Affairs Journalism at the University of Missouri School of Journalism. As a member of the school's Washington program faculty, Cochran engages in programs of research, consulting and training aimed at improving the practice of journalism. She works with the Committee of Concerned Journalists, also located in Washington, and the Donald W. Reynolds Journalism Institute.

She served for 12 years as president of the Radio Television Digital News Association, the world's largest professional organization of journalists working in television, radio, online and other electronic media, becoming president emeritus on her retirement in 2009. Before joining RTNDA, she worked in journalism in Washington for 28 years. She held leadership positions in newspapers, radio and television, serving as managing editor of the *Washington Star*, vice president for news at National Public Radio, executive producer of NBC's *Meet the Press* and vice president and Washington bureau chief of CBS News.

At NPR, she directed the creation of *Morning Edition*, which, along with *All Things Considered*, received the Alfred I. duPont-Columbia Award during her tenure.

The Aspen Institute Communications and Society Program

www.aspeninstitute.org/c&s

The Communications and Society Program is an active venue for global leaders and experts to exchange new insights on the societal impact of digital technology and network communications. The Program also creates a multi-disciplinary space in the communications policy-making world where veteran and emerging decision-makers can explore new concepts, find personal growth, and develop new networks for the betterment of society.

The Program's projects fall into one or more of three categories: communications and media policy, digital technologies and democratic values, and network technology and social change. Ongoing activities of the Communications and Society Program include annual roundtables on journalism and society (e.g., journalism and national security), communications policy in a converged world (e.g., the future of international digital economy), the impact of advances in information technology (e.g., "when push comes to pull"), and serving the information needs of communities. For the past three years, the Program has taken a deeper look at community information needs through the work of the Knight Commission on the Information Needs of Communities in a Democracy, a project of the Aspen Institute and the John S. and James L. Knight Foundation. The Program also convenes the Aspen Institute Forum on Communications and Society, in which chief executive-level leaders of business, government and the non-profit sector examine issues relating to the changing media and technology environment.

Most conferences utilize the signature Aspen Institute seminar format: approximately 25 leaders from a variety of disciplines and perspectives engaged in roundtable dialogue, moderated with the objective of driving the agenda to specific conclusions and recommendations.

Conference reports and other materials are distributed to key policymakers and opinion leaders within the United States and around the world. They are also available to the public at large through the World Wide Web, www.aspeninstitute.org/c&s.

The Program's Executive Director is Charles M. Firestone, who has served in that capacity since 1989, and has also served as Executive Vice President of the Aspen Institute for three years. He is a communications attorney and law professor, formerly director of the UCLA Communications Law Program, first president of the Los Angeles Board of Telecommunications Commissioners, and an appellate attorney for the U.S. Federal Communications Commission.

THE ASPEN INSTITUTE COMMUNICATIONS AND SOCIETY PROGRAM

CONNECTING the EDGES

By Richard Adler



THE ASPEN INSTITUTE

A REPORT ON THE 2012 ASPEN INSTITUTE ROUNDTABLE
ON INSTITUTIONAL INNOVATION

Connecting the Edges

*A Report of the 2012 Aspen Institute
Roundtable on Institutional Innovation*

By Richard Adler



THE ASPEN INSTITUTE

Communications and Society Program

Charles M. Firestone

Executive Director

Washington, D.C.

2013

To purchase additional copies of this report, please contact:

The Aspen Institute
Publications Office
P.O. Box 222
109 Houghton Lab Lane
Queenstown, Maryland 21658
Phone: (410) 820-5326
Fax: (410) 827-9174
E-mail: publications@aspeninstitute.org

For all other inquiries, please contact:

The Aspen Institute
Communications and Society Program
One Dupont Circle, NW
Suite 700
Washington, DC 20036
Phone: (202) 736-5818
Fax: (202) 467-0790

Charles M. Firestone
Executive Director

Patricia K. Kelly
Assistant Director

Copyright © 2013 by The Aspen Institute

This work is licensed under the Creative Commons Attribution-Noncommercial 3.0 United States License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc/3.0/us/> or send a letter to Creative Commons, 171 Second Street, Suite 300, San Francisco, California, 94105, USA.

The Aspen Institute
One Dupont Circle, NW
Suite 700
Washington, DC 20036

Published in the United States of America in 2013
by The Aspen Institute

All rights reserved

Printed in the United States of America

ISBN: 0-89843-589-7

13/015

Contents

FOREWORD , <i>Charles M. Firestone</i>	v
EXECUTIVE SUMMARY , <i>Richard Adler</i>	vii
CONNECTING THE EDGES , <i>Richard Adler</i>	
The Economic Imperative.....	1
Schumpeter’s Gale	2
Core vs. Edge: Where does Innovation Happen?	4
The Role of Education	5
New Realities for Business: From Transactions to Relationships	7
<i>The Facebook Effect</i>	8
<i>Building Trust</i>	11
<i>Can Governments Really Change?</i>	12
<i>Cities as Vital Edges</i>	15
Developing Human Capability.....	17
<i>New Ways to Work</i>	19
<i>New Ways to Learn</i>	20
<i>Learning on the Job?</i>	24
Connecting the Edges.....	26
<i>Finding the Right Edge, Using the Right Tools</i>	28
<i>Reinventing Higher Education at ASU</i>	30
Staying on the Edge	32
Endnotes	33

APPENDIX

Roundtable Participants..... 39
About the Author 41
The Aspen Institute Communications and Society Program..... 43
Previous Publications from the Aspen Institute
 Roundtable on Institutional Innovation..... 45

Foreword

The Aspen Institute Communications and Society Program convenes a number of different roundtables to address issues involving the impact of the digital revolution at the cutting edges of societal, democratic and business institutions and values. One of the newest in these series looks at institutional innovation—how institutions need to adapt to meet the changing needs of their organizations, their constituent parts and the ecologies they live in.

As much of the world has faced problems recently in their economies—leading in some cases to societal unrest—many point to the need for economic growth as the way out, and to innovation as a means to that growth. In the United States, for example, the business engine for growth has slowed over the past decade at least, leading to concerns about the future of jobs, both in numbers and quality. Forward thinkers call for greater innovation in both the business and public sectors to jumpstart growth and progress.

This Roundtable series is premised heavily on the work of John Hagel and John Seely Brown, leaders of the aptly named Deloitte Center for the Edge. Their research, and the Aspen Roundtable itself, focuses on ways to encourage creativity and innovation through collaboration, social networking and interactions of all kinds, particularly at the edge of organizations, where, as our rapporteur says, “The weight of inertia is less inhibiting and where disruptive initiatives are more likely to be tolerated.”

Digital network technologies are disrupting the cores of many organizations—from the entertainment and information businesses to perhaps the last bastion of resistance, our educational institutions. At the edges of these organizations, we find the greatest (some say only) innovative measures—that is, invention turned into action. This conference looked not only at that phenomenon but also how these edge networks connect both to each other and to the cores of their organizations.

Acknowledgments

I would like to thank the Deloitte Center for the Edge for being our senior sponsor for the Roundtable and in particular, John Hagel and

John Seely Brown for their leadership, suggestions and assistance. In addition, we thank EMC Greenplum for their sponsoring contributions to the Communications and Society Program, and Richard Adler for weaving the Roundtable's dialogue, background readings and his own independent research into a concise and coherent report.

Finally, I thank Kiahna Williams, Senior Project Manager, who managed the Roundtable throughout, and Tricia Kelly, Assistant Director of the Communications and Society Program, for her review and help in producing this report.

Charles M. Firestone
Executive Director
Communications and Society Program
The Aspen Institute
Washington, D.C.
April 2013

Executive Summary

America's democratic, capitalist system has produced an unprecedented level of prosperity for this country. But the engine of growth responsible for this prosperity, which has been based on incessant innovation and continuous renewal, has slowed in recent years. The result has been a growing economic disparity that is leaving a substantial portion of the population behind. What is needed now is a new wave of innovation that embraces the public as well as the private sector that generates enough good jobs to allow all workers to do well.

Innovation is rarely a solo activity. It most often takes place within networks that bring people together in ways that encourage creativity and allow good ideas to be turned into action. The place where innovation is most likely to flourish is not at the core of organizations but at the edge where the weight of inertia is less inhibiting and where disruptive initiatives are more likely to be tolerated.

Digital network technologies are creating new possibilities for collaboration outside the confines of traditional institutions. These new capabilities not only threaten to disrupt many existing business enterprises but also educational institutions that find themselves challenged by the rise of Massively Open Online Courses and other non-conventional forms of learning. In each case, it is at the edge of organizations where the most exciting developments are taking place, where new ideas, new technologies and new ways of working are being combined in promising ways. If we are going to re-start vigorous, inclusive economic development, and ultimately realize the full potential of new ways of doing things, we need to learn how to foster edge institutions that will accelerate innovation and find more effective mechanisms for linking the edge to the core.

*This report is written from the perspective of an informed observer at the
Aspen Institute Roundtable on Institutional Innovation.
Unless attributed to a particular person, none of the comments or ideas contained
in this report should be taken as embodying the views or carrying the endorsement
of any specific participant at the event.*

CONNECTING THE EDGES

Richard Adler

Connecting the Edges

A Report of the 2012 Aspen Institute Roundtable on Institutional Innovation

By Richard Adler

The Economic Imperative

For the past five years, the Aspen Institute Roundtable on Institutional Innovation has been exploring the challenge of ensuring that organizations remain healthy and competitive in the 21st century. Previous reports from the Roundtable describe the far-reaching changes in the environments in which commercial and non-profit enterprises operate and the ways that those enterprises might usefully respond to these changes.

As documented in Deloitte's *Shift Index*, there has been a steady, long-term decline in the overall economic performance of business enterprises as a result of their failure to adapt to operating in a hyper-connected, rapidly changing world.¹

Through their work at the Deloitte Center for the Edge, John Hagel and John Seely Brown have argued that to survive in this new environment, organizations need to move from a 20th century “push” model in which success is based on achieving economies of scale—a model that was appropriate to a world in which markets were relatively stable and predictable—to a 21st century “pull” model based on scaling continuous learning to keep pace with a constantly evolving marketplace. Key to achieving this transformation is empowering all employees—not just the top leadership, but everyone in an organization—to take on challenges and solve problems that will allow them and their organization to keep learning and growing. Engaging workers' passions through such challenges is key to sustaining the kind of extreme performance that has become a necessity for institutional survival.

The starting point for the 2012 Roundtable on Institutional Innovation was the difficult realities of the current economic environment and the urgent need to increase the rate of economic growth, not only in the United States but across the globe. What is at stake is not just the survival of many existing enterprises but the economic well-being of a substantial portion of the U.S. population. What will allow firms, organizations, networks and the individuals within these ecosystems, to keep growing and developing? Are there new strategies for growth that can benefit both individual organizations and the economy as a whole? And where are these new strategies most likely to be developed and implemented?

**...the most conducive environment for innovation
is often at the edge of organizations....**

One place where radical change is not likely to be welcomed is at the *core*—of an enterprise or a network or an economy—because of the inertia of legacy systems and the need to meet expectations of producing consistent, predictable results. By contrast, the most conducive environment for innovation is often at the *edge* of organizations, where less is at stake and experimentation (and the possibility of failure) is more likely to be tolerated. But in order to have substantial impact, innovations eventually need to be brought into the core (or to grow into a new core). The purpose of the 2012 Roundtable was to explore the relationship between core and edge and identify ways in which they can be more effectively connected in order to accelerate the process of positive change and re-ignite vigorous, inclusive economic growth.

Schumpeter's Gale

Michael Crow, President of Arizona State University, began the discussion by pointing out that the United States is the home of a great deal of innovation and is itself “an institutional innovation of enormous magnitude.” America’s capitalist, democratic system represents a fundamental systems innovation in how a society is organized. Through its belief in progress, its openness to new ideas and change,

and its commitment to the ideal of freedom, the U.S. has produced unprecedented economic prosperity for its citizens (and for millions of non-citizens as well). The mechanism that has powered this economic success story has been what Crow described as “Schumpeter’s Gale”—the constant pressure exerted by a free marketplace that brings about the death of enterprises that are unable to compete effectively, clearing the way for the birth of innovative new enterprises. This process of “creative destruction” (described by economist Joseph Schumpeter), driven by the entrepreneurial spirit, is the force that drives growth.

Unfortunately, the gale that has been responsible for our economic prosperity has diminished in recent years. Danger signs are apparent in many places. The country’s persistent high unemployment rate is directly related to the failure of the economy to create enough new jobs. And, according to Michael Crow, the economic situation of a substantial portion of the population is increasingly dire. If you divide the U.S. population into three roughly equal strata, you will find the top 100 million are doing reasonably well (with the top one percent doing considerably better than that); the middle 100 million experiencing little if any improvement in their economic situation in the past several decades and often finding it difficult to hold on to what they have; and the bottom 100 million in serious trouble, falling further and further behind the rest of the population in terms of income, educational attainment and health status. In Arizona, the gap between the top and bottom segments of society is growing at the fastest rate in history, a trend that is being replicated in much of the rest of the country. In fact, a significant portion of those at the bottom come from families that have no income at all.

What will it take to revive economic growth enough to bring prosperity to everyone? Although Schumpeter focused on the role of creative destruction in the private sector, generating sustained inclusive growth will require innovation in all sectors. This includes government, which is typically seen by free market advocates as an obstacle whose influence must be diminished to allow growth to happen. (In the memorable words of Ronald Reagan, “Government is not the solution to our problem; government is the problem.”) But rather than creating barriers to innovation by attempting to control markets through rigid regulation, is it possible for government to be a positive force in fostering innovation? New models for more adaptive, pro-growth approaches to

regulation—based on new ideas about how technology-driven markets operate—are emerging from the field of evolutionary economics, but have not yet been widely adopted.² For these ideas to take hold, government must recognize that the traditional models of regulation are no longer adequate and it must undertake a process of innovation in its own operations that it has not previously done. Other components of the society, including education, also need to be reinvented. But where does innovation come from and how can it best be nurtured?

Core vs. Edge: Where does Innovation Happen?

According to Geoffrey West, Distinguished Professor and Past President of the Santa Fe Institute, innovation is inherently social. It is heavily influenced by how people cluster and interact with each other. Institutions are, in fact, places that bring people together for various purposes, including, possibly, innovation. But the key to understanding innovation is how people interact through their social networks. Innovative institutions nurture the development of networks that foster creativity by helping people think and work in new ways and, particularly, by encouraging serendipity. But institutions that are rigid and hierarchical can stifle innovation. And, in the Internet age, free-standing networks can support connections and collaborations as well or better than traditional institutions. As John Seely Brown noted, when people outside of an institution can do what an institution does, then that institution is in trouble.

...the key to understanding innovation is how people interact through their social networks.

One of the basic premises of the Aspen Roundtable is that innovation is often pursued most vigorously at the edge—of enterprises or of societies—because edges do not have the same burden of expectations for reliable performance that the core must deliver. Edges are also free of the need to work within legacy systems that form the core of most organizations. There is, of course, an important role for the core in providing efficiency and consistency of operations, particularly in publicly traded

companies that must meet the expectations of investors for reliable results, and in companies in areas like financial services, transportation or health care that people rely on to deliver predictable services every day. But institutions that want to remain innovative need to recognize the value of edges, and they also need better mechanisms to move innovation from the edge to the core, where the biggest payoff can be realized. John Levis, Global Chief Innovation Officer for Deloitte, pointed out that even though there is more innovation happening in the world now than at any other time in history, we lack efficient routes to move innovation from the edge to the core of an enterprise.

...edges do not have the same burden of expectations for reliable performance that the core must deliver. -John Levis

The Role of Education

Of all social institutions, none is more important than education in driving social mobility. We count on education to equip workers with the capabilities that employers need as well as to produce an informed citizenry. But to paraphrase Ronald Reagan, is education part of the solution or part of the problem? Unfortunately, education—especially higher education—is mainly serving the most affluent segment of society while excluding a large portion of the population for whom it could provide a path out of poverty. Michael Crow noted that students from families in the top quartile economically have a greater than 80 percent chance of earning a bachelor’s degree, regardless of their academic qualifications, while students from the bottom economic quartile have a less than 10 percent likelihood of graduating from college.³ Moreover, the gap between rich and poor in college graduation rates has widened substantially, from a 34 percent difference in the 1970s to more than 70 percent today.⁴

But are educational institutions still necessary to support learning? The emergence of online education, including Massively Open Online Courses (MOOCs), generated a lot of attention as a promising new

means of expanding access to educational resources.⁵ Jerry Murdock, Co-Founder of Insight Venture Partners, noted that the next wave of technology innovation will make possible \$10 feature phones that support web access and can potentially provide virtually universal access to online education. Michael Crow agreed that we need a massive influx of technology to provide affordable learning solutions for everyone. But it is an open question as to whether the existing educational establishment will be willing to accept non-traditional methods of learning. Will elite educational institutions agree to give credit for online courses? Will employers consider credentials earned online as equivalent to those earned the old fashioned way? Crow warned that he could foresee a future in which “rich families send their kids to elite institutions while poor families send their kids to warehouses full of computers” for their education.

The next wave of technology innovation will make possible \$10 feature phones that support web access and can potentially provide virtually universal access to online education.

– Jerry Murdock

John Seely Brown noted that two key ingredients of education are communities of practice and credentialing, both of which are being disrupted by new technological alternatives. First of all, learning is not a solitary pursuit, but happens within communities of practice in which students interact with peers, work with mentors and learn by observing the methods of advanced practitioners in a field. Historically, schools have provided access to these communities, but now students can find online communities that they can join or even build their own communities—a capability that Jack Stephenson, Director of Mobile, E-Commerce and Payments for JP Morgan Chase, described as “a powerful force that can change everything.”

Until now, established educational institutions have enjoyed a virtual monopoly on the ability to offer credit for their courses and grant degrees. However, this is beginning to change. As evidence accrues for

the effectiveness of online courses, mechanisms are being developed to provide credit for online learning, often based on students taking an independently administered, proctored final exam.⁶ Even more significantly, the dominance of traditional academic credit is being challenged by a movement to evaluate students based on the specific skills they have acquired rather than the number of course credits they have accumulated.

**More than 80 percent of learning actually
takes place outside of school.**

Peter Smith, Senior Vice President for Academic Strategies and Development at Kaplan Higher Education Group, pointed out that schools are typically not very good at promoting innovation. Nor do schools have a monopoly on education—more than 80 percent of learning actually takes place outside of school. According to research conducted in the 1960s, adults spend an average of 700 hours per year in self-directed “learning projects” directed at acquiring a new skill or new knowledge.⁷ With the emergence of MOOCs and other forms of online learning, much of which is available at no cost, it is increasingly easy to for individuals to pursue learning tailored to their personal interests outside of educational institutions.

**New Realities for Business:
From Transactions to Relationships**

To what extent are new technologies changing the rules that determine where and how innovation happens? The impact of technology, and particularly of network technology, is not confined to the edges of enterprises. As competition became global and the speed of change increased, the environment in which organizations operate changed in ways that are re-shaping how business is conducted. Traditionally, firms engaged in transactional work. In fact, the fundamental rationale for the existence of companies, as first articulated by Ronald Coase in 1937, is that they lower the cost of transactions by bringing individuals together to work within a single structure.⁸ In addition, much of the

business of business involves conducting transactions with customers and with other firms in a value chain. But in the new, more competitive environment, are transactions enough to sustain a competitive advantage? Do work and commerce need to move from a transactional focus to a focus on building and maintaining deeper multi-dimensional relationships? And to what degree is developing the right relationships critical to sustained innovation?

Luke Lonergan, Chief Technology Officer at EMC Greenplum, addressed these questions by enumerating some of the ways in which “network effects,” made possible by the spread of the Internet, have changed the rules of business by radically altering the flow of information and the economics of attention. He described some of the ways that social networks are changing behavior and the new ways in which human behavior can be studied.

The Facebook Effect

As of the spring of 2012, Facebook had attracted more than 700 million users who created online identities and generated some 69 billion “network links” among themselves (by the end of 2012, the number of Facebook users was reported to exceed one billion⁹). This vast infrastructure has created opportunities for some interesting experiments. For example, in late 2011, Facebook, in partnership with Spotify, introduced the ability for users to “share” the music they were listening to with friends (and follow the music others were listening to). In less than three months, Facebook users had shared more than five billion songs.¹⁰

In early 2012, Facebook agreed to put an organ donor check box on its site. This not only made it easy for people to become donors, but allowed them to share their decision with family and friends, potentially encouraging them to follow suit. On the first day that the check box was introduced, organ donor registries received more than 6,000 new sign-ups, a 15-fold increase compared to the 400 sign-ups that these registries receive on a typical day. Although the number of daily registrations fell off after an initial flurry of activity, a Facebook spokesperson indicated that in the first four months of the program, “more than 275,000 Facebook users in several countries...used the organ donation tool and shared with their friends and family that they are organ donors.”¹¹ One of the most striking facts about this campaign

is that its costs were close to zero since it was able to leverage the huge reach of Facebook's platform.

Networked digital technologies are providing unprecedented opportunities to explore human behavior through the analysis of the enormous amount of data that they generate and provide relatively low cost access to. Geoffrey West noted that platforms like Facebook represent a uniquely valuable resource for psychologists and social scientists. Similarly, cell phones can be seen as a new kind of "detector" constantly generating potentially valuable information on their users, which now includes almost everyone. West described how he is using cell phone data to support his research on the "metabolism" of cities, and particularly how a variety of factors scale with the size of cities. His research shows that there is a strong correlation between the population of a city and factors ranging from size of the police force or the number of AIDS cases to the number of patents produced annually by residents.¹² Using data from Portugal and the UK, West has found that the same kind of scaling occurs when he looks at who is calling whom on their cell phones in relation to the size of different cities.

Another area where the Internet and social networking are bringing about big changes is in the field of sales, where old paradigms and old assumptions are being directly challenged. Luke Loneran cited a few examples that illustrate the demise of business as usual:

- ***The End of Solution Selling.*** For many decades, offering "solutions" to customers was regarded as the best way to sell complex products. Sales people who could develop good relationships with their customers and help them solve their problems were generally top performers. Solutions sales worked because many customers needed outside help in solving problems, but with the rise of the Internet and social networking that has changed. With so much information available online, customers can do their own research and have often made a buying decision before they call a supplier. A study published in a special section of the *Harvard Business Review* on "smart selling" found that the top performing salespeople today are "challengers" who are in the business of "disruption enablement."¹³ That is, they do not attempt to get to know a customer's problems then offer solutions, but bring customers new ideas and new

perspectives that can help them to anticipate challenges or significantly improve their businesses. This new style of selling is based on providing useful insights to organizations that are open to innovation: the salesperson as a catalyst for change.

- ***The End of Commission Selling.*** There is no cow more sacred than a salesperson's commission as a motivator to successful performance. However, in another *Harvard Business Review* article on "smart selling," Daniel Pink argues that financial compensation is not the most effective motivator for people engaged in sales that involve "complex, creative, conceptual endeavors."¹⁴ Pink cites recent psychological research that shows that while "contingent rewards" like commissions work well for relatively straightforward "algorithmic" tasks, they are much less effective for the type of non-routine work that psychologists describe as "heuristic." Now that the simpler, more routine aspects of selling can be automated, the key skills for successful sales people increasingly involve "curating and interpreting information instead of merely dispensing it. Identifying new problems along with solving established ones. Selling insights rather than items."
- ***The End of Slow Selling.*** In the past, major companies enjoyed economies of scale that most of their customers did not have. As a result, they could dominate their relationships and anticipate, if not control, demand for their products. No longer: now customers are steering demand for products. As sales cycles get shorter, product developers cannot work in isolation but must be much closer to their customers, which means that companies need to focus on building platforms for interaction as much as on creating products.

As these examples suggest, successful enterprises must be constantly engaged in a process of creative destruction, abandoning old business models and old assumptions about what works and embracing new ones. Start-ups do this by necessity: they need to find an unoccupied niche by filling an unmet need or by operating in a novel way. The big question is whether existing institutions can adapt to this new, more dynamic environment.

Ellen Levy, Managing Director of Silicon Valley Connect, commented that transactions are being decoupled from relationships. While transactions are not going away, the creation of platforms that support the development of relationships on a global basis are becoming more important. Thanks to platforms like Facebook or LinkedIn, it is now simple to connect with and partner with virtually anyone in the world.

...transactions are being decoupled from relationships. – Ellen Levy

Building Trust

A key to effective relationships is trust. No matter how many people we may be connected to physically, we are not likely to interact with them actively if we do not believe we can trust them. In many traditional societies, the process of building a level of trust that is a requirement for doing business together can be an elaborate and time consuming process. But in a rapidly moving networked world, we need to develop methods for building what Maryam Alavi, Vice Dean at the Goizueta Business School at Emory University, described as “swift trust.” One place that has perfected this art is the movie industry: it is possible to assemble a crew of disparate people to work on a new film who within a few hours can function as if they had worked together for life. The secret is that every individual on the team, whether in front of the camera or behind it, has a specific role based on established traditions of their craft. Trust is placed in the practice of these crafts, not of individual people.

Business-to-business (B2B) relationships have always involved a relatively high degree of trust. While there has been an increase in the need to establish trust swiftly between business partners, the bigger change has taken place in the world of business-to-consumer (B2C) relationships. With individuals having much greater access to information, the balance of power has shifted. Consumers no longer need to place their trust in the companies they do business with. But the question remains of where they will place their trust: In their peers? In brands?

Richard McAniff, former Co-President and Chief Development Officer of VMware, commented that brands need to find new ways to build trust. One way to get customers to identify with the brand is through “purpose marketing” campaigns that are designed to demonstrate the values the brand supports.¹⁵ A recent example of how one brand is doing this is the “Loads of Hope” campaign sponsored by P&G’s Tide detergent. When a natural disaster—such as Hurricane Sandy—happens somewhere in the country, Tide sends a fleet of vans equipped with washers and dryers to the site that can be used to wash clothes of local families at no cost. According to the company, the program has “cleaned over 58,000 loads of laundry for families affected by disasters.”¹⁶ Other examples include Coca-Cola’s campaign to create a safe haven for polar bears in the high Arctic¹⁷ and Benetton’s Unhate Foundation, launched in 2012 to combat discrimination and prejudice by supporting dialog and promoting diversity.¹⁸

...we tend to trust people or institutions that are willing to listen to us and are responsive to our needs. – Laura Bailyn

Laura Bailyn, Senior Director at the Markle Foundation, noted that we tend to trust people or institutions that are willing to listen to us and are responsive to our needs. Another vital contributor to trust building is transparency that allows people to see what an organization stands for and how it acts. Tide’s “Loads of Hope” campaign is a good example of a deliberate effort to demonstrate the kind of caring (connected to the nature of the brand) that inspires trust. By contrast, the reason that many people do not trust government is that it is perceived as unresponsive to people’s needs.

Can Governments Really Change?

Commercial brands and companies may be open to acting in new ways that will keep them relevant to customers. But is the government capable of acting in new ways? Carmen Medina, Specialist Leader at

Deloitte, noted that governments are creatures of law, which tends to make them inflexible. Because of their political nature, governments also act as “protectors of ideology,” which further contributes to inertia. And the sheer size of government bureaucracies makes them places that favor rules and discourage spontaneity. There is perhaps no major institution today that is more dysfunctional than the U.S. Congress, which seems to be acting in ways that actually prevent innovation. It often seems that progress happens in spite of government rather than because of it. Medina suggested that the government’s “decision making power is overrated”—that what people themselves choose to do trumps what government decides should be done.

There have been a few recent efforts on the federal level to act in new ways that can break down the image of government as a stodgy, opaque monolith that functions according to its own logic. One pioneering effort is the “Peer to Patent” project at the U.S. Patent and Trademark Office (USPTO) that has been experimenting with opening the patent examination process to public participation. The USPTO has been fairly notorious for the size of the backlog of patent applications that has built up, reaching more than 700,000 applications by 2009.¹⁹ The Peer to Patent project, initiated by Beth Noveck, Deputy Chief Technology Officer for Open Government in the Obama Administration, was designed to help reduce the backlog by bringing additional outside resources to bear on the time consuming process of reviewing applications. Members of the public with expertise related to a particular application were invited to supply relevant information and research that could be used by government examiners in making their decisions. According to the project’s website, “The process combines the democracy of open participation with the legitimacy and effectiveness of administrative decision making.”²⁰

Another notable attempt to open up government and make it more agile is the Direct Project, sponsored by the Department of Health and Human Services (HHS). The project represents an experiment in bringing distinctly edge-like processes into a very large core organization. For many years, HHS had been working to create a comprehensive National Health Information Infrastructure (NHIN) to support the secure electronic exchange of information among health care providers. Because of the ambitiousness and broad scope of the NHIN, progress in its construction has been slow. In an effort to speed up the process,

HHS decided to experiment with developing one specific component of the NHIN—a standard for the direct exchange of health information between two parties—using a radically different method of development than typically employed by the government. Rather than creating a set of detailed specifications, then seeking a contractor to meet them, HHS invited any interested organization to participate directly in the development process. A wiki was set up to coordinate the project, along with a public code repository and an open blog that documented the project’s progress. More than 60 companies and organizations agreed to participate in the project, and a working standard was developed, tested and deployed in less than one year. Aneesh Chopra, then-U.S. Chief Technology Officer, described the Direct Project as a successful attempt to “bring the principles of start-up into government policy-making.”²¹

Finally, the Consumer Financial Protection Bureau (CFPB), which began operating in July 2011, took advantage of its newness to “bake in” openness and interactivity in its design and operations. The CFPB’s website is uncomplicated and is written in simple, non-technical language (a section describing a new initiative invites the public to contribute “your two cents on student cards and bank accounts”). The site also offers numerous ways for the public to connect with the Bureau: its home page prominently lists a toll-free phone number and one main menu item on the page is “Participate,” while another provides an easy way to “Submit a complaint.”

The CFPB’s commitment to openness goes even deeper than these publicly visible actions, and includes its approach to software development. According to Chris Willey, the CFPB’s CIO, the Bureau has adopted an open source philosophy “in every aspect of what we do,” which includes being an active participant in the wider open source community. For example, the agency is using GitHub to share code it creates with other federal agencies and with the general public.²²

The federal government does seem to be making a deliberate effort to become more open and more social, and almost all major agencies are at least experimenting with using new media to connect to the public. A 2011 survey by the General Service Administration (GSA) found that 23 out of 24 federal agencies were engaged in using social media such as Facebook, Twitter and YouTube.²³ In addition to disseminating

information on these media, the agencies were also using them to seek input from the public and to respond to citizens' comments on posted contents. To encourage greater use of these tools, the GSA established a Center for Excellence in Digital Government, that "provides...support, training and solutions that help agencies deliver excellent customer service to the public via social media,"²⁴ and launched Challenge.gov, an online portal where agencies can post "challenges and prizes to promote [public participation in] open government and innovation."²⁵

**23 out of 24 federal agencies [a]re engaged
in using social media.**

In addition to using social media to support more robust public dialog, some large federal organizations are beginning to use social networks internally. In 2010, the U.S. Department of Transportation launched IdeaHub to enable its 55,000 employees to submit suggestions, vote on which are best and track their progress toward implementation.²⁶ And several federal agencies, including Homeland Security, the Environmental Protection Agency and the Department of Transportation are experimenting with the use of Yammer to improve internal communications and collaboration.²⁷

Cities as Vital Edges

Carmen Medina raised the possibility that we may be seeing "the hollowing out of national institutions" with more decision making power devolving to local and regional entities. After all, nations were originally confederations of city states. What if cities were able to offer a form a citizenship independent of a national identity? Network technology provides new capabilities that could enable such an unlikely possibility.

Cities are critical because according to Geoffrey West, "they have provided almost all of the innovation in the history of mankind." They act as "vacuum cleaners" that suck up creative people from all over a country and bring them together where they can meet and work with

other interesting people. While famous people have been born in every part of the world, including lots of small towns, they generally end up living in a few big cities—think of the people associated with Paris, London or New York. While cities generally tend to nurture innovation, some cities are more successful in doing so than others. When West compared 366 metropolitan areas in the U.S., he found that the higher and lower performing cities remained quite constant over time. For example, in 1960, San Jose was near the top of all cities in terms of the number of patents granted to its residents, and now some fifty years later, it is still outperforming other cities in this regard. West is now interested in finding out “what the DNA is that determines the status of individual cities.”

The Rise of Global Cities

The entire world is rapidly urbanizing, which is a hopeful development for accelerating innovation globally.

- In 2008, for the first time in human history, half the world’s population lived in urban areas. Fifty years ago, 30 percent of the global population lived in cities, and a century ago it was 10 percent.
- In 1800, Beijing was the only city in the world with a population of one million or greater. By 1900, 16 cities had reached this figure, and by 2000, it was 378 cities. By 2025, there will be about 600 cities of one million or more worldwide.
- Today there are 19 megacities with populations of 10 million or more. Their number is expected to increase to 27 in 2025.²⁸

Michael Crow noted that municipalities are the level of government where the most innovation is taking place. Arizona State University’s College of Public Programs is hosting an Alliance for Innovation whose purpose is to transform “local government by accelerating the development and dissemination of innovations.”²⁹ A few city governments are taking concrete steps to seek new ways of operating. For example, the

City of San Francisco recently established an Office of Civic Innovation whose mission is to “work with residents and local creative and tech-minded communities to collectively design new approaches to long-standing challenges in [the areas of] economic development, citizen engagement and government efficiency.”³⁰

Developing Human Capability

Cities have a life of their own (which is part of the secret of their resilience). But organizations have to be managed well if they are to survive, which means that they have to make maximum use of the resources they have, including their human resources. What will it take to create a more talented workforce? Are companies managing their workers in ways that bring out their best abilities or that frustrate and discourage them?

As documented in previous reports from the Institutional Innovation Roundtable and other Aspen projects, the old model of work that promised secure lifelong employment in return for loyalty and hard work has largely disappeared.³¹ Maynard Webb, Founder of the Webb Investment Network, fondly recalled the comfort of “growing up” as a long-term employee at IBM, a company that sent silver spoons to new parents and where an executive’s power could be easily determined by the number of tiles in his office ceiling. That paternalistic world is gone. Pensions are going away, and job security is eroding. As employee longevity falls and organizations get flatter, middle managers are increasingly threatened. The traditional pattern of career mentoring that helped workers to advance no longer functions reliably and workers’ satisfaction with their jobs has steadily eroded. According to an annual survey conducted by the Conference Board, less than half of workers report that they are satisfied by their jobs today.³² And, as John Hagel noted, the level of passion among workers is even lower: passion for one’s work is highest among the self-employed and lowest within large institutions.³³ What will it take to pull passionate workers back into these enterprises?

In the old paternalistic world, according to Webb, there were two types of workers: those who accepted the proposition that hard work and loyalty would lead to success, who were generally content with their roles as good company men or women; and disenchanting employees

who had an entitlement mentality and felt that they were not being sufficiently recognized or compensated for their abilities, and ascribed to someone else the power to determine whether they are a success or a failure (the “Dilbert syndrome”³⁴). This classic dichotomy is becoming less and less common (though it is not yet extinct) as we have moved to what Webb describes as an “entrepreneurial” world that offers a new choice of roles. In this world, every employee needs to view themselves as the CEO of their own destinies. They still need to work hard, but need to recognize that working hard does not guarantee any sort of job tenure. It is every worker’s responsibility to manage their own careers, pursuing the opportunities that present themselves. Some workers may be confident enough to see themselves as aspiring entrepreneurs with the right stuff to go out on their own and start their own businesses. Webb noted that none of these roles are necessarily permanent and that workers often move from one to another: entrepreneurs who are successful may end up having their start-ups acquired and going back to work for someone else. If they feel underappreciated by their new employer, they may find themselves becoming disenchanting, which could be a spur to start the cycle over again. The bottom line here is that there is not much that workers can count on other than themselves and that career paths have become much more complicated and unstable than they were in the past.

Webb’s Matrix

	Paternalistic	Entrepreneurial
Meritocracy	Company man/woman	CEO of your own destiny
Entitlement	Disenchanted employee	Aspiring entrepreneur

Although there is a strong case to be made for workers taking personal responsibility for their happiness on the job, some environments are more benign than others. One reason for worker dissatisfaction according to Carmen Medina, Specialist Leader at Deloitte, is the way they are managed—or mismanaged. All too often, creative workers with the most innovative ideas are treated as “heretics” within their organizations. Too many employers simply do not know how to

harvest the potential of these workers. Creative individuals are either driven out of the company or placed in “innovation cells” where they are effectively insulated from the rest of the organization. It would be much more effective to assign creative workers to corporate staff positions where they would be able to gain practical knowledge about how the organization really works and gain the experiences they need to be successful and productive over time.

New Ways to Work

Are there new paradigms for work that are more appropriate to the new world of relentless global competition and constant change, that are more likely to produce satisfied rather than disaffected workers? There are a few examples of firms that have attempted to replace paternalism with a meritocracy that offers no tenure and few if any traditional corporate benefits but rewards superior performance. For example, eBay, where Webb was Chief Operating Officer, had a relatively small number of full-time employees, but made it possible for more than a million people to generate income as merchants in eBay’s marketplace. LiveOps, a company that Webb was recruited to run after he retired from eBay, has more than 20,000 independent contractors who provide telephone customer support from their homes. Unlike traditional call centers where workers are expected to show up on a regular schedule, LiveOps has no physical facilities and allows its workers to determine their own hours and choose the companies they support. Software automatically routes calls to the best performers, which provides a strong incentive for doing good work. The result is a high level of motivation and morale. John Hagel added that IKEA has spawned whole network of “IKEA hackers,” independent craftspeople who take its products and customize them.

Some older, more traditional companies have experimented with new ways of working. Bain & Company established an “externship” program that pays employees, typically in their third year, to spend six months working at another company or non-profit organization, in some cases in another country. In addition to broadening employees’ experience base, the externship provides them with an opportunity to make sure that they are happy at Bain before committing to a long-term career path leading to a partnership.³⁵

Luke Loneragan noted that, at least within the “bubble” of Silicon Valley (which he acknowledged may be a unique environment that is not replicable elsewhere), workers are often motivated more by a job’s intellectual rewards than by financial compensation packages. Given the Valley’s “abundance mentality,” the most compelling reason to stay at a job is the opportunity it offers to learn and to work on interesting projects. Teresa Briggs, Bay Area Managing Partner for Deloitte, pointed out that start-ups rarely have a problem attracting people to work for them even though they generally do not pay well compared to larger companies.

A more entrepreneurial approach to employment may be generationally-related. Joaquin Alvarado, Chief Strategy Officer at the Center for Investigative Reporting, noted that the younger people he works with tend to be more capable of imagining a radically different future and are eager to take on difficult challenges, while older workers are more comfortable with incremental changes. Older workers have seen big changes, to be sure, but their response is typically to try to figure out how to cope with them rather than to capitalize on them.

But what about people who are not inherently life-long learners and may be less than eager to take on risks with their jobs? Will there be enough work for them? If we do not have an economy that is growing strongly, we are going to have a big problem finding work for everyone. Technology may be creating new ways of working and generating whole new categories of jobs, but these tend to require higher level skills that those at the bottom or even in the middle of the economy, who are not lifelong learners, may lack. This brings the discussion back to the central role of education.

New Ways to Learn

The persistence of high unemployment even while many jobs go unfilled is a clear signal of a mismatch between the job skills needed by employers and the skills that workers currently have.³⁶ Our current educational system was largely designed to serve the needs of a work world that is rapidly vanishing, and failures to prepare students for successful careers can be found at all levels of education according to the Roundtable participants. Margarita Quihuis, Director of the Stanford Peace Innovation Lab, described K-12 education as functioning more

as a “sorting” mechanism than a system designed to teach real mastery. Some courses are made intentionally hard to support the sorting process. In the public schools in Palo Alto, for example, all sixth graders take a test that will determine the math courses that they will be eligible to take through high school. Students who do not score high enough are not admitted to computer courses which teach skills that are critical in a whole range of occupations (half of all students in the district have tutors to help them do better on these critical tests.) While parents of top students like the system, it is bad for minority students and for late bloomers.

The middle school and high schools are largely “clueless” about what they should be teaching: they are locked into traditional curriculums and are not able to respond to signals from the economy about what they should be teaching. Tayloe Stansbury, Senior Vice President and Chief Technology Officer at Intuit, suggest that trying to tackle K-12 education head-on may be a lost cause. It may be more productive to experiment with small, innovative projects at the edge than trying to change an institution as large as public education.

At the college level, we are failing to do a good enough job with either liberal education or technical training. Liberal education is failing to ensure that students know how to think for themselves and to be lifelong learners, while we no longer have a system of technical schools that can equip students with the skills to work in trades or in manufacturing jobs.

...higher education is producing too many students who are ready to graduate but are not properly prepared to work. – Peter Smith

The ultimate problem, according to Peter Smith of the Kaplan Higher Education Group, is that higher education is producing too many students who are ready to graduate but are not properly prepared to work. In fact, a college degree simply is evidence that an individual has accumulated enough credits to qualify for graduation, but a degree provides little information about the specific skills and knowledge that students

have acquired. A new movement is emerging to supplement or even replace traditional course credits with “badges” that attest to specific abilities (organizations that are supporting the movement include the MacArthur Foundation and the Bill and Melinda Gates Foundation).

If companies shift from just looking at applicants’ academic credentials to seeking to understand what they actually know and what their actual skills are, this movement could really gain momentum. Some institutions are beginning to experiment with “capacity-based education” that is based on a dramatically different approach to evaluating and documenting students’ accomplishments (see sidebar).

Competency-Based Learning and Capacity Profiles

According to Paul LeBlanc, President of Southern New Hampshire University, the irony of the current credit-for-courses system is that “we are really good at telling the world how long students have sat at their desks [but] we are really quite poor at saying how much they have learned or even what they learned.”³⁷ So-called competency-based learning offers an alternative that is based on assessing and documenting students’ specific capabilities.

The Western Governors University, established in 1997, has pioneered the concept of competency-based education, while Northern Arizona University and the University of Wisconsin are developing similar programs.³⁸ LeBlanc’s school is preparing to launch the College for America which will offer an online, competency-based degree. What a graduate should know will be defined by 120 different competencies that are broken into 20 “task families.” For example, the “using business tools” family includes tasks like “can write a business memo,” “can use a spreadsheet to perform a variety of calculations” and “can use logic, reasoning and analysis to address a business problem.” When students pass tests on all the competencies within a family, “they will be deemed to have the knowledge and skills necessary to pass a 3-credit course.”³⁹

Peter Smith believes that this approach could be carried even further by using technology to automate the assessment process

and customize an educational program for every individual learner. Assume, for example, that a young person decides that he or she wants to become an accountant. Using a web-based system, that person could, first, explore the prospects for employment in the field and the kinds of careers that the field offers. The system would also explain the types of skills that are required for success as an accountant. Next, the system would provide a battery of diagnostic tests to assess the student's aptitudes and current knowledge/skill levels. It would then perform a gap analysis in order to create a customized program of study that would prescribe particular courses or, perhaps, portions of courses that would provide the missing skills. Employers could be involved with determining the skill definitions and would thereby have an interest in recruiting students with the kinds of documented capabilities that would make them productive employees.⁴⁰

The challenges extend beyond college: Maryam Alavi argued that graduate business schools need to be responsible for more than teaching specific skills, even though that is what many employers focus on in hiring decisions. They need to help students to develop holistically, in terms of higher-level skills like critical thinking, sense making and emotional intelligence. In an increasingly volatile world, schools need to prepare students not just for their first jobs, but for their second and third jobs as well. They need to produce life-long learners.

In an increasingly volatile world, schools need to prepare students not just for their first jobs, but for their second and third jobs as well.

– Maryam Alavi

Should work experience be built in to the education process? Unfortunately, colleges that offer such experiences find themselves “trapped in the second tier” of educational institutions. Michael Crow confirmed that work-study programs are generally viewed with suspi-

cion by elite institutions. Arizona State University created a School of Engineering that focuses specifically on teaching practical skills, and its graduates are able to command the highest starting salaries among engineering graduates. Nevertheless, the school gets “punished in academic ratings” because it produces “a different type of graduate.”

Learning on the Job?

If our schools are not producing the right kind of workers, can companies take on the responsibility for providing workers with the skills and the motivation they need to be successful? Jack Stephenson acknowledged that many of his bank’s 250,000 employees probably do not have the optimal skills for the challenges that the organization is facing. Providing them with the training—or the retraining—that they need is a formidable challenge that has not been fully addressed.

In fact, large enterprises have all of the elements necessary to enable employees to become continuous learners, but they need to be organized to promote learning. The answer will almost certainly involve some unconventional solutions rather than formal training approaches. One strategy proposed by John Seely Brown would be for young people who are comfortable operating on the edge to be recruited to serve as reverse mentors for middle managers, and even senior managers, in large enterprises. At Deloitte, such a reverse mentoring program was instrumental in successfully introducing an internal social network in the organization. The initiative began when a senior executive posted a request for help on the company’s new Yammer network in understanding social media. Younger staff members responded by offering to share their knowledge, which inspired other senior staff to acknowledge that they also needed help. An account of this activity concluded that reverse mentoring has multiple benefits that include “[harnessing] the (often untapped) talent of rising stars, [increasing] the organization’s ‘superconnectedness’ by forming unlikely relationships and [exposing] employees to areas of the company outside their normal daily routine.”⁴¹

**...the most effective learning does not happen
alone but in groups.**

Research has established that the most effective learning does not happen alone but in groups (studies conducted at Harvard found that the single best indicator of academic success was a student's ability to form a study group⁴²). Teamwork in business, if mobilized properly, can be both a means to improved performance as well as a highly effective mechanism to support learning. Pivotal Labs has been a pioneer in the agile software movement for more than two decades. According to Luke Loneragan, the company's key innovation has been the practice of "pair programming" that involves developing software in cross-functional teams that often consist of one more experienced and one more junior participant. According to Pivotal, when "developers work together, they produce more code of higher quality. With two people continually refining ideas, the development flow is never broken; bad ideas get weeded out early, and progress is made consistently and rapidly. As the pairings rotate, knowledge is spread rapidly through the team, avoiding silos of knowledge and allowing for team growth, if needed."⁴³

What might a genius bar look like in a public school? – *Joaquin Alvarado*

There may be radically different models for learning that we have not yet invented. Joaquin Alvarado asked what would happen if every enterprise had its own "genius bar?" What might a genius bar look like in a public school?

Geoffrey West concluded the discussion by considering whether corporations are inevitably doomed to perish. His research has shown that while cities are largely "immortal," organizations like corporations have a finite lifetime. Many cities have survived for centuries, even millennia (e.g., Alexandria, Jerusalem, Beirut, Damascus, Athens, Rome, Lisbon, Paris, Beijing, Xi'an, Varanasi), but few corporations have survived for even a hundred years. Cities like Hiroshima and Dresden have demonstrated the ability to recover from being virtually obliterated. And cities seem to have the ability to continue growing, almost without limit: as noted earlier, there are now nearly 400 cities in the world with populations of at least 10 million, and that number is projected to increase to more than 600 cities by 2025.

The key to the longevity of cities, West believes, is their diversity or “dimensionality.” Cities tolerate misfits and “crazy people” which contributes to innovation and ultimately makes them more resilient. But companies have a tendency to become “uni-dimensional” over time, which makes them less adaptable when their environment changes. Start-ups, because they are new and small, have little structure and lots of innovation. As they grow, they need to develop rules and build a bureaucracy to make sure that work gets done and products get delivered on time. But the rigidity that comes with bureaucracy stifles creativity and alienates the most passionate workers. It may be that a strong administrative structure is ultimately antithetical to innovation: big companies need it, but it is what kills them in the end.

Connecting the Edges

Innovate or die seems to be the choice that faces every large enterprise. But if innovation happens at the edge, in small, peripheral groups where less is at stake than at the core or an enterprise, how can large organizations innovate fast enough to survive? What can they do to connect their edges to the core in ways that will allow vital innovations to be adopted on a scale that matters?

The key to success is the ability to scale learning.

But why is continuous change mandatory today? Why is it not possible to survive by becoming the best at one thing and continuing to do it? The answer is that the underlying digital infrastructure in which businesses operate is not only changing continuously, but is changing at an increasingly rapid rate. Deloitte’s Shift Index has documented the impact of these changes—a steady, steep decline in the performance of large corporations that were designed to take advantage of the last great wave of innovation that rewarded the ability to scale manufacturing and distribution capabilities. In this environment, which was built on manufacturing and transportation, success was based on the ability to efficiently organize resources to meet forecasted demands. But in a rapidly changing environment driven by digital technology, the key to success is the ability to scale learning.

Are large corporations fated to perish like the dinosaurs that vanished within a very short period of time—perhaps a matter of years or even months—after the cataclysm that changed their environment? One obstacle is what John Hagel described as “the change paradox.” Precisely when the need to change becomes more urgent, organizations find themselves with fewer resources and less ability to change as a result of the erosion that has occurred over a period of years.

Based on past history, the prospects for institutions to accomplish major change are “abysmal,” with a success record of no more than 20 or 30 percent. Among the barriers to success are:

- A “big bang” mentality that assumes that worthwhile projects must “go for broke.” When the payoff from a fundamental shift in operating assumptions appears distant and highly uncertain, even while requiring a large upfront investment, undertaking such an effort can be difficult to justify.
- Focusing change efforts on the core of an organization. Precisely because this is where there is the most at stake, where an organization’s resources are most heavily concentrated, it is the place where change will be most strongly resisted. Since the core is where power resides, it is the place where people who have been successful in the existing system tend to migrate. The core also bears the heaviest responsibility for consistently producing the results that investors expect, making it a dangerous place to conduct experiments.
- A deeply entrenched belief that change is a rational process that assumes that if you place the right information in front of the right people, they will make logical decisions about what needs to be done. In fact, change is a political process that requires enemies to be neutralized and champions to be empowered. The change process is all about fear and hope, which are deep, powerful emotions.

**The change process is all about fear and hope,
which are deep, powerful emotions.**

For anyone hoping to accomplish a major institutional transformation, a better strategy is to concentrate on the edge rather than the core. There are several reasons why working on the edge is more likely to succeed: first, edges tend to be ignored by the core. It is often possible to pursue major innovations for a long time without triggering the corporate immune system that will attempt to kill it off, especially if a new venture can demonstrate the ability to grow the overall pie rather than cannibalizing existing lines of business in the core. Also, edges of organizations tend to attract passionate people with the kind of questioning disposition that makes them good candidates for pursuing new and potentially risky ventures.

Finding the Right Edge, Using the Right Tools

What are the characteristics of edge innovations that make them most likely to succeed? One good starting point is to create a platform that has the potential to scale rapidly. It is also helpful if such a platform can be created without requiring a large initial investment. One way to do this is by leveraging existing resources by attracting them from the core to the edge rather than trying to directly co-opt them.

There are few if any examples of complete transformation that began at the edge and eventually took over the core and remade it. But a new generation of technology is emerging—cloud, social, mobile, analytics—that can be used to accelerate change by providing powerful tools to rapidly build, test and launch new ventures without large upfront investments. John Hagel cited two notable initiatives that provide encouraging examples of how these technologies can be mobilized to create new edge ventures that can grow into large enterprises.

In 2006, Amazon launched Amazon Web Services (AWS) to offer customers access to the sophisticated digital infrastructure that it developed for its core e-commerce business. AWS is an edge undertaking in two senses: first, it represents an entirely new kind of venture for Amazon that started small (by leveraging computing capabilities that Amazon built for itself), but was able to grow into a line of business that generated an estimated \$1.5 billion in revenue by 2012.⁴⁴ Second, AWS succeeded by appealing to other edge businesses: according to a recent analysis, the value it offered was not about “moving existing compute and storage infrastructure and applications into AWS. Rather

it was more about enabling organizations to do new tasks that weren't previously possible or practical.”⁴⁵

Another innovation that began on the edge but grew to have a major impact on the core is SAP's Community Network (SCN). The new venture got its start when SAP's Co-Founder and Chief Executive Officer Hasso Plattner was seeking a way to break out of the company's insular, not-invented-here mentality that had grown up as the result of many years of success as the world leader in enterprise software. In 2004, SAP launched NetWeaver, a web-based service that represented a dramatically different way of delivering SAP's products to its customers. Because of this difference, Plattner saw NetWeaver as an ideal opportunity to experiment with new ways of doing business. SCN was one way to do this. Rather than having SAP take responsibility for all product support, the network allowed customers to connect with each other to share problems and solutions for using SAP software. Like AWS, SCN started small but rapidly grew larger. As it evolved, it pulled in more participants from the core of the enterprise and became a platform for deep relationships that were not anticipated initially (e.g., coders connecting via the network to collaborate on projects that add value to SAP's products). Today SCN encompasses two million users globally who can get a question answered on the network in an average of 17 minutes. What began as a relatively small edge experiment now represents a major resource and a key competitive advantage for SAP in its own right.

Roundtable participants cited several other “edge” projects that are attempting to spark big changes.

Jack Stephenson, Director of Mobile, E-Commerce and Payments at JP Morgan Chase, described his current role as being “very much on the edge” as he tries to introduce new mobile banking and social media services in a large, well established bank. On the one hand, these services have proved very popular with customers and produced real benefits. For example, the ability of customers to get answers to their questions and solve problems online has resulted in a substantial drop in calls to the bank's customer support center and branches. On the other hand, these services are sometimes “antithetical” to the bank's desire to protect customer information by sealing up data and restricting access as much as possible. The result of this clash of values between what customers want and what bankers are comfortable giving them is “hand to hand ground warfare” to bring about change.

Luke Lonergan, who co-founded Greenplum (a data analytics company) in 2003, has watched as development cycles for new or improved products lengthened as the company grew. In 2012, Greenplum acquired Pivotal Labs, a leader in agile software development, to help improve and speed up their own processes, but he has not yet seen as much impact as hoped for. While this acquisition was an attempt to leverage an innovative approach to development by establishing a new edge that operates differently than the company's core, he is still struggling to understand how best to connect the edge to the core of the enterprise to provide a catalyst for change.

Reinventing Higher Education at ASU

One of the most radical and mature experiments in institutional transformation is taking place at Arizona State University. When Michael Crow became the President of ASU in 2002, he announced his intention to change the school in fundamental ways in order to create what he called the New American University, a process that would be guided by eight key “design aspirations.”⁴⁶ The first of these, “Leverage Our Place,” meant that the school should respond to the particular needs of the community in which it is based—in this case, the largest metropolitan area (Phoenix) in the state of Arizona.

ASU's Eight Design Aspirations for a New American University

1. Leverage Our Place
2. Transform Society
3. Value Entrepreneurship
4. Conduct Use-Inspired Research
5. Enable Student Success
6. Fuse Intellectual Disciplines
7. Be Socially Embedded
8. Engage Globally

Crow noted that virtually all higher education institutions in the U.S. are engaged in a competition to score as highly as possible in rankings of the “best American colleges and universities.”⁴⁷ The Ivy League schools are perennial leaders in these rankings, with Harvard, Yale and Princeton ensconced at the very top of the list, and every other institution in the country trying to emulate them in order to get as high a score as possible. Crow noted that these rankings are heavily influenced by a school’s “selectivity”—that is, the number of people who are rejected each year from the total pool of applicants. As a public institution that is responsible for providing education to a large segment of the state’s population, it did not make sense to Crow to follow this model or to try to compete with the Ivies or even with the most prestigious public institutions like Berkeley and Michigan that also pride themselves on their selectivity. Crow set a distinctly different goal for ASU: “combining academic excellence with broad access, promoting diversity, and meeting the special needs of underserved populations.”⁴⁸ This involved substantially increasing the number of students it serves by offering admission to all academically qualified students in the state (and being “punished” in the ratings for doing so by becoming less selective). In particular, the university reached out to actively recruit minority and economically disadvantaged students who have historically been excluded from higher education. From 2003 to 2008, the enrollment of low-income freshmen at ASU increased by 873 percent, and the school is now the largest research university in the United States.

ASU also made far-reaching changes in the way the school is organized. Under Crow’s leadership, more than 60 academic units were abolished, a number of new transdisciplinary programs were launched to address real-world problems (e.g., the Global Institute of Sustainability, the Biodesign Institute), and existing schools were reoriented to emphasize the pursuit of new approaches (e.g., ASU’s College of Nursing is now the College of Nursing and Health Innovation).

How has Crow been able to bring about such far-reaching changes? In a sense, Arizona State University could be considered an “edge institution.” For one thing, it is relatively new. Originally founded as the Tempe Normal School for the Arizona Territory, it became Arizona State College in 1945 and did not take on its present name until 1985. And when Crow arrived, ASU was better known for its athletic teams and its active social life than for its academic excellence.

Even so, driving and sustaining change of this magnitude takes a deep commitment: a good portion of Crow's time and energy continue to be devoted to "selling the vision" of a new model of higher education for Arizona. He speaks and writes extensively about what he is trying to accomplish⁴⁹ and makes a point of meeting personally with every new faculty member to ensure that they understand what he is trying to create at ASU. The eight design principles that are guiding the university's transformation are prominently posted in buildings across the campus.

Crow also acknowledged that deviating from the traditional model of higher education has generated jealousy, contempt and derision from critics and, at times, nearly provoked "actual combat." For example, the University of Arizona, traditionally the leading research university in the state, responded to the challenge to their model with "fixed bayonets." When skeptics suggest that the changes ASU has been making are jeopardizing the school's academic integrity, Crow points to a list of 150 indicators that measure the university's progress, including the high graduation rate of students and a substantial increase in research funding the school has attracted.⁵⁰ But Crow recognizes that not all schools can emulate what ASU has done: many leaders of other institutions who have visited ASU, after expressing admiration for what Crow has accomplished, have told him that although they "wish they could do it too, they would get killed if they tried."

Staying on the Edge

Even in the most favorable circumstances, bringing about deep institutional change is difficult. Maynard Webb noted that virtually all successful executives have built their careers on seeking to be near the core, where budgets are largest and authority is concentrated. Start-ups may be "cool," but they operate on the edge out of necessity, and typically define success as either moving closer to the core (of an existing enterprise) or growing to the point that they can build their own core. It may well be that every successful organization must eventually take on core characteristics in order to consolidate power and reduce uncertainty, both internally and externally. But if they want to survive in a volatile world, organizations need to keep an edge mentality, remaining open to innovation even if it disrupts existing structures and business

models. We need organizations that are ambidextrous, that have the ability to construct platforms that connect the core to the edge in ways that benefit both. What is at stake is nothing less than the economic health of the country.

**...to survive in a volatile world, organizations need
to keep an edge mentality....**

Endnotes

1. The Shift Index. Available online: www.deloitte.com/view/en_US/us/About/Catalyst-for-Innovation/Center-for-the-Edge/the-shift-index/index.htm.
2. For an exploration of new approaches to regulation, which includes a discussion of the key ideas of evolutionary economics and adaptive regulation, see Richard Adler's Report on the 2012 Aspen Institute Conference on Communications Policy, *Rethinking Communications Regulation*, (Washington, D.C.: Aspen Institute, 2013). Available online: <http://www.aspeninstitute.org/sites/default/files/content/upload/Rethinking-Communications-Regulation.pdf>.
3. Tom Mortenson, "Bachelor's Degree Attainment by Age 24 by Family Income Quartiles, 1970–2010," (Oskaloosa, IA: Pell Institute for the Study of Opportunity in Higher Education, 2010).
4. Jason DeParle, "For Poor, Leap to College Often Ends in a Hard Fall," *The New York Times*, December 22, 2012. Available online: www.nytimes.com/2012/12/23/education/poor-students-struggle-as-class-plays-a-greater-role-in-success.html. While BA attainment for those in the bottom income quartile grew from just 6.2 percent in 1970 to 8.3 percent today, among those in the top income quartile, the college graduation rate more than doubled, from 40.2 percent to 82.4 percent over the same period.
5. For an insightful summary of the implications of online education, see Clay Shirky, "Napster, Udacity and the Academy," November 12, 2012. Available online: www.shirky.com/weblog/2012/11/napster-udacity-and-the-academy.
6. Tamar Lewin, "College Credit Eyed for Online Courses," *The New York Times*, November 12, 2012. Available online: www.nytimes.com/2012/11/14/education/moocs-to-be-evaluated-for-possible-college-credit.html.
7. The classic study of this topic is Allen Tough, *The Adult's Learning Projects*, Pfeiffer & Company, 1979. Available online: <http://ietl.org/tough/books/alp.htm>.
8. R.H. Coase, The Theory of the Firm, *Economica*, Volume 4, Issue 16, 1937: 386-405. Available online: <http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0335.1937.tb00002.x/pdf>.

9. Aaron Smith, Laurie Segall and Stacy Cowley, "Facebook reaches one billion users," CNN Money, October 4, 2012. Available online: <http://money.cnn.com/2012/10/04/technology/facebook-billion-users/index.html>.
10. Kate Solomon, "5 billion songs shared on Facebook since September," TechRadar, January 30, 2012. Available online: www.techradar.com/us/news/internet/5-billion-songs-shared-on-facebook-since-september-1058743.
11. David Schultz, *The 'Facebook Effect' On Organ Donation*, NPR, September 20, 2012. Available online: www.npr.org/blogs/health/2012/09/18/161358304/the-facebook-effect-on-organ-donation.
12. For a summary of West's research, see last year's Innovations Roundtable report, Richard Adler, *Institutional Innovation: Oxymoron or Imperative?* (Washington, D.C.: Aspen Institute, 2012). Available online: www.aspeninstitute.org/publications/institutional-innovation-oxymoron-or-imperative. For the original research, see Luís M. A. Bettencourt, José Lobo, Dirk Helbing, Christian Kühnert, and Geoffrey B. West, "Growth, innovation, scaling, and the pace of life in cities," *Proc Natl Acad Sci USA*, 2007 April 24; 104(17): 7301–7306. Available online: www.ncbi.nlm.nih.gov/pmc/articles/PMC1852329.
13. Brent Adamson, Matthew Dixon and Nicholas Toman, "The End of Solution Sales," *Harvard Business Review*, July/August 2012. Available online: <http://hbr.org/2012/07/the-end-of-solution-sales/ar/1>.
14. Daniel Pink, "A Radical Prescription for Sales," *Harvard Business Review*, July/August 2012. Available online: <http://hbr.org/2012/07/a-radical-prescription-for-sales/ar/1>.
15. Stuart Elliott, "Selling Products by Selling Shared Values," *The New York Times*, February 15, 2013.
16. See www.tide.com/en-US/loads-of-hope/about.jsp.
17. "Coke Raises More Than \$2 Million to Save Polar Bears," Coca Cola Company. Available online: www.coca-colacompany.com/our-company/coke-raises-over-2-million-to-save-polar-bears. Customers were invited to text a code on selected packages of Coke products to trigger a \$1 contribution to the World Wildlife Fund polar bear campaign.
18. Unhate Foundation, see <http://unhate.benetton.com/foundation>. Benetton's Foundation is sponsoring a media campaign featuring nine multicultural celebrity spokespeople as well as providing funding for local projects to promote tolerance.
19. Amy Schatz, "New Chief of Patent Office Takes Aim at a Massive Backlog," *The Wall Street Journal*, October 10, 2009. Available online: http://online.wsj.com/article/SB125513250890977347.html?mod=WSJ_hpp_sections_business.
20. See <http://peertopatent.org/>.
21. Richard Adler, "The Direct Project: Accelerating Government Innovation in Health IT," iHealthBeat, March 22, 2011. Available online: www.ihealthbeat.org/perspectives/2011/the-direct-project-accelerating-government-innovation-in-health-it.aspx. The Direct Project was first described in the report of the 2010 Aspen Roundtable on Institutional Innovation, *Solving the Dilbert Paradox* (Washington, D.C.: Aspen Institute, 2011). Available online: www.aspeninstitute.org/publications/solving-dilbert-paradox.

22. Alex Howard, "Open source is interoperable with smarter government at the CFPB," O'Reilly Radar, April 10, 2012. Available online: <http://radar.oreilly.com/2012/04/open-source-government-cfpb.html>. Also see <https://github.com/cfpb>.
23. *Social Media: Federal Agencies Need Policies and Procedures for Managing and Protecting Information They Access and Disseminate*, U.S. Government Accountability Office, Report to Congressional Requesters, GAO 11-605, June 2011. Available online: www.gao.gov/new.items/d11605.pdf.
24. See www.gsa.gov/portal/content/142785.
25. Challenges on the site range from a Corporate Mentoring Challenge from the Corporation for National and Community Service designed to promote corporate involvement in student mentoring programs, to the Longeran Challenge from NASA that seeks help in "positioning the solar arrays on the International Space Station to generate as much power possible during the most challenging orbital position." See www.challenge.gov.
26. Brittany Ballenstedt, "DOT Launches Online IdeaHub," NextGov, August 3, 2012. Available online: www.nextgov.com/cio-briefing/wired-workplace/2010/08/dot-launches-online-idea-hub/53643.
27. See www.govloop.com/forum/topics/looking-for-yammer-advice.
28. Ten urbanization statistics, *The Anthropocene Journal*, March 29, 2012. Available online: <http://anthropocenejournal.com/2012/03/29/ten-urbanization-statistics>.
29. Alliance for Innovation, see <http://urbaninnovation.asu.edu/alliance-for-innovation>.
30. See <http://innovatesf.com>.
31. See, for example, Richard Adler, *Jobs, Technology, and Employability: Redefining the Social Contract*, (Washington, D.C.: The Aspen Institute, 1998). Available online: www.aspeninstitute.org/publications/jobs-technology-and-employability-redefining-social-contract.
32. Julianne Pepitone, "U.S. job satisfaction hits 22-year low," CNN Money, January 5, 2010. Available online: http://money.cnn.com/2010/01/05/news/economy/job_satisfaction_report. The Conference Board's annual survey found that 45% of workers reported being satisfied with their jobs, and all-time low. The level of worker satisfaction rose slightly in the past few years as the recession ended, but remains well below the 61.1% level recorded in 1987, the first year the survey was conducted.
33. "Worker Passion Drives Inter-Firm Knowledge Flows, Which Can Significantly Improve Firm Performance," Deloitte. Available online: www.deloitte.com/view/en_US/us/Industries/technology/center-for-edge-tech/cf9186a8b1363310VgnVCM2000001b56f00aRCRD.htm.
34. For further analysis of this phenomenon, see the report of the 2011 Institutional Innovation Roundtable, Richard Adler, *Solving the Dilbert Paradox*, (Washington, D.C.: Aspen Institute, 2012). Available online: www.aspeninstitute.org/publications/solving-dilbert-paradox.
35. See www.joinbain.com/bain-career/flexible-work-options/externships.asp.
36. Nick Schulz, "Unemployment Paradox: Why So Many Jobs Go Unfilled," *Wall Street Journal*, October 29, 2012. Available online: <http://classroom.wsj.com/cre/2012/10/29/unemployment-paradox-why-so-many-jobs-go-unfilled>.

37. Paul J. LeBlanc, "Accreditation in a Rapidly Changing World," *Inside Higher Ed*, January 31, 2012. Available online: www.insidehighered.com/views/2013/01/31/competency-based-education-and-regional-accreditation#ixzz2K3Thq4cL.
38. Steve Kolowich, "Competency Loves Company," *Inside Higher Ed*, July 11, 2012. Available online: www.insidehighered.com/news/2012/07/11/northern-arizona-u-partners-pearson-competency-based-degree-programs#ixzz2K3bP2D6I.
39. Paul Fain, "A Disruption Grows Up?" *Inside Higher Ed*, October 1, 2012. Available online: www.insidehighered.com/news/2012/10/01/competency-based-education-may-get-boost.
40. Efforts to measure competency of students are not limited to the U.S. In *The New York Times*, Tom Friedman described an Indian start up called Mettl which "has developed an online assessment platform to help hiring managers to measure and track skills of pre hires and employees to determine if they can really do a particular job. Mettl can measure the hard skills which are directly applicable to a job rather than just the knowledge which you have acquired by rote." Tom Friedman, "When E.T. and I.T. Meet ID," *The New York Times*, February 12, 2013. Available online: www.nytimes.com/2013/02/13/opinion/friedman-when-et-and-it-meet-id.html.
41. Bryony, "Digital Natives, Dinosaurs and Immigrants," Yammer: The Blog, April 28, 2011. Available online: <http://blog.yammer.com/blog/2011/04/digital-natives-dinosaurs-and-immigrants.html>.
42. Richard Light, *Making the Most of College* (Harvard University Press, 2004).
43. About Pivotal Labs, see <http://pivotallabs.com/wordpress/wp-content/uploads/2012/09/About-Pivotal-Labs.pdf>.
44. "Cloud Computing 2013: The Amazon Gorilla Invades the Enterprise," Wikibon, January 10, 2013. Available online: http://wikibon.org/wiki/v/Cloud_Computing_2013%3A_The_Amazon_Gorilla_Invades_the_Enterprise.
45. Ibid.
46. See <http://newamericanuniversity.asu.edu/#1>.
47. The best known of these rankings is maintained by U.S. News, which ranks some 1,600 colleges and universities annually, see <http://colleges.usnews.rankingsandreviews.com/best-colleges>.
48. Michael Crow, "Differentiating America's Colleges and Universities: Institutional Innovation in Arizona," *Change*, September/October 2010. Available online: <http://president.asu.edu/sites/default/files/Differentiating%20Univ%20Institutional%20Innovation%20090110%20Change%20Mag.pdf>.
49. See, for example, The New American University Reader. Available online: <http://president.asu.edu/sites/default/files/New%20American%20University%20Reader%20072611%20%282%29.pdf>.
50. ASU Attains Research Metrics, see <http://president.asu.edu/node/1288>.

APPENDIX

Aspen Institute Roundtable on Institutional Innovation

Connecting the Edges

Aspen, Colorado · July 29-31, 2012

Roundtable Participants

Richard Adler

Research Associate
Institute of the Future

Maryam Alavi

Vice Dean and Professor
Goizueta Business School
Emory University

Joaquin Alvarado

Chief Strategy Officer
Center for Investigative
Reporting

Laura Bailyn

Senior Director
Markle Foundation

Teresa Briggs

Bay Area Managing Partner
Deloitte, LLP

John Seely Brown

Independent Co-Chairman
Deloitte Center for the Edge

Michael Crow

President
Arizona State University

Charlie Firestone

Executive Director
Communications and Society
Program
The Aspen Institute

Sunil Garg

President
Exelon Power

John Hagel

Co-Chairman
Deloitte Center for the Edge

John Levis

Global Chief Innovation Officer
Deloitte

Ellen Levy

Managing Director
Silicon Valley Connect

Luke Lonergan

Chief Technology Officer
Data Computing Division
EMC Greenplum

Note: Titles and affiliations are as of the date of the conference.

Richard McAniff

Former Co-President and Chief
Development Officer

VMware, Inc.

and

Former Corporate Vice-President
Microsoft

Carmen Medina

Specialist Leader

Deloitte

Jerry Murdock

Co-Founder

Insight Venture Partners

and

Trustee

The Aspen Institute

Peter Smith

Senior Vice President for
Academic Strategies and
Development

Kaplan Higher Education Group

Tayloe Stansbury

Senior Vice President

and Chief Technology Officer

Intuit

Jack Stephenson

Director of Mobile, E-Commerce
and Payments

JPMorgan Chase

Margarita Quihuis

Director

Stanford Peace Innovation Lab

Maynard Webb

Founder

Webb Investment Network

Geoffrey West

Distinguished Professor and

Former President

Santa Fe Institute

*Staff:***Kiahna Williams**

Senior Project Manager

Communications and Society

Program

The Aspen Institute

About the Author

Richard Adler is a Distinguished Fellow at the Institute for the Future, Palo Alto. He is also president of People & Technology, a consulting firm located in Silicon Valley. His research has focused on the impact of new technologies on fields including business, education, healthcare and aging.

Richard is the author of reports from each of the previous Innovation Roundtables: *Institutional Innovation: Oxymoron or Imperative?* (2012); *Solving the Dilbert Paradox* (2011); *Leveraging the Talent-Driven Firm* (2010); and *Talent Reframed: Moving to the Talent Driven Firm* (2009). Other reports he has written for the Aspen Institute include: *Rethinking Communications Policy* (2012); *Updating Rules of the Digital Road: Privacy, Security, Intellectual Property* (2011); *News Cities: The Next Generation of Healthy Informed Communities* (2011); *Media and Democracy* (2009); and *Minds on Fire: Enhancing India's Knowledge Workforce* (2007). He is also the author of *After Broadband: Imagining Hyperconnected Worlds* (Wharton, 2012) and *Healthcare Unplugged: The Evolving Role of Wireless Technology* (California HealthCare Foundation, 2007).

Richard is Fellow of the World Demographic Association and serves on a number of local and national boards. He holds a BA from Harvard, an MA from the University of California at Berkeley, and an MBA from the McLaren School of Business at the University of San Francisco.

The Aspen Institute Communications and Society Program

www.aspeninstitute.org/c&s

The Communications and Society Program is an active venue for framing policies and developing recommendations in the information and communications fields. We provide a multi-disciplinary space where veteran and emerging decision-makers can develop new approaches and suggestions for communications policy. The Program enables global leaders and experts to explore new concepts, exchange insights, develop meaningful networks, and find personal growth, all for the betterment of society.

The Program's projects range across many areas of information, communications and media policy. Our activities focus on issues of open and innovative governance, public diplomacy, institutional innovation, broadband and spectrum management, as well as the future of content, issues of race and diversity, and the free flow of digital goods, services and ideas across borders.

Most conferences employ the signature Aspen Institute seminar format: approximately 25 leaders from diverse disciplines and perspectives engaged in roundtable dialogue, moderated with the goal of driving the agenda to specific conclusions and recommendations. The program distributes our conference reports and other materials to key policymakers, opinion leaders and the public in the United States and around the world. We also use the internet and social media to inform and ignite broader conversations that foster greater participation in the democratic process.

The Program's Executive Director is Charles M. Firestone. He has served in this capacity since 1989 and also as Executive Vice President of the Aspen Institute. Prior to joining the Aspen Institute, Mr. Firestone was a communications attorney and law professor who has argued cases before the United States Supreme Court. He is a former director of the UCLA Communications Law Program, first president of the Los Angeles Board of Telecommunications Commissioners, and an appellate attorney for the U.S. Federal Communications Commission.

Previous Publications from the Aspen Institute Roundtable on Institutional Innovation

(formerly the Aspen Institute Roundtable on Talent Development)

Institutional Innovation: Oxymoron or Imperative? (2012)

Institutional Innovation: Oxymoron or Imperative is the report of the 2011 Roundtable on Institutional Innovation. It explores the consequences of the growing disconnect between the fundamental design of most firms and the capabilities of the business infrastructure in which they operate. The report, written by Richard Adler, captures the insights of the participants with a focus on identifying conditions that are favorable to institutional innovation and maximizing the effectiveness of institutional leadership. 63 pages, ISBN Paper: 0-89843-572-2, \$12.00 per copy

Solving the Dilbert Paradox (2011)

Solving the Dilbert Paradox is the volume resulting from the 2010 Aspen Institute Roundtable on Talent Development. This “Dilbert Paradox” finds expression in wasted opportunities for organizational learning, collaboration, and access to knowledge and ideas outside the corporate hierarchy. The report, written by Richard Adler, captures the insights of the participants during the conference and details how some large organizations, as well as start-ups and small companies, are experimenting by giving employees new opportunities to maximize innovation. 48 pages, ISBN Paper: 0-89843-545-5, \$12.00 per copy

Leveraging the Talent-Driven Organization (2010)

Leveraging the Talent-Driven Organization details how a number of firms are using social networking tools to open up communication, collaboration and learning across boundaries, and leveraging these tools to develop new products and real-time solutions for customers.

The report, written by Richard Adler, is the result of the Inaugural Roundtable on Talent Development. 48 pages, ISBN Paper: 0-89843-519-6, \$12.00 per copy

Talent Reframed: Moving to the Talent-Driven Firm (2009)

Talent Reframed: Moving to the Talent-Driven Firm offers new rules for organizations seeking to attain and develop a talented workforce amid a rapidly changing and increasingly globalized business environment. The report, which sets the premise for a new series of Aspen Institute Roundtables on the Talent-Driven Firm, explores how organizations can build talent by relying less on traditional command-and-control structure and more on horizontal collaboration and shared learning. The report, written by Richard Adler, also features a white paper by John Hagel and John Seely Brown. 46 pages, ISBN Paper: 0-89843-498-X, \$12.00 per copy

Reports can be ordered online at www.aspeninstitute.org or by sending an email request to publications@aspeninstitute.org.

A Digital Gift to the Nation

Lawrence K. Grossman - Newton N. Minow

The Proposal

The federal government should establish an independent educational trust fund to meet the independent educational trust fund the urgent need to transform learning in the 21st Century

The Digital Opportunity Investment Trust (DO IT).

This trust will be financed by revenue generated by revenue generated by auctions of publicly owned spectrum.

The purpose uses:

Uses for technology to enhance education, training, for technology for technology lifelong learning, and support new educational models

Background

Once each century our country has made a bold investment in transforming education.

- In the 18th Century the Northwest Ordinance set set aside land for the creation of public schools.
 - For the first time, education was made available to the average child.
- In the 19th Century Abraham Lincoln signed and enacted into law Justin Morrill's proposal to set aside land for every state to sell in order to create the Land Grant Colleges.
- In the 20th Century the GI Bill offered opportunities for higher learning to millions of Americans. They went to college and helped propel the US and its economy to worldwide leadership.
- The 21st Century
 - Our emerging knowledge-based economy makes the makes the people's access to knowledge and learning across a lifetime in the sciences and humanities a national imperative.

Public education must be transformed to meet the fast changing technological challenges of the new century.

Our libraries, museums, universities, schools and cultural organizations need to be brought into the digital age so they can educate citizens to become part of the informed citizenry our democracy relies upon.

Our workers need retraining to keep pace with the changing workplace.

The Opportunity

To do for education in its broadest sense what NSF does for science, NIH does for health and NSF does for science, NIH does and DARPA does for defense.

Through simulations, digitization, and virtual reality, today's advanced digital technologies can open the door to a knowledge-based economy for all Americans, as well as for people throughout the world.

The Internet and Education

We spend over \$2 billion a year connecting classrooms to the Internet, but almost nothing on educational content suitable for the Internet.

DOIT will change that.

We can give online students access to off- site world-class facilities such as electron microscopes, sophisticated telescopes, undersea laboratories, museum collections, and university, research and government libraries.

DO IT WOULD:

- Train teachers in the best uses of new info technologies
- Digitize America's collected memory stored in universities, libraries and museums
 - Develop learning models and simulations to explore a virtual solar
 - a three dimensional model of the human body
 - a realistic trip to Mars
 - a recreation of Mark Twain's America
 - Create voice sensitive computer programs to teach language to new immigrants
 - Create inviting training materials for workforce development skills improvement, adult and civic engagement
 - Measure the learning progress of individual students
 - Disseminate the best of our arts and culture locally, regionally, nationally, globally.

What Others are Saying

United States Commission on National Security

—The inadequacies of our systems of research and education pose a greater threat to U.S. national security over the next quarter century than any conventional war we might imagine.“

George Lucas, Creator, Star Wars

--“DO IT will help fully realize the potential of the Internet and digital technologies for the education of all Americans.“

Phillip J. Bond, Under Secretary of Commerce for Technology

—“We need to...create a new ‘knowledge utility’ for all of us, which integrates learning into all aspects of our work and lives, making learning opportunities as ubiquitous as electricity for everybody, from the pre-schooler to the retiree.”

Cato Institute

—“A better idea is to simply return those billions of dollars to taxpayers....in the end, it's just more socialist snake oil that rejects free markets and consumer choice.”

Dr. Leon Lederman, Nobel Laureate

—“The combination of education and research may be most powerful capability the nation can nurture in times of stress and uncertainty.”

—“A visitor from 1900 would feel totally out of place in our greatly changed world, except in one environment. In our classrooms we are still teaching in ways designed in the nineteenth century.”

President’s Information Technology Advisory Committee

—“Our overarching recommendation is to make effective integration of information of information technology with education and training a national priority.”

Funding

In the emerging information economy, there is no more valuable public asset than the airwaves, also known as the electromagnetic spectrum.

Congress mandated the FCC to conduct auctions for new licenses to use the new electromagnetic spectrum. These auctions are expected to generate tens of billions of dollars.

In past centuries, we used proceeds from public land to fund public education. This century, we should use the proceeds from publicly owned spectrum sales to help transform education for generations of Americans.

This could amount to \$20 billion for the trust.

These monies would be invested in Government notes and bonds and would generate income of more than \$1 billion per annum.

The Trust would make available grants and contracts that meet the priorities and criteria established by the Board of the Trust.

DOIT

Endorsements

A coalition of organizations is actively engaged in the support of DOIT:

American Association of Museums of Museums
American Council on Education
American Federation of Teachers, AFL-CIO
Americans for the Arts

American Library Association
Communication Workers of America, AFL-CIO
Federation of American Scientists
Independent Sector
National Association of State Universities and Land Grant Colleges
National Humanities Alliance
Smithsonian Institution

Private Sector Endorsements

The DOIT Coalition also includes a growing list of private sector leaders:

Eric Benhamou, Chairman, 3Com
Rob Glaser, Chairman and CEO, RealNetworks
Garret Greuner, General Partner, ALTA Partners
Nick Grouf, Chairman and CEO, PeoplePC
Bill Janeway, Vice Chairman, Warburg Pincus
Dr. Leon Lederman, Nobel Laureate
George Lucas, Chairman, The George Lucas Charitable Foundation
Hon. Paul Simon, Former U.S. Senator, IL
Barbara Roberts, President, Acoustiguide Corp.
Barbara Roberts, Barbara Roberts,
Dr. J.M. Tenenbaum, Senior VP, CommerceOne
Meg Whitman, President and CEO, Ebay

Legislation

A bill, the "Digital Opportunity Investment Trust Act," is being introduced in the Senate by Sen. Chris Dodd of CT with bipartisan support from leading senators.

Another bill, the Wireless Technology Investment and Digital Dividends Act of 2002." was introduced in the House on May 2 by Rep. Edward Markey of MA.

Leading members of the House and Senate have asked the National Science Board to study the DOIT proposal and report back to Congress in late May to inform hearings planned for later this session.

We hope you will join us.

Together we can DO IT.

Visit
www.digitalpromise.org
for information
on DOIT events and current developments.

Digital and Media Literacy: A Plan of Action

A White Paper on the Digital and Media Literacy
Recommendations of the Knight Commission on the
Information Needs of Communities in a Democracy

written by
Renee Hobbs



THE ASPEN INSTITUTE
Communications and Society Program
2010

The Aspen Institute and the John S. and James L. Knight Foundation invite you to join the public dialogue around the Knight Commission's recommendations at www.knightcomm.org or by using Twitter hashtag #knightcomm.

Copyright 2010 by The Aspen Institute

The Aspen Institute
One Dupont Circle, NW
Suite 700
Washington, D.C. 20036

Published in the United States of America in 2010 by The Aspen Institute
All rights reserved
Printed in the United States of America

ISBN: 0-89843-535-8
10/020

Individuals are encouraged to cite this paper and its contents.
In doing so, please include the following attribution:

The Aspen Institute Communications and Society Program, *Digital and Media Literacy: A Plan of Action*, Washington, D.C.: The Aspen Institute, November 2010.

For more information, contact:

**The Aspen Institute
Communications and Society Program**

One Dupont Circle, NW
Suite 700
Washington, D.C. 20036
Phone: (202) 736-5818
Fax: (202) 467-0790
www.aspeninstitute.org/c&s

To purchase additional copies of this paper, please contact:

The Aspen Institute
Publications Office
P.O. Box 222
109 Houghton Lab Lane
Queenstown, MD 21658
Phone: (410) 820-5326
Fax: (410) 827-9174

Cover background graphic was created in part at www.wordle.net.



A project of the Aspen Institute Communications and Society Program
and the John S. and James L. Knight Foundation.

Contents

FROM REPORT TO ACTION	v
EXECUTIVE SUMMARY	vii
DIGITAL AND MEDIA LITERACY: A PLAN OF ACTION, <i>Renee Hobbs</i>	
The Knight Commission Recommendation	15
The Heritage of Digital and Media Literacy	16
Meeting the Needs of All.....	20
Where Learning Occurs.....	21
Learning and Teaching: What Works.....	22
Issues to Consider When Implementing Digital and Media Literacy Programs.....	25
A Plan of Action: 10 Recommendations	36
Who Should Do What	46
Conclusion: Imagining the Future.....	50
APPENDIX	
Portraits of Success	59
About the Author	65
About the Communications and Society Program	67

From Report to Action

Implementing the Recommendations of the Knight Commission on the Information Needs of Communities in a Democracy

In October 2009, the Knight Commission on the Information Needs of Communities in a Democracy released its report, *Informing Communities: Sustaining Democracy in the Digital Age*, with 15 recommendations to better meet community information needs.

Immediately following the release of *Informing Communities*, the Aspen Institute Communications and Society Program and the John S. and James L. Knight Foundation partnered to explore ways to implement the Commission's recommendations.

As a result, the Aspen Institute commissioned a series of white papers with the purpose of moving the Knight Commission recommendations from report into action. The topics of the commissioned papers include:

- Universal Broadband
- Civic Engagement
- Government Transparency
- Online Hubs
- Digital and Media Literacy
- Local Journalism
- Public Media
- Assessing the Information Health of Communities

The following paper is one of those white papers.

This paper is written from the perspective of the author individually. The ideas and proposals herein are those of the author, and do not necessarily represent the views of the Aspen Institute, the John S. and James L. Knight Foundation, the members of the Knight Commission on the Information Needs of Communities in a Democracy, or any other institution. Unless attributed to a particular person, none of the comments or ideas contained in this report should be taken as embodying the views or carrying the endorsement of any person other than the author.

Digital and Media Literacy: A Plan of Action

Executive Summary

The time to bring digital and media literacy into the mainstream of American communities is now. People need the ability to access, analyze and engage in critical thinking about the array of messages they receive and send in order to make informed decisions about the everyday issues they face regarding health, work, politics and leisure. Most American families live in “constantly connected” homes with 500+ TV channels, broadband Internet access, and mobile phones offering on-screen, interactive activities at the touch of a fingertip. In an age of information overload, people need to allocate the scarce resource of human attention to quality, high-value messages that have relevance to their lives.

Today full participation in contemporary culture requires not just consuming messages, but also creating and sharing them. To fulfill the promise of digital citizenship, Americans must acquire multimedia communication skills that include the ability to compose messages using language, graphic design, images, and sound, and know how to use these skills to engage in the civic life of their communities. These competencies must be developed in formal educational settings, especially in K–12 and higher education, as well as informal settings. The inclusion of digital and media literacy in formal education can be a bridge across digital divides and cultural enclaves, a way to energize learners and make connections across subject areas, and a means for providing more equal opportunities in digital environments.

This report offers a plan of action for how to bring digital and media literacy education into formal and informal settings through a community education movement. This work will depend on the active support of many stakeholders: educational leaders at the local, state and federal levels; trustees of public libraries; leaders of community-based organizations; state and federal officials; members of the business community; leaders in media and technology industries, and the foundation community. It will take the energy and imagination of people who recognize that the time is now to support the development of digital and media literacy education for all our nation’s citizens, young and old.

In this report, we define digital and media literacy as a constellation of life skills that are necessary for full participation in our media-saturated, information-rich society. These include the ability to do the following:

- Make responsible choices and access information by locating and sharing materials and comprehending information and ideas

- Analyze messages in a variety of forms by identifying the author, purpose and point of view, and evaluating the quality and credibility of the content
- Create content in a variety of forms, making use of language, images, sound, and new digital tools and technologies
- Reflect on one's own conduct and communication behavior by applying social responsibility and ethical principles
- Take social action by working individually and collaboratively to share knowledge and solve problems in the family, workplace and community, and by participating as a member of a community

These digital and media literacy competencies, which constitute core competencies of citizenship in the digital age, have enormous practical value. To be able to apply for jobs online, people need skills to find relevant information. To get relevant health information, people need to be able to distinguish between a marketing ploy for nutritional supplements and solid information based on research evidence. To take advantage of online educational opportunities, people need to have a good understanding of how knowledge is constructed and how it represents reality and articulates a point of view. For people to take social action and truly engage in actual civic activities that improve their communities, they need to feel a sense of empowerment that comes from working collaboratively to solve problems.

There is growing momentum to support the integration of digital and media literacy into education. The U.S. Department of Education's 2010 technology plan, "Transforming American Education: Learning Powered by Technology," notes, "Whether the domain is English language arts, mathematics, sciences, social studies, history, art, or music, 21st-century competencies and expertise such as critical thinking, complex problem solving, collaboration, and multimedia communication should be woven into all content areas. These competencies are necessary to become expert learners, which we all must be if we are to adapt to our rapidly changing world over the course of our lives, and that involves developing deep understanding within specific content areas and making the connections between them" (p. vi).

Senator Jay Rockefeller (D-WV) has proposed a bill, the 21st Century Skills Incentive Fund Act, that would provide matching federal funds to states offering students curriculum options that include information literacy and media literacy. According to the bill, "Students need to go beyond just learning today's academic context to develop critical thinking and problem solving skills, communications skills, creativity and innovation skills, collaboration skills, contextual learning skills, and information and media literacy skills" (S. 1029, 2009). If passed, the bill would appropriate \$100 million a year for states that develop a comprehensive plan to implement a statewide 21st-century skills initiative and are able to supply

matching funds. Similarly, members of Congress Tammy Baldwin (D-WI), and Shelley Moore Capito (R-WV) have sponsored the Healthy Media for Youth Act (H.R.4925) which authorizes \$40 million to support media literacy programs for children and youth. But these efforts, as substantial as they are, even if they are passed, will not be enough.

At the heart of this momentum is the recognition that we must work to promote people's capacity to simultaneously empower and protect themselves and their families as everyday lives become more saturated and enmeshed with information. As philosopher John Dewey made clear, true education arises from thoughtful exploration of the genuine problems we encounter in daily life. Information needs are both personal and civic (Knight Commission, 2009). We look to digital and media literacy to help us more deeply engage with ideas and information to make decisions and participate in cultural life.

Rather than viewing empowerment and protection as an either-or proposition, they must be seen as two sides of the same coin. Because mass media, popular culture and digital technologies contribute to shaping people's attitudes, behaviors and values, not only in childhood but across a lifetime, there is a public interest in addressing potential harms. For healthy development, children and youth need privacy, physical and psychological safety, and freedom from exposure to objectionable, disturbing or inappropriate material. At the same time, media and technology can empower individuals and groups. People gain many personal, social and cultural benefits from making wise choices about information and entertainment, using digital tools for self-expression and communication, and participating in online communities with people around the neighborhood and around the world who share their interests and concerns.

To strengthen digital citizenship and make digital and media literacy part of mainstream education in the United States, a series of key steps, both large and small, will be necessary. In this report, a plan of action includes 10 recommendations for local, regional, state and national initiatives aligned with the themes of community action, teacher education, research and assessment, parent outreach, national visibility and stakeholder engagement. These action steps do more than bring digital and media literacy into the public eye. Each step provides specific concrete programs and services to meet the diverse needs of our nation's citizens, young and old, and build the capacity for digital and media literacy to thrive as a community education movement.

Support Community-Level Digital and Media Literacy Initiatives

1. Map existing community resources and offer small grants to promote community partnerships to integrate digital and media literacy competencies into existing programs.

2. Support a national network of summer learning programs to integrate digital and media literacy into public charter schools.
3. Support a Digital and Media Literacy (DML) Youth Corps to bring digital and media literacy to underserved communities and special populations via public libraries, museums and other community centers.

Develop Partnerships for Teacher Education

4. Support interdisciplinary bridge building in higher education to integrate core principles of digital and media literacy education into teacher preparation programs.
5. Create district-level initiatives that support digital and media literacy across K–12 via community and media partnerships.
6. Partner with media and technology companies to bring local and national news media more fully into education programs in ways that promote civic engagement.

Research and Assessment

7. Develop online measures of media and digital literacy to assess learning progression and develop online video documentation of digital and media literacy instructional strategies to build expertise in teacher education.

Parent Outreach, National Visibility, and Stakeholder Engagement

8. Engage the entertainment industry’s creative community in an entertainment-education initiative to raise visibility and create shared social norms regarding ethical behaviors in using online social media.
9. Host a statewide youth-produced Public Service Announcement (PSA) competition to increase visibility for digital and media literacy education.
10. Support an annual conference and educator showcase competition in Washington, D.C. to increase national leadership in digital and media literacy education.

Today, people struggle with the challenges of too much information. For example, millions of people search for health information online every day. One survey found that 75 percent of these searchers do not pay heed to the quality of the information they find, and 25 percent reported becoming frustrated, confused or overwhelmed by what they find (Fox, 2006). The impulse to address the problem of information overload leads us to digital and media literacy, which can help people develop the capacity to manage and evaluate the flood of data threatening to overtake them. It is vital for citizens of a pluralistic democracy who are committed to freedom and diversity to develop these competencies:

- Reading or watching the news
- Writing a letter to the editor
- Talking with family, co-workers and friends about current events
- Commenting on an online news story
- Contributing to an online community network
- Calling a local radio talk show host to express an opinion
- Taking an opinion poll
- Searching for information on topics and issues of special interest
- Evaluating the quality of information they find
- Sharing ideas and deliberating
- Taking action in the community

But people cannot be forced to engage with the public life of the community—they have to experience for themselves the benefits that come from such engagement. That’s why this plan of action focuses on helping people of all ages not simply to use digital tools but also to discover both the pleasures and the power of being well-informed, engaged and responsible consumers and producers.

Digital and media literacy education offers the potential to maximize what we value most about the empowering characteristics of media and technology, while minimizing its negative dimensions. As the Knight Commission report, *Informing Communities: Sustaining Democracy in the Digital Age*, explains, informed and engaged communities need citizens who appreciate the values of transparency, inclusion, participation, empowerment, and the common pursuit of the public interest.

But this report also identifies some challenges that a plan of action must address to be effective. Educators, curriculum developers and policymakers must consider five challenges when implementing programs in digital and media literacy:

1. Moving beyond a tool-oriented focus that conflates having access to media and technology with the skillful use of it
2. Addressing risks associated with media and digital technology
3. Expanding the concept of literacy
4. Strengthening people’s capacity to assess message credibility and quality
5. Using news and journalism in the context of K–12 education

Existing paradigms in technology education must be shifted towards a focus on critical thinking and communication skills and away from “gee-whiz” gaping over new technology tools. We must consider the balance between protection and empowerment and respond seriously to the genuine risks associated with media and digital technology. We must better understand how digital and media literacy competencies are linked to print literacy skills and develop robust new approaches to measure learning progression. We must help people of all ages to learn skills that help them discriminate between high-quality information, marketing hype, and silly or harmful junk. We must raise the visibility and status of news and current events as powerful, engaging resources for both K–12 and lifelong learning while we acknowledge the challenges faced by journalism today and in the future.

An effective community education movement needs a shared vision. This report offers recommendations that involve many stakeholders, each participating in a way that supports the whole community.

DIGITAL AND MEDIA LITERACY
A PLAN OF ACTION

Renee Hobbs

Digital and Media Literacy: A Plan of Action

“Integrate digital and media literacy as critical elements for education at all levels through collaboration among federal, state and local education officials.”

— Recommendation 6, *Informing Communities:
Sustaining Democracy in the Digital Age*

The Knight Commission Recommendation

Children and young people are growing up in a world with more choices for information and entertainment than at any point in human history. Most Americans now live in “constantly connected” homes with broadband Internet access, 500+ channels of TV and on-demand movies, and with mobile phones offering on-screen interactive activities with the touch of a fingertip. Global media companies from Google to Viacom to News Corporation dominate the media landscape, despite the rapid growth of user-generated content. As entertainment and news aggregators replace editorial gatekeepers, people now have access to the widest variety of content—the good, the bad, and the ugly—in the history of the world.

But in addition to mass media and popular culture leisure activities, many people are discovering the pleasures of participating in digital media culture, being able to stay connected to friends and family, share photos, learn about virtually anything, and exercise their creativity by contributing user-generated content on topics from cooking to politics to health, science, relationships, the arts and more. While at one time it was expensive and difficult to create and distribute videos and print publications, now anyone can publish his or her ideas on a blog or upload a video to YouTube.

The rapid rate of change we are experiencing in the development of new communications technologies and the flow of information is likely to continue. Consequently, people need to engage actively in lifelong learning starting as early as preschool and running well into old age in order to use evolving tools and resources that can help them accomplish personal, social, cultural and civic activities. At the same time, people are increasingly aware of the negative aspects of life in a media and information-saturated society. Contemporary media culture includes ultraviolent and sexually explicit movies, pornography, gossip-mongering blogs, public relations masquerading as news, widespread sales promotion of unhealthy products, hate sites that promote prejudice, sexism, racism and terrorism, cyber bullying, cyber terrorism, and unethical online marketing practices. Stalking, online bullying and cell phone harassment may affect physical and psychological

safety. Intellectual property and reputation are also vitally important issues in a time when we are experiencing rapidly shifting notions of ownership, authorship, privacy and social appropriateness.

Such ubiquitous and easy access to so many information and entertainment choices requires that people acquire new knowledge and skills in order to make wise and responsible decisions. For people to achieve the personal, professional and social benefits of thriving in a digital age, these skills are not just optional or desirable—they are the essential elements of *digital citizenship*.

The Knight Commission’s report, *Information Communities: Sustaining Democracy in the Digital Age*, recognized that people need news and information to take advantage of life’s opportunities for themselves and their families. To be effective participants in contemporary society, people need to be engaged in the public life of the community, the nation and the world. They need access to relevant and credible information that helps them make decisions.

This necessarily involves strengthening the capacity of individuals to participate as both producers and consumers in public conversations about events and issues that matter. Media and digital literacy education is now fundamentally implicated in the practice of citizenship.

To address these needs of digital citizenship, the Knight Commission made three recommendations that directly address the issue of digital and media literacy education in the context of formal and informal public education sectors:

Recommendation 6: Integrate digital and media literacy as critical elements for education at all levels through collaboration among federal, state and local education officials.

Recommendation 7: Fund and support public libraries and other community institutions as centers of digital and media training, especially for adults.

Recommendation 12: Engage young people in developing the digital information and communication capacities of local communities.

The Heritage of Digital and Media Literacy

When people think of the term “literacy,” what generally springs to mind is reading and writing, speaking and listening. These are indeed foundational elements of literacy. But because today people use so many different types of expression and communication in daily life, the concept of literacy is beginning to be defined as the ability to share meaning through symbol systems in order to fully participate in society. Similarly, the term “text” is beginning to be understood as any form of expression or communication in fixed and tangible form that uses

symbol systems, including language, still and moving images, graphic design, sound, music and interactivity.

New types of texts and new types of literacies have been emerging over a period of more than 50 years. Many closely interrelated terms describe the new set of competencies required for success in contemporary society. These include terms like *information literacy*, *media literacy*, *media education*, *visual literacy*, *news literacy*, *health media literacy*, and *digital literacy*, among others. Each term is associated with a particular body of scholarship, practice and intellectual heritage, with some ideas stretching back to the middle of the 20th century and other ideas emerging in the past couple of years. These terms reflect both the disciplinary backgrounds of the stakeholders and the wide scope of the knowledge and skills involved.

These concepts must not be treated as competitors. Referencing philosopher Ludwig Wittgenstein's concept of family resemblance, one scholar identifies the shared heritage among these new literacies and argues, "The boundaries between the various members of this family overlap, but they should be seen as a closely-knit family" (Horton, 2007, p. 15).

We can consider different types of literacy to be part of the same family. For example, information literacy has typically been associated with research skills. Media literacy typically has been associated with critical analysis of news, advertising and mass media entertainment. Health media literacy has been associated with exploring media's impact on making positive choices related to nutrition, exercise, body image, violence and substance abuse prevention. Digital literacy is associated with the ability to use computers, social media, and the Internet.

Although they reflect distinct and important theoretical ideas and values from different disciplinary traditions and historical contexts, effective programs in all of the "new media literacies" reveal many similarities. The recommendations in this report draw on the broad similarities that unite this work, which comes from many fields and disciplines including education, reading and literacy, public health, literature and the humanities, sociology, human development and psychology, cultural studies, library and information science, journalism, communication and new media studies.

In this report, the term "digital and media literacy" is used to encompass the full range of cognitive, emotional and social competencies that includes the use of texts, tools and technologies; the skills of critical thinking and analysis; the practice of message composition and creativity; the ability to engage in reflection and ethical thinking; as well as active participation through teamwork and collaboration. When people have digital and media literacy competencies, they recognize personal, corporate and political agendas and are empowered to speak out on behalf of the missing voices and omitted perspectives in our communities. By identifying and attempting to solve problems, people use their powerful voices and their rights under the law to improve the world around them.

For all aspects of daily life, people today need a constellation of well-developed communication and problem-solving skills that include these competencies:



Figure 1: Essential competencies of Digital and Media Literacy

These five competencies work together in a spiral of empowerment, supporting people’s active participation in lifelong learning through the processes of both consuming and creating messages. This approach is consistent with constructivist education, which, as Brazilian education scholar Paulo Freire described, adopts “a concept of women and men as conscious beings...and with the posing of the problems of human beings in their relations with the world” (1968, p. 51).

The five digital and media literacy competencies shown below represent a synthesis of the full complement of scholarship and thinking about “new literacies.” These ideas have been acknowledged by major groups and professional associations including the International Reading Association (IRA), the National Council of Teachers of English (NCTE) and the National Council for Accreditation of Teacher Education (NCATE), just to name a few.

As the Common Core State Standards Initiative (2010) points out, “To be ready for college, workforce training, and life in a technological society, students need the ability to gather, comprehend, evaluate, synthesize, report on, and create a high volume and extensive range of print and nonprint texts in media forms old and new. The need to research and to consume and produce media is embedded into every element of today’s curriculum.”

Teacher education programs recognize the importance of preparing future teachers to be skilled in digital and media literacy. The Professional Standards for the Accreditation of Teacher Preparation Institutions states: “Teachers understand media’s influence on culture and people’s actions and communication; as a result, teachers use a variety of approaches for teaching students how to construct mean-

Essential Competencies of Digital and Media Literacy
1. ACCESS Finding and using media and technology tools skillfully and sharing appropriate and relevant information with others
2. ANALYZE & EVALUATE Comprehending messages and using critical thinking to analyze message quality, veracity, credibility, and point of view, while considering potential effects or consequences of messages
3. CREATE Composing or generating content using creativity and confidence in self-expression, with awareness of purpose, audience, and composition techniques
4. REFLECT Applying social responsibility and ethical principles to one's own identity and lived experience, communication behavior and conduct
5. ACT Working individually and collaboratively to share knowledge and solve problems in the family, the workplace and the community, and participating as a member of a community at local, regional, national and international levels

ing from media and nonprint texts and how to compose and respond to film, video, graphic, photographic, audio, and multimedia texts” (NCATE Standards, 2007, p. 57). The National Council of Teachers of English adopted a resolution encouraging “preservice, inservice, and staff development programs that will focus on new literacies, multimedia composition, and a broadened concept of literacy” (NCTE, 2003). The National Communication Association (NCA, 1998) states that media-literate communicators should be able to do the following:

- Understand how people use media in their personal and public lives
- Recognize the complex relationships among audiences and media content
- Appreciate that media content is produced within social and cultural contexts
- Understand the commercial nature of media
- Use media to communicate to specific audiences

But genuine educational change in K–12 and higher education does not come about simply by generating documents or developing written standards. Similarly, websites that distribute curriculum materials and lesson plans only go so far in

helping teachers acquire the knowledge and skills they need to bring these practices to their students.

What is needed now is a clear and compelling vision of the instructional practices that can best support the development of these new competencies among all Americans. In this paper, a plan of concrete action is offered to help these practices to become standard in the context of home, school and workplace.

Meeting the Needs of All

In a country with over 300 million residents, there is no “one-size-fits-all” program. Many different types of programs will be necessary to help build a community education movement for digital and media literacy. Both formal and informal learning environments can support the development of people’s digital and media literacy competencies. These skills can be developed in the home and through programs in K–12 schools, libraries, museums, summer and afterschool programs, local cable access centers, college and universities, and non-profit organizations.

It is important to maximize effectiveness by developing community-based informal or formal learning programs that reach specific sub-groups or targeted populations. For example, K–12 programs reach children and teens, university programs reach young adults, and libraries and cable access programs reach working and non-working adults. But many groups of American citizens go without access to resources or programs that support digital and media literacy education. There are some underserved audiences that will benefit from special opportunities to develop digital and media literacy competencies.

Minority Children, Youth and Families – A recent report by the Kaiser Family Foundation showed that African-American and Hispanic children ages 8–18 spent more than 12 hours daily in some form of mediated experience, which is nearly two hours more than white children (Kaiser Family Foundation, 2010). Meanwhile, all parents are faced with many decisions about parenting in a technology-saturated society, as children may watch videos in the car, play videogames on cell phones as early as age three, have their own cell phones by age seven or eight, and create their own Facebook pages before reaching their teen years.

Special Education Students – Students enrolled in special education programs may be more vulnerable to media influence because of limitations in skills, including comprehension, inference-making and using social or environmental cues. They may not recognize the difference between informative and persuasive messages, for example, or may be quick to click on a link based on purely visual cues. Yet these young people also need the ability to use the media in all its forms, including new and emerging forms of technology that may be helpful in supporting their learning.

Juvenile Offenders – Young people who experience the juvenile justice system may be among the most vulnerable to negative messages in the media because of

the lack of supportive adults and other resiliency factors. But when exposed to digital and media literacy education, they can receive valuable benefits from using the power of media and technology for reflection and expression, building self-esteem, advocacy and critical thinking skills.

New Immigrants – These individuals are highly motivated to acquire the knowledge and skills they need to be successful in their new homeland. Many use communication devices and media to stay connected with family and their countries of origin. But they also may use media and technology as a “window on the world” to develop language skills and to understand American culture and values without appreciating the unique characteristics of the American commercial media system, which differs in fundamental ways from those of many other countries.

Senior Citizens – Older people are heavy consumers of television and may be particularly vulnerable to certain persuasive messages, (e.g., advertisements for prescription medicine, over-the-counter drugs, and nutritional supplements). Improving their digital and media literacy would not only help them better evaluate this information, it would also offer them the benefits of information sharing and the social connectedness available through social media. In the United Kingdom, the Silver Surfers Program provides one-on-one assistance for seniors who need support as they master basic computer skills, including using the mouse, keyboarding, and file management. SeniorNet has been doing the same in the United States since 1986.

Sadly, there are too few programs in the United States that help bring digital and media literacy to special education students, parents of young children, those in juvenile justice programs, new immigrants, people with disabilities, and senior citizens. To meet the needs of all the members of our communities, it will be important to support the development of customized, replicable and scalable digital and media literacy programs to reach these underserved groups. It is necessary to do so in the environments where learning already occurs.

Where Learning Occurs

Strategic partnerships between families, schools, non-governmental organizations and libraries can help build a community education movement for digital and media literacy education. Consider where learning occurs.

In the Home – Digital and media literacy competencies can be learned in the home, where most people watch television and movies, surf the Internet, listen to music, read newspapers and magazines, and play videogames. With appropriate levels of parental engagement, many digital and media literacy competencies can be learned at home, provided parents have high levels of interest and motivation and the drive to gain knowledge and skills. Organizations like Common Sense Media provide parents with tools to help them start conversations with their children about the responsibilities of media and technology use.

K–12 Education – Programs in elementary and secondary schools can help students develop access, analysis/evaluation, and creative competencies in relation to the academic subjects of math, language arts, social studies, science and health education. For example, these programs may help children and teens use online databases to find information related to school subjects like science or health, create multimedia slide presentations, engage in group problem solving or work collaboratively on a video project related to school subjects in history or literature.

Library Programs – Libraries provide the general public with access to computers and the Internet and may offer programs to help people use technology tools. One third of Americans age 14 and over (about 77 million people) accessed the Internet at a public library in the past year (Becker et al., 2010). Libraries generally offer one-on-one support to patrons, helping them find information on the Internet or demonstrating how to use email and other software applications, library databases or search engines. This is the most personalized and effective form of education. Librarians connect people to jobs, news, education, services, health information, friends and family—as well as community engagement and civic participation. Librarians often model critical thinking skills in finding and evaluating information.

Youth Media Programs – Hundreds of small programs that serve teens provide them with opportunities to critically analyze and create multimedia messages using traditional and interactive media. These programs can help young people see themselves as active participants in their communities, helping to solve problems through the power of effective communication and social advocacy.

Local Access – In those communities where there is a cable public access system, members of the public can learn to use video and digital media and can create programs that reflect their special interests, issues and hobbies. These programs help people use video cameras to collect and edit footage and produce a in-studio talk show, “how to” program or documentary.

Higher Education – Programs offered through colleges and universities may emphasize competencies that focus on critical analysis and advocacy. For example, these programs may involve groups of people analyzing local press coverage of a particular event or topic of local concern or creating a public information campaign about an important issue to increase community awareness.

Learning and Teaching: What Works

Today, educators use a variety of engaging texts, including those from mass media, popular culture and digital media, to support the development of digital and media literacy competencies across K–12 and higher education. With support from creative teachers, students use books, movies, websites, newspapers, blogs, wikis, and games for learning. They also use instructional practices that enable students to take personal responsibility for their own learning.

Instructional Practices of Digital and Media Literacy Education	
<i>Keeping a media-use diary</i>	Record-keeping activities help people keep track of media choices and reflect on decisions about sharing and participation, deepening awareness of personal habits.
<i>Using information search and evaluation strategies</i>	Finding, evaluating and sharing content from a variety of sources helps people explore diverse sources of information. Using search strategies appropriate to one's needs helps people make discriminating choices about quality and relevance.
<i>Reading, viewing, listening and discussing</i>	Active interpretation of texts helps people acquire new ideas, perspectives and knowledge and make sense of it in relation to lived experience. Dialogue and sharing help deepen understanding and appreciation.
<i>Close analysis</i>	Careful examination of the constructed nature of particular texts encourages people to use critical questioning to examine the author's intent and issues of representation.
<i>Cross-media comparison</i>	Comparing and contrasting two texts that address the same topic help people develop critical thinking skills. By examining genre, purpose, form and content, and point of view, people recognize how media shape message content.
<i>Gaming, simulation and role-playing</i>	Playful activities promote imagination, creativity and decision-making skills, supporting people's reflective thinking about choices and consequences.
<i>Multimedia composition</i>	Message composition using a combination of language, images, sound, music, special effects and interactivity provides real-world experience addressing a particular audience in a specific context to accomplish a stated goal. Teamwork, collaboration and knowledge sharing enhance creativity and deepen respect for the diverse talents of individuals.

Notice that none of these instructional practices are dependent upon using a particular set of texts, tools or technologies. That is why digital and media literacy education can be applied to a variety of technologies and with entertaining, persuasive and informational content. These instructional practices can be used across all grade levels and subject areas, including social studies, science, literature, health, mathematics, the arts and the vocational and professional fields, in both formal and informal educational settings.

It is also important to recognize that many of these instructional practices are already standard in some fields of study. They do not necessarily require either expensive equipment or time-consuming hours of instruction to develop. They *do* require the presence of educators who have the skills and experience necessary to use these practices in productive ways to support genuine learning. In this report, we see teachers and learners (not technology) as the vital resources at the heart of the vision for how digital and media literacy competencies are best acquired.

The successful application of these instructional practices depends on creating a respectful learning environment where students' lived experience is valued and multiple points of view are encouraged. Digital and media literacy education activates independent thinking, authentic dialogue, collaboration, reflection, creativity, and social responsibility as applied to the practices of responding to, creating and sharing messages (NAMLE, 2007; Partnership for 21st Century Skills, 2010). Fortunately, this definition of digital and media literacy education resonates with diverse stakeholders in the education, media, technology, museum, non-profit, social service and library communities.

A comprehensive plan of action is needed to build a community education movement for digital and media literacy education. Many diverse stakeholders are already moving towards this goal. Groups like the Partnership for 21st Century Skills have done a commendable job in helping school leaders and policymakers understand the "big picture" scope of the challenge. The federal government, through the Commerce Department's National Telecommunications and Information Administration (NTIA) is providing \$4 billion through the Broadband Technology Opportunities Program (BTOP), which will help bring broadband infrastructure to local communities along with supporting public computing centers and providing training opportunities. With support from the John D. and Catherine T. MacArthur Foundation, the Digital Youth Network and the YOUmedia program at the Chicago Public Library has enabled young people to collaborate and create using digital media. Still, much work is needed to make digital and media literacy a fundamental part of K–12, higher education and life-long learning, in and out of school.

Issues to Consider When Implementing Digital and Media Literacy Programs

In developing a plan of action, there are five challenges that educators and community leaders must consider in implementing programs in digital and media literacy: (1) moving beyond a tool-oriented focus that conflates having access to technology with the skillful use of it, (2) addressing risks associated with media and digital technology, (3) expanding the concept of literacy, (4) strengthening people's capacity to assess message credibility and quality, and (5) bringing news and current events into K–12 education.

Moving Beyond a Tool-Oriented Focus that Conflates Having Access to Media and Technology with the Skillful Use of It. Generally, neither children nor adults acquire critical thinking skills about mass media, popular culture or digital media just by using technology tools themselves. Educators frequently complain about a generation of children who cannot distinguish between standard English grammar and spelling and the discourse of text messaging. Many teens lack the ability to identify appropriate keywords for an online search activity, and many young adults cannot identify the author of a web page. These same children and young people often are convinced they are expert researchers because they can find information “on Google.” However, some of these same youth produce and upload their own dance videos for their favorite songs, collaborate to solve problems in videogames, use mobile phones to show up for impromptu local events, and make their own fictional newspapers about their favorite fantasy-novel characters.

The larger concern is whether people will be able to transfer their self-developed digital skills beyond their affinity groups, fan communities or local social cliques. Although young people are using digital media, we should not assume they are digitally literate in the sense that we are discussing it here (Vaidhyanathan, 2008). People who play Farmville on Facebook may (or may not) have the skills they need to search for information about jobs, education and health care. For young people today, it is vital that formal education begin to offer a bridge from the often insular and entertainment-focused digital culture of the home to a wider, broader range of cultural and civic experiences that support their intellectual, cultural, social and emotional development.

In many schools, despite significant investment in technology, teachers are not making effective use of the engaging instructional practices of digital and media literacy. The reasons for this vary. Some teachers do not know how to use technology tools. Some mistake the mere transfer of classroom materials from paper to a com-

puter screen as effective use. Others do not have the time to spare on media production projects because they are busy preparing children for high-stakes testing.

One thing is certain: simply buying computers for schools does not necessarily lead to digital and media literacy education. Schools have a long way to go on this front. Access to broadband is a substantial issue as diffusion is uneven across American cities and towns (Levin, 2010). Mandatory Internet filtering in schools means that many important types of social media are not available to teachers or students. And though there are computers with Internet access in most classrooms, fewer than half of American teachers can display a website because they do not have a data projector available to them. When computers are used, most American students use them to prepare written documents, drill-and-practice on basic skills, or to make Powerpoint presentations (U.S. Department of Education, 2010).

Sadly, some people equate the amount of money that school districts spend on technology or the numbers of students enrolled in online learning programs as a proxy for digital and media literacy education. Some of the hype surrounding “digital natives” and the transformative potential of technology in education is promoted uncritically by fans of social media or subsidized by those who stand to benefit from selling data systems, interactive white boards, games or cell phones.

Many American parents mistakenly believe that simply providing children and young people with access to digital technology will automatically enhance learning. These days, across a wide range of socioeconomic strata, the “soccer mom” has been replaced by the “technology mom” who purchases a Leapfrog electronic toy for her baby, lap-surfs with her toddler, buys a Wii, an xBox and a Playstation for the kids and their friends, puts the spare TV set in the child’s bedroom, sets her child down for hours at a time to use social media like Webkinz and Club Penguin, and buys a laptop for her pre-teen so she will not have to share her own computer with the child.

In many American homes, the computer is primarily an entertainment device, extending the legacy of the television, which is still viewed for more than 3 hours per day by children aged 8 to 18, who spend 10 to 12 hours every day with some form of media (Kaiser Family Foundation, 2010). The computer is used for downloading music, watching videos, playing games and interacting on social networks.

While some may assume that the computer is used as a research tool for exploring the world, keeping up with current events and learning new things, research has shown that many people lack the knowledge and skills to use the computer for these purposes (Hargittai & Walejko, 2008). Parents’ behavior and attitudes towards technology are a critical factor in predicting a child’s experience and approaches towards media (Pew Internet and American Life Project, 2009). Research shows that students who have at least one parent with a graduate degree

are significantly more likely to create content, either online or offline, than others. “While it may be that digital media are leveling the playing field when it comes to exposure to content, engaging in creative pursuits remains unequally distributed by social background” (Hargittai & Walejko, 2008, p. 256).

For these reasons, educators must not just teach *with* digital technologies, tools or games. To develop digital and media literacy competencies it is necessary to teach *about* media and technology, making active use of the practices of dialogue and Socratic questioning to promote critical thinking about the choices people make when consuming, creating and sharing messages. As Buckingham (2007, p. 113) explains, “Rather than seeing the web as a neutral source of ‘information,’ students need to be asking questions about the sources of that information, the interests of its producers and how it represents the world.”

One example of a program that works to develop these competencies in children and teens is Kids Voting USA, which provides civic education and preparation for voting with news reading and media analysis activities. Students are also encouraged to analyze political advertisements, news stories, and candidate debates (McDevitt & Chaffee, 2000). Similarly, research conducted in Maine as part of the middle-school laptop initiative shows that when science teachers use engaging digital and media literacy projects as part of a science lesson, students retain information longer, and when digital and media literacy instructional practices are used in teaching middle-school students, their ability to analyze the content and quality of informational websites improves (Berry & Wintle, 2009; Pinkham, Wintle & Silvernail, 2008).

The inherently engaging and immersive environment of games may make it difficult for young people to recognize the constructed nature of the digital environment and how it shapes personal and social action. But when children and young people become game-makers, they develop important skills while building an understanding of games as an interactive message system. The World Wide Workshop Foundation’s Globaloria project is an example of a program that uses game design to develop important digital and media literacy skills through its emphasis on participation and critical thinking. By becoming authors, game programmers and designers, students deepen their awareness of the choices involved in the structure and function of technology tools themselves.

Learners need opportunities to interact with audiences beyond their family and like-minded friends. The competencies promoted by digital and media literacy are fundamentally tied to true participation in a community, where engaging with people different from ourselves helps us clarify our own ideas, look at the world for different viewpoints, and in the process, deepen our own learning and develop a sense of connectedness to the people around us.

Using game design in education: Globaloria

Produced and launched by the World Wide Workshop Foundation in 2006, Globaloria is an innovative social learning network for designing and programming web-games that uses social media technology and computational tools for project-based learning.

Participants create educational games for their own personal and professional development, and for the social and economic benefit of their communities. The Program, while aimed at youth ages 12 and up, is suitable for students at all levels and does not require any prior web design or programming experience.

Instead of separate silos for vocational and technical education, academic subjects, and college preparation, Globaloria combines them all into a year-long project of approximately 150 hours, similar to computer gaming and software industry workplace practices. The scalable learning network includes programmable wikis and blogs, game programming tutorials, game content resources and a customizable self-paced curriculum with model implementations and alignments to a state's curriculum standards.

The largest Globaloria pilot is in West Virginia, where educators in 41 middle schools, high schools, community colleges and universities work with students, individually and collectively, to develop games and create original content. Globaloria West Virginia is used as a vehicle for teaching core subjects such as biology, English, and civics, where educators customize and align the curriculum with the West Virginia Department of Education's Content Standards and Objectives and 21st-Century Skills (Global21).

East Austin College Prep Academy (EACPA) in Austin, Texas is the first charter school to integrate Globaloria curriculum school-wide. During the 2010-11 school year, 6th and 7th grade students at EACPA are taking a daily, 90 minute Globaloria class, where they develop original math and science games in addition to tracking social issues affecting the community they live in. The program reaches out to students' families as well to extend learning into the home. The Globaloria EACPA curriculum is aligned with the Texas Content Standards for Mathematics (TEKS), ELA and Technology Learning. Support for Globaloria at EACPA is provided by AMD, Southwest Key, the Caperton Fund and the World Wide Workshop Foundation.

What makes Globaloria successful, according to Dr. Idit Harel Caperton, President & Founder of the World Wide Workshop Foundation, are three things. First, the participatory structure at the center of the program's design. Students and teachers learn by doing. Second, the strong partnerships the program has forged with government officials, education departments, private and public foundations, local business, industry and institutes of higher education. And third, the culture of transparency and collaboration that Globaloria brings into schools.

Addressing Risks Associated with Media and Digital Technology. Digital and media literacy competencies are not only needed to strengthen people’s capacity for engaging with information but also for addressing potential risks associated with mass media and digital media. For example, concerns about identity theft are emerging as the Federal Trade Commission reports that 10 million Americans were victimized last year by willingly giving personal information to robbers, often because “they couldn’t distinguish an email from their bank from an email from a predator” (Rothkopf, 2009, p. 5). This example is just the tip of the iceberg, of course. While many people actively support pro-social goals by contributing to a social network, there are others who exploit digital technology for harmful ends.

In the United States and many Western countries, the risk-benefit pendulum swings back and forth over time, through periods of increased (or decreased) concern about the negative aspects of media and technology. Comprehensive research from the European Union (Staksrud, Livingstone, Haddon, & Ólafsson, 2009) identifies three types of risk associated with the use of mass media, popular culture and digital media:



- **Content risks** – This includes exposure to potentially offensive or harmful content, including violent, sexual, sexist, racist, or hate material.
- **Contact risks** – This includes practices where people engage in harassment, cyber bullying and cyber stalking; talk with strangers; or violate privacy.
- **Conduct risks** – This includes lying or intentionally misinforming people, giving out personal information, illegal downloading, gambling, hacking and more.

Figure 2: Categories of risk associated with the use of mass media, popular culture and digital media

Some people are determined to flatly ignore, dismiss or trivialize any risks associated with digital media, mass media and popular culture. In the United States, the discourse about risks and opportunities continues to swing back and forth between fear, anxiety and optimism, reflecting ideas about the need to both protect and empower children and youth in relation to media and technology. In recent years, we have seen fear-inducing headlines about suicides brought on by online harassment give way to anxieties about Internet predators, then give way

again to optimism about social networking, including the possibility that children are developing social learning skills by updating their Facebook pages or playing World of Warcraft (Ito et al, 2008).

But most people recognize that the stances of protection and empowerment are not examples of “either-or” thinking, since these two positions are not in opposition—they are two sides of the same coin. Both empowerment and protection are needed to address the transformative social potential of the Internet in the context of child and adolescent development.

For example, when it comes to sexuality, both empowerment and protection are essential for children, young people and their families. Young people can use the Internet and mobile phone texting services to ask difficult questions about sexuality, get accurate information about sexual health and participate in online communities. The Internet also enables and extends forms of sexual expression and experimentation, often in new forms, including webcams and live chat. Pornography is a multibillion dollar industry in the United States. In a country with the highest teenage pregnancy rate of all Western industrialized countries in the world, a recent report from the Witherspoon Institute (2010) offers compelling evidence that the prevalence of pornography in the lives of many children and adolescents is far more significant than most adults realize, that pornography may be deforming the healthy sexual development of young people, and that it can be used to exploit children and adolescents. Teens have many reasons to keep secret their exposure to pornography, and many are unlikely to tell researchers about their activities. But about 15 percent of teens aged 12 to 17 do report that they have received sexually explicit images on their cell phones from people they knew personally (Pew Internet and American Life Project, 2009).

A 2008 Centers for Disease Control report notes that 9 percent to 35 percent of children and young people also say they have been victims of electronic aggression (Centers for Disease Control and Prevention, 2008). Sexting and cyber bullying are examples of how human needs for power, intimacy, trust and respect intersect with the ethical challenges embedded in social participation in a digital environment. That is why empowerment and protection are so deeply linked.

Digital and media literacy will not be a panacea for American social problems. And it will not let media companies and producers off the hook when it comes to their own social responsibility. As Jenkins et al (2006, p. 19) point out, one key goal of media literacy education is to “encourage young people to become more reflective about the ethical choices they make as participants and communicators and the impact they have on others.”

Expanding the Concept of Literacy. Make no mistake about it: digital and media literacy does not replace or supplant print literacy. At a time when the word “text” now means any form of symbolic expression in any format that conveys meaning, the concept of literacy is simply expanding. *Literacy is beginning to be understood*

as the ability to share meaning through symbol systems in order to fully participate in society. Print is now one of an interrelated set of symbol systems for sharing meaning. Because it takes years of practice to master print literacy, effective instruction in reading and writing is becoming more important than ever before. To read well, people need to acquire decoding and comprehension skills plus a base of knowledge from which they can interpret new ideas. To write, it is important to understand how words come together to form ideas, claims and arguments and how to design messages to accomplish the goals of informing, entertaining or persuading.

Some literacy educators recognize the value of digital media simply for its ability to get kids engaged in learning, to help them pay attention in school. Although educators know that motivation and engagement are enhanced when mass media, popular culture and digital media and technology are incorporated into learning, this is not (and should not be) the sole rationale for implementing digital and media literacy into the curriculum. When used well, news media, mass media and digital media texts can support the acquisition of literacy competencies including comprehension, inference-making, analysis and prediction. Concepts like audience, purpose and point of view must be applied to messages from digital media and popular culture as well as printed texts. Participating in digital and media literacy activities also promotes writing, public speaking and advocacy, empowering children and young people by offering opportunities to express themselves using language, images, sound and interactivity (Alvermann, 2004; Hobbs, 2008; Gainer and Lapp, 2010).

Reading online is now a fundamental dimension of digital and media literacy that requires many interrelated practices, including using a search engine, reading search engine results, and quickly reading a web page to locate the best link to the information that is required. Many people lack these skills (Coiro, 2007). When using a search engine, it is not uncommon to see inefficient practices like clicking down the list of links in a “click and look” strategy without looking for clues to determine the relevance of the websites to the purpose and goal.

Digital and media literacy education requires and supports the practices of reading comprehension and writing. Large-scale empirical research evidence shows that student participation in media literacy education programs in high school can strengthen reading comprehension, writing, and print-media analysis skills (Hobbs, 2007). That is because digital and media literacy educational practices cultivate an active approach to the process of meaning making in ways that help knowledge and skills to transfer from school to home and back.

To promote reading and writing skills, adolescent literacy experts have long urged teachers to make literacy experiences more relevant to students’ interests, everyday life, and important current events, recommending, “Look for opportunities to bridge the activities outside and inside the classroom. Tune into the lives of students to find out what they think is relevant and why, and then use this information to design instruction and learning opportunities that will be more relevant” (U.S. Department of Education, 2008, p. 28).

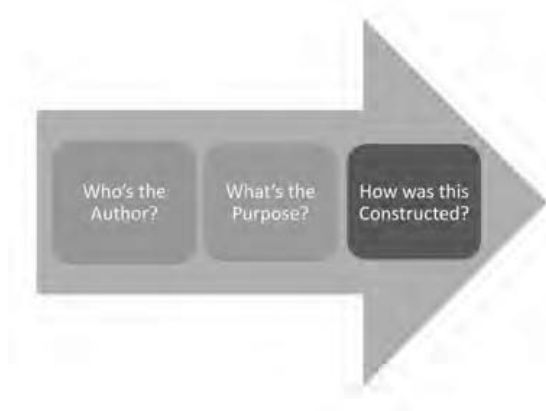
But although people do develop many skills informally through their use of digital media with peers in online communities and social groups, without routine practice in making connections between print literacy and digital and media literacy competencies, those skills are unlikely to transfer to new contexts (Salomon & Perkins, 1989). Digital and media literacy education can provide a bridge to transfer print literacy skills from informal to formal, familiar to new, and narrow to broad contexts.

Strengthening People's Capacity to Access Message Credibility and Quality. Librarians and researchers tell us that, when looking for information online, many people give up before they find what they need. People use a small number of search strategies in a repetitive way even when they do not get the information they are seeking. They do not take the time to digest and evaluate what they encounter. In many cases, “students typically use information that finds them, rather than deciding what information *they* need” (Cheney, 2010, p. 1).

In addition, many people also use very superficial criteria for assessing the quality of a message. Likeability, attractiveness, trustworthiness and expertise all affect our decisions about the credibility of people, information and ideas. We can easily understand that younger children may be more susceptible to digital misinformation and less able to discern credible sources. But actually, few people verify the information they find online—both adults and children tend to uncritically trust information they find, from whatever source. “Digital media allow for the uncoupling of credibility and authority in a way never before possible,” notes Miriam Metzger, a researcher at the University of California, Santa Barbara. In addition, family, co-workers and friends have always influenced our decisions about what to trust. Today, judgments about what is credible can be shaped by participation in online communities. Our ideas about credibility and reliability are also shifting in relation to networked environments and services like collectively created encyclopedias, reviews and ratings services (Metzger, 2009).

So how do we expand our capacity to use reasoning in deciding who and what to believe? With so many sources of information available, assessing credibility is difficult, even for adults. Many people simply use cues like graphic design to evaluate the credibility of a source. According to this view, if it “looks right,” it is credible. The Internet blurs the lines between amateur and professional, between entertainment and marketing, between information and persuasion. We experience a “context deficit,” where information about authorship is often unavailable, masked or entirely missing. For example, websites that aggregate information may display materials from multiple sources on one web page, which may itself be inaccurately perceived as the source. Hyperlinking may make it even more difficult for users to follow and evaluate multiple sources (Harris, 2008; Metzger, 2007).

At a broader level, the immediacy and immersive social characteristics of digital media may also discourage reflective, analytic thinking about sources, content and credibility. It is just so simple, point, click and wow, you're on to something new.



To judge the credibility of information, it is important to begin by answering these three basic questions: Who's the author? What's the purpose of this message? How was this message constructed? These simple but powerful questions enable people to assess the relative credibility of a media message.

In fact, for the savvy user, skillful use of digital information can enhance the process of fact checking and source comparison.

Figure 3: Basic questions to assess the credibility of information

People who pay attention to the quality of media messages also need to be self-aware, possessing a general understanding of human perceptual and cognitive processes. Among these include our natural tendencies to value sources as credible only when they reinforce our existing beliefs and attitudes. It is part of human nature: people tend to trust the sources that match our existing opinions and distrust information that challenges our beliefs. Awareness of this tendency, which is emphasized by those who teach news media literacy, can help people become more open and receptive to diverse sources and points of view. These insights can be useful in addressing the problem of political polarization, where extreme and often simplistic positions come to dominate and overpower more moderate, nuanced points of view.

People also need increased awareness of the practice of “source stripping,” where almost immediately as we process information, we detach the content from the source, forgetting where we learned it (Eysenbach & Kohler, 2002). Digital and media literacy education can offer people an increased knowledge of human information processing, self-awareness and self-reflexivity, which can help counteract these tendencies. Research and assessment tools are needed to better understand which instructional “best practices” support the development of people’s ability to evaluate the quality of information they receive from print, television, movies, advertising and digital media sources.

Bringing News and Current Events into K–12 Education. American adults can probably remember the practice of cutting out a newspaper article about a “current event” and bringing it into social studies class. But civics-oriented education, with its use of everyday journalistic resources, has been declining as a component of the American educational curriculum for over 50 years. In 1947, more than half

of American high schools offered a course in Problems in Democracy that emphasized reading of news magazines (Hobbs, 1998). Times have changed.

Today, young people tell us that the news is a significant source of stress, because it reminds them of the peril the world is in and makes them feel unsafe and threatened. Although teens read the news only incidentally, when they do, they prefer news about music, entertainment, celebrities, and sports (Vahlberg, Peer & Nesbit, 2008). Some child development professionals believe it is not good for children or young people to read or watch the news (American Academy of Child and Adolescent Psychiatry, 2002). Research has shown that violent news content actually induces more fear reactions than violent fiction, creating persistent worrisome thoughts in some children and young people (Kaiser Family Foundation, 2003). Almost 4 in 10 parents report that their children have been frightened or upset by something they have seen in the news and have concern that it can happen to them or their family (Cantor & Nathanson, 1996).

Using news and current events in the classroom can also be controversial. When President Obama's televised back-to-school speech to the nation's schoolchildren was blasted by conservative critics who accused the President of trying to spread propaganda, it illustrated perhaps the biggest challenge teachers face in bringing news and current events into the classroom. In addition, in an era of competition for and fragmentation within the news audience, no simplistic assumptions can be made about the nature of what information sources count as trustworthy and authoritative. Many teachers are reluctant to use news and current events in an increasingly polarized political climate (Hobbs, et al 2010; Hobbs, 2001). But as Mihailidis has observed, "Making the connections between media literacy, freedom of expression, and civic engagement can reposition media literacy as the core of new civic education" (Mihailidis, 2009, p. 9).

While in the United Kingdom and Western Europe news and information programming for children and teens is provided as a public service initiative, in the United States, it is almost purely a commercial enterprise. At the secondary level, *Channel One* provides television news and advertising to six million teens. Research has shown that teens gain current events knowledge from viewing this program only when teachers support students' learning by asking questions and promoting reflective dialogue (Johnston, Brzezinski & Anderman, 1994). At the elementary level, *Time for Kids* and Scholastic both offer magazines and online content specifically for children; however, these programs generally have a limited focus on news and current events, often favor articles of topical or seasonal interest and are less likely to reach students in low-income schools.

Newspaper industry programs like Newspapers in Education (NIE) provide newspapers to schools through advertising sponsorship and other donation programs. However, NIE programs have faced substantial cutbacks as newspaper revenues continue to decline. With NIE staff assuming responsibility for fundraising, sales and marketing, there is less time to focus on curriculum and instruction (Arnold, 2010). Access to quality journalism has been an additional expense for school districts in communities that are often strapped to manage even basic expenses. In both the United States and the U.K. “It has proved difficult to support, develop and sustain teaching about broadcast news because of the ephemerality of the subject matter and the effort involved in bringing current TV, radio or Internet news into the classroom” (Bazalgette, Harland & James, 2008, p. 81).

Whether we like it or not, the use of news media in the K–12 classroom is not sufficiently on the radar screen in American public education. Still, there are efforts underway to explore the development of curriculum and resources to engage students as active participants in the process of creating journalism. While these efforts are more developed at the university level, programs are springing up at the high school level and even younger. One example is Palo Alto High School in Palo Alto, California, where the media program is the fastest growing program in the school. The program’s director has reported that more than 500 students out of a student body of 1,900 have elected to take journalism on one platform or another (Wojcicki, 2010).

We have good evidence from studies of high school journalism, which show that participating student journalists enhance their own civic engagement skills by exercising a public voice (Levine, 2008). But much less is known about how regular reading, viewing and discussion of news and current events affects the development of students’ knowledge and skills. Regular engagement with news and current events may support the development of learners’ background knowledge. It may help build connections between the classroom and the culture. It may help learners see how news and current events are constructed by those with economic, political and cultural interests at stake. It may help them appreciate how audiences understand and interpret messages differently based on their life experiences, prior knowledge and attitudes.

Careful video documentation of instructional practices in digital and media literacy education, especially in relation to the use of news and current events in the context of formal and informal education, is needed. This will help build a base of research evidence to help scholars and educators determine which approaches to using news and current events in the classroom are most likely to empower students in a way that supports their development as citizens.

A Look Inside One Program: Seattle's Common Language Project

Nearly every city in America has at least one program in digital and media literacy. In Seattle, the Common Language Project at the University of Washington offers media literacy and production workshops in a variety of educational settings. Jessica Partnow, a Seattle media literacy educator, wants her students to more deeply understand how news values are culturally inflected.

Working in local schools, she began one lesson by asking students to compare and contrast the English-language news monthly *Egypt Today* with *Newsweek*. Both magazines had featured articles on the Israeli-Lebanese conflict in 2006. *Egypt Today* ran a several-page spread of full color photos depicting desperate people searching for friends and family in the dusty rubble of a freshly-bombed apartment complex; another photo showed a dead body before it had been covered with a sheet. In contrast, *Newsweek* used an infographic as its main illustration: stick figures in red and blue to indicate the numbers of injuries and deaths on either side of the conflict.

As Partnow explains, students “respond to the idea that our media are sanitizing our information for us. They enjoy a rebellious, typical teenage reaction to being told what to think. Others pick up on the emotional manipulation inherent in printing pictures of extreme suffering—or in choosing not to print them.” These discussions help students think about how—and who—is processing their information for them. And perhaps even more importantly, the lessons “foster a love for what she calls the ‘mind-boggler,’ or questions that do not have one simple answer—where wrestling with every side of the issue is what is most important” (Partnow, 2010, p. 1). This program also provides an interactive portal where students cannot only read, listen to and view stories, but also interact with journalists and fellow students in the U.S. and in Nairobi, Kenya, created in partnership with the Pulitzer Center on Crisis Reporting.

Portraits of Success (found in the Appendix) offers a list of other noteworthy organizations and programs where pioneering stakeholders have shown a common interest in strengthening students' digital and media literacy competencies. These programs are enabling communities to acquire the knowledge and expertise that is needed to develop and implement effective programs at the local, state and national levels.

A Plan of Action: 10 Recommendations

To support the development of digital and media literacy competencies for all Americans, we need a comprehensive community education movement. Local, regional, state and national initiatives are essential. It will take time to build the infrastructure capacity and human resources necessary to bring digital and media literacy education to all citizens.

There are some key audiences and locations where this work must occur, including children and youth, new immigrants, special education students, juvenile offenders, and senior citizens, in K–12 schools, universities and colleges,

libraries, youth media and local access centers. To achieve the buy-in necessary for success, initiatives must capitalize on existing local programs and resources and enroll new stakeholders, including educational leaders, members of the business community, and members of professional associations who are motivated to develop and sustain programs.

Community Initiatives

1. Map existing community resources in digital and media literacy and offer small grants to promote community partnerships to integrate digital and media literacy competencies into existing programs.

City and community leaders often have little awareness of programs and services in digital and media literacy education. Increased awareness and better coordination would help develop leadership, promote partnerships, and build organizational capacity to support the expansion of work in the community. Community-focused foundations, media or technology companies should support the work of community leadership panels to map existing community resources in digital and media literacy. For example, the Comcast Foundation, through its partnership with Digital Connectors, could support digital and media literacy mapping projects in the communities where Comcast provides service.

In each participating community, the sponsoring entity would charge an experienced local group with mapping a community's existing programs in digital and media literacy. Mapping resources, training and services along the essential dimensions of digital and media literacy education will make it possible to identify the assets that already exist in the community as well as the core values and priorities each program offers. It can also identify underserved populations. This will help identify gaps in programs and services.

The foundation or corporate sponsor could offer small annual grants of between \$25,000 and \$75,000, targeted to develop pilot programs to bring digital and media literacy education to specific populations with greatest need in the community. The foundation and its partners could host an annual community event to showcase programs and projects and promote networking and leadership development at the community level.

One example of a local group with the capacity to map a community's digital and media literacy resources is the Gateway Media Literacy Partners. GMLP is a confederation of community leaders with experience in developing media literacy programs in St. Louis, Missouri. This group is established as a regional caucus of the National Association for Media Literacy Education (NAMLE).

Community Partnerships: The Digital Connectors Program

The Digital Connectors Program was launched by One Economy in 2001 in Washington, D.C. The program identifies young people from diverse backgrounds between the ages of 14 to 21 and immerses them in certified technology training. The training helps these young *digital connectors* build leadership skills and prepares them to enter the 21st century workplace. Participants give back to their community by training family members and residents on how to use technology effectively.

In addition to hands-on learning, digital connectors also learn about career opportunities through site visits to technology companies, job shadowing experiences, and campus tours. Many participating youth receive stipends through their City's employment program or new computers as compensation for their efforts.

Programs are run in housing developments, community centers, libraries and schools. To date, more than 3,500 young people from diverse, low-income backgrounds have been trained as *digital connectors*. These young people have contributed more than 77,000 hours of service to their communities spreading digital literacy.

In late 2010, with federal funding from the American Recovery and Reinvestment Act (ARRA) and corporate matches, One Economy and the Broadband Opportunity Coalition, a leading civil rights organizations, will expand Digital Connectors programs substantially. The expanded program will train 2,500-3,000 youth through the launch of 167 Digital Connector programs in 19 major cities throughout the country.

2. Support a national network of summer learning programs to integrate digital and media literacy into public charter schools.

Schools should leverage their in-school summer programs to fully realize the transformative potential of digital and media literacy education, especially for children in low-income communities. More than 75 percent of American children receive no summer learning experience during the months of summer vacation. Much of the achievement gap between lower- and higher-income youth can be explained by the summer learning loss that disproportionately affects low-income children (Finn, 2010). Taking advantage of the ability to blend fun and education, and keeping kids involved in learning activities during the summer, a national network of summer learning programs in digital and media literacy for urban youth should be formed. One example of such a program is Powerful Voices for Kids, a university-school program that brings digital and media literacy education to children ages 5 to 15 through a summer learning program. The program is staffed by recent college graduates and includes a professional development program for teachers, in-school and after-school mentoring, and a research and assessment program. It receives support from the Wyncote Foundation, Verizon Foundation, and the Brook J. Lenfest Foundation.

Charter schools in low-income communities are receptive to innovation and ready to implement in-school summer learning programs. Over one million children in 3,500 schools are enrolled in public charter schools (Berends, 2009). In-school summer programs can also help inspire teachers to introduce the instructional practices of digital and media literacy during the academic year. By engaging students in enrichment activities that capitalize on their interests in mass media, popular culture and digital media, the program enables children to build positive relationships with peers and adults, use digital media and technology for learning, and develop critical thinking and communication skills. Recent college graduates and media professionals can serve as program staff for the 4 to 6 week summer learning program, providing a powerful service learning opportunity that builds civic awareness. In coordination with the National Alliance for Public Charter Schools, this program could be supported in the same manner as the National Writing Project, with direct federal funding to build, sustain, and expand the national network. Federal investment could be matched one-to-one by university, local, state, and private dollars. Congress should pass the Healthy Media for Youth Act (H.R.4925) as this competitive grant program could also support summer programs that support media literacy programs for children and youth.

3. Support a Digital and Media Literacy (DML) Youth Corps to bring digital and media literacy to underserved communities and special populations via public libraries, museums and other community centers.

There are many American adults who are not using broadband connections and services. They cite factors such as access, relevance, lack of digital literacy skills and cost among the reasons they have not become adopters of high-speed Internet and digital media. They may see media as “just entertainment” and have declared themselves “not computer people.” They may be intimidated by technology and unsure of where to start or how to use it. By opting out, they are missing out on the opportunity to use digital media to enhance daily life. To accommodate often busy lives, adults need flexible, short-term and drop-in programs, catered to their needs, where they can explore and learn, supported by knowledgeable and supportive assistants who offer just-in-time learning strategies. Most people learn new digital skills from a combination of trial-and-error strategies along with an “elbow-to-elbow” friend who offers appropriate help and support when needed.

Congress should dedicate 10 percent of Americorps funding for the development of a Digital and Media Literacy (DML) Youth Corps. The DML Youth Corps would be a service outreach program that offers training and professional development in digital and media literacy to a group of recent college graduates and places them, in teams, to work in public libraries, school libraries and technology centers, local public access centers, and other community non-profit organizations.

Three to five partnership programs from different regions of the U.S. could be tapped to recruit, train and support DML corps members. Existing programs, such

as the recently launched Public Media Corps, or a National Digital Literacy Corps as proposed in the National Broadband Plan, could be engaged or serve as models. Corps members would be responsible for offering informal digital media learning programs to adults in coordination with the hosting organization. Participants might be introduced to innovative websites like Finding Dulcinea, which helps Internet users quickly and easily find the best, most credible websites. In coordination with the American Library Association, some members of this team could be responsible for hosting a “Silver Surfers Week” based on the model developed in the U.K., which is a library-based program designed to support the development of digital and media literacy competencies among people ages 55+. Corps members could receive a small stipend for their 12-month service.

Partnerships for Teacher Education

4. Support interdisciplinary bridge building in higher education to integrate core principles of digital and media literacy education into teacher preparation programs.

Digital and media literacy education cannot come into the classroom without teachers who have the knowledge and skills to teach it. At the present time, many K–12 educators are not familiar with the instructional practices of digital and media literacy education, creating a leadership gap in schools. A parallel gap exists at most colleges and universities because the silos between disciplines mean there is little interface between faculty in the schools of education and communication. Most schools of education lag behind in bringing innovative digital and media literacy education to their students because faculty do not make active use of digital media themselves. Most faculty in schools of communication specialize in professional digital media training but have little expertise in developing non-specialist programs that address the needs of children, youth and other underserved populations. Teacher education programs must give their students rich digital and media literacy learning experiences if they hope to inspire them to include this pedagogy in their own teaching.

Future teachers could be well served if colleges and universities invested in the building of interdisciplinary bridges that bring faculty and students together for co-learning opportunities. Programs at the University of Minnesota, the University of New York at Buffalo and Stony Brook, the University of Southern California, Temple University, Syracuse University, Webster University in St. Louis, Sacred Heart University in Connecticut and other schools have begun such initiatives, bringing together faculty in schools of communication and education for community-based learning initiatives.

State departments of education should make available a competitive pool of monies exclusively for university and college partnerships to support cross-disciplinary teacher education programs in digital and media literacy education

that enable intensive collaboration between faculty and students in education and communication/media studies programs to support community-based digital and media literacy learning. These colleges and universities should develop certification programs in digital and media literacy so that school districts can hire teachers with this specific set of knowledge and skills.

5. Create district-level initiatives that support digital and media literacy across K–12 via community and media partnerships.

To integrate digital and media literacy education into the curriculum, teachers already in service must receive meaningful staff development. The average American teacher is 50 years old and will be working for another 10 to 15 years (Ingersoll, 2009). School districts should dedicate funding to support a fast-track, 12-month coordinated staff development program in digital and media literacy at the district level. This could be staffed by teams that include technology specialists, library/media educators, education and communication faculty and community partners, including those from professional media organizations. Training should make use of the instructional practices of digital and media literacy education. School districts could offer opportunities to “catalyst teachers” who would participate in 10 full days of professional development in partnership with a college or university over the course of an academic year. Some of this training can be offered online. Upon completion of the program, educators will receive a certificate that enables them to offer professional development to others in their district. A rigorous evaluation component should assess program impact on both teachers’ classroom practices and their students’ knowledge and skills. States should make available matching funds for school districts that invest in teacher education programs in digital and media literacy. Foundations should support research on district-level initiatives to help develop a base of scholarship to support the field.

6. Partner with media and technology companies to bring local and national news media more fully into education programs in ways that promote civic engagement.

News media resources can be powerful tools to support citizenship education and strengthen digital and media literacy competencies. Whereas in the past, access to print news required a subscription and TV news content was available only by viewing at a specific time, now it is at our fingertips on a 24/7 basis. New services are emerging online to help people use, analyze and share news content. As the Knight Commission report noted, technology companies can make an enormous contribution to the public interest by volunteering their expertise and resources.

There are a host of innovative online news tools already on the market that could better enable teachers and students to use and analyze print, online and television news as part of general education. For example, the Know the News

project from Link TV enables students to remix broadcast news, discovering how choices in language, image and editing shape the meaning-making process. The New York Times Learning Network has over 3,000 lesson plans and activities that help teachers and students easily and meaningfully connect current events to perennial classroom topics and enable students to comment on the news. Video news aggregation services like Red Lasso (www.redlasso.com) make it possible for people to select, edit and circulate excerpts of local TV news content for private or public purposes, selecting and embedding clips of local news from more than 150 media markets. News Trust (www.newstrust.com) uses a news ratings system to enable people to see how others evaluate the quality of informational content of print news media reports. NBC Learn has launched I-Cue (www.icue.com), a social networking website where NBC video clips and related news stories are fashioned into virtual trading cards.

At the present time, however, few educators are taking advantage of these new tools. To help develop a cadre of teacher leaders to spread the word about the value of using existing online news tools, modest grants from media and technology companies could be used to support partnerships between the developers of these new tools and key educational groups. School districts, community colleges, museums, libraries, colleges and universities could be invited to apply for these funds, which would support teacher education and outreach activities. This would empower educators and their students to discover fresh ways to engage with local news using new online resources. Well-publicized examples of effective instructional strategies for using these tools, generated by educators and students themselves, could also support the growth of digital and media literacy education across the disciplines and content areas.

Research and Assessment

7. Develop online measures of media and digital literacy to assess learning progression and develop online video documentation of digital and media literacy instructional strategies to build expertise in teacher education.

It is important to make a case for the importance of digital and media literacy—and offering compelling evidence of need is a vital first step. Many people who have well-developed digital and media literacy competencies wrongly assume that others have the same levels of knowledge and skills they possess. Those who lack these skills may be unaware of the utility or value of these competencies. Compelling test results are essential to help establish the importance of—and need for—digital and media literacy education.



Figure 4: Top-down and Bottom-up Assessment Strategies

Two key action items are proposed here that reflect the need for both top-down and bottom-up assessment strategies: (a) online measures of students' learning progression and (b) video documentation of instructional practices to support best practices research that will enhance teacher education.

Online Measures to Assess Students' Learning Progression – Measures of digital and media literacy are desperately needed to measure learning progression. There are so many dimensions of media and digital literacy that it will take many years to develop truly comprehensive measures that support the needs of students, educators, policymakers and other stakeholders. Although “technological literacy” will be part of the 2012 National Assessment of Educational Progress (NAEP), this framework will *not* include digital and media literacy competencies (Cavanaugh, 2009). Therefore, an online test dedicated to digital and media literacy is needed. First, three to five benchmarks for assessment need to be developed, targeted to children and young people ages 9, 14 and 19. This could be used to both establish the need for new programs and to measure program effectiveness. The Department of Education should initiate funding to support a simple online test requiring no more than 30 minutes to complete that could measure the ability to (a) use digital tools including basic and more advanced skills, (b) analyze and evaluate the author's purpose and point of view, (c) identify ethical issues in message production and reception, (d) make judgments of the credibility of information sources and (e) compose messages using language, image and sound.

Video Documentation of Instructional Practices – Like most professionals, teachers learn new skills best when they have the opportunity to observe and analyze the practices of their peers and colleagues. An online database of video excerpts of digital and media literacy learning is needed as a resource for teacher education programs locally, district and statewide, nationally and around the world. These video excerpts should be accompanied with teacher-created lesson plans, samples of student work and other materials, including opportunities for users to comment, review and critique. Such a resource should also be used to develop research evidence to identify “best practices” by determining which approaches to digital and media literacy education are most effective. It could also be used as the basis upon which to develop a meaningful test for new teachers to measure their ability to implement digital and media literacy instructional practices into the curricu-

lum. At the present, few states require new teachers to demonstrate competence in digital and media literacy education. The state of Texas does include measures of digital and media literacy education competencies as 15 percent of the test for new English teachers in grades 8–12 (Texas Education Agency, 2006), but the methodology of brief written vignettes with multiple choice options limits its effectiveness. The online video documentation tool should be coordinated by the National Association for Media Literacy Education (NAMLE). Members should be able to upload clips of their own teaching practices and download clips for use in teacher education. Such a database should be supported by a major philanthropy or charitable foundation in order to dramatically improve our knowledge of effective practices in teacher education for digital and media literacy education.

Parent Outreach, National Visibility, and Stakeholder Engagement

8. Engage the entertainment industry’s creative community in an entertainment-education initiative to raise visibility and create shared social norms regarding ethical behaviors in using online and social media.

As participation in digital culture spreads, we are seeing the development of social norms for how people interact with technology. Right now, there are few culturally normative practices that truly support the growth of digital and media literacy. For example, most people do not know exactly what it means to “ask critical questions” about mass media, digital media, or popular culture. Parents may not be aware of the importance of sitting with their children and learning along with them about online social media. Others may think of the television and the computer as devices for diversion or entertainment only. To strengthen people’s capacity for engaging with information, it is important to envision what digital and media literacy practices actually look like in the context of ordinary life in the family, workplace and community.

To raise the level of visibility of the concept of digital and media literacy in the home, an education-entertainment initiative, similar to the one developed for the “designated driver” campaign, is needed. In the classic case, Jay Winsten of the Harvard School of Public Health met with Hollywood producers and writers to explore possibilities for integrating the topic of the designated driver into popular television programs. Since “entertainment not only mirrors social reality, but also helps shape it by depicting what constitutes popular opinion,” the program was effective because it used short messages, embedded within dialogue, that were casually presented by characters who serve as role models within a dramatic context (Winsten, 2010). With support from the Writers Guild of America West, over a four-year period, more than 160 prime-time programs incorporated sub-plots, scenes, and dialogue on the subject, including frequent references to the use of designated drivers. Most importantly, alcohol-related traffic fatalities declined by 30 percent over this time period.

We propose targeting a specific dimension of digital and media literacy, perhaps an ethically problematic but common online behavior (like spying, harassment, intolerance, cyber bullying or sexting). A website that archives and offers examples of this programming could help parents and educators use these TV clips to extend learning and discussion opportunities in both the home and the classroom.

Working with the Writer's Guild of America West, the Creative Coalition, and potentially other partners, including Viacom, Comcast, Time Warner and Disney, entertainment programs for children, teens and adults could address the problem and identify appropriate solutions, helping to establish and reinforce social norms about responsibilities and behavior in online communication. With a modest investment in an entertainment-education campaign, social norms and ethical practices regarding the use of online social media could become part of our cultural vocabulary.

9. Host a statewide youth-produced PSA competition to increase visibility for digital and media literacy education.

Youth-media programs involve students in video, print, and online media production. There are a number of youth media initiatives across the United States despite the extremely limited funding opportunities available to them. The optimistic spirit of "youth voice" is inspiring to those who work in cities and communities. Now the field is well-developed enough to support a journal, *Youth Media Reporter*, which offers a place for youth media advocates and professionals to share ideas about what works and why. A community education movement for digital and media literacy must include a prominent role for youth media advocates. Local or national celebrities also have a role to play in bringing attention to the talents of young people who are working to develop critical thinking, social responsibility and communication skills using language, image, sound, music and interactivity.

Statewide competitions should be developed to motivate youth-media organizations to make digital and media literacy a focus topic for community advocacy. Working collaboratively, youth media organizations, high school video production programs, and local access centers, working with cable providers in coordination with *Channel One* schools should host an annual statewide PSA competition, inviting video, audio or script/storyboard submissions from youth media organizations, public access centers, and individuals. The contest might involve telling a story in 30 seconds about the benefits that come from thinking critically and being socially responsible about digital media, mass media and popular culture, using the tag line "Get Media Smart." Winning entries should be produced, hosted by a prominent celebrity, and distributed via local access and public television stations across the state.

Local libraries and public media organizations should host community screenings featuring the local producers who contributed to the project. A social media

website could showcase all entries and offer “one-stop shopping” style information about digital and media literacy concepts that can be effective in the home and community. A group of young leaders should be recognized at a special event sponsored by the White House.

10. Support an annual conference and educator showcase competition in Washington, D.C. to increase national leadership in digital and media literacy education.

To build a community education movement for digital and media literacy, visibility is needed among media professionals, members of Congress, federal and state officials, and business, trade and civic membership associations. It is important to nurture the development of professional associations for digital and media literacy education, enabling educators to share experiences about “what works,” showing how digital and media literacy education is relevant to a wide range of stakeholders. At present, the National Association for Media Literacy Education (NAMLE) hosts a national conference every two years, with the next event scheduled for July 2011 in Philadelphia. An annual conference based in Washington, D.C. would support the increased visibility of digital and media literacy education among leaders in K–12 education at both the state and national levels. Because of rapid growth in this field, an annual conference is needed.

A national leadership conference with an educator showcase competition will substantially raise the visibility of digital and media literacy among policymakers, federal officials, and leading non-profit and charitable organizations. It could help bring new leaders into the field and enable the membership organization to sustain a full-time executive director. This organization could easily triple its membership within one year with an annual national leadership conference, especially if coordinated with a larger association like the National Council of Teachers of English (NCTE), the American Library Association (ALA) or the International Society for Technology Education (ISTE). This should be combined with a visibility campaign targeted to reach college and university faculty, K–12 educators, media professionals, youth media advocates, and other stakeholders with interests and experience in digital and media literacy. A major philanthropy or charitable foundation should support NAMLE over a three-year period in order for it to position itself as a unifying force for digital and media literacy as a national and community education movement.

Who Should Do What

In order to review key action items, here is a summary of what each of the different stakeholders should do:

Executive Branch

The White House should raise visibility for digital and media literacy by asking Congress to support major initiatives in digital and media literacy. The President and First Lady could host a Rose Garden event that showcases the winners of the youth-produced PSA competition.

Congress

Congress should dedicate funding to support a network of in-school summer learning programs in digital and media literacy for public charter schools in low-income communities. This would help close the achievement gap. Direct federal funding should be used to build, sustain, and expand the national network. Federal investment could be matched one-to-one by university, local, state, and private dollars.

Congress should pass the Healthy Media for Youth Act (H.R.4925), which authorizes \$40 million annually to support educational programs in media literacy programs for children and youth.

Congress should dedicate 10 percent of Americorps funding to support the development of a DML service outreach program that offers training and professional development in digital and media literacy to a group of recent college graduates and places them, in teams, to work in public libraries, school libraries and technology centers, local public access centers, and other community non-profit organizations.

U.S. Department of Education

The Department of Education should initiate funding to support an online test requiring no more than 30 minutes to complete that could measure students' ability to (a) use digital tools; (b) identify the author, purpose and point of view of messages in print and digital formats; (c) engage in ethical reasoning about social responsibility as producers and consumers; (d) make judgments on the credibility of information sources; and (e) create simple media composition activities using language, images and sound.

Federal support for the development of an online video documentation tool is needed. Such a database would dramatically improve knowledge of "best practices" in teacher education for digital and media literacy education.

The Department of Education should support research on district-level teacher education initiatives in digital and media literacy to help develop a rigorous base of scholarship to support the field.

State Governments

State departments of education should make available a competitive pool of monies exclusively for university and college partnerships to support cross-disciplinary teacher education programs in digital and media literacy education. This would enable intensive collaboration between faculty and students in education and communication/media studies programs to support in-school community education programs in digital and media literacy.

States should make available matching funds, on 2:1 match basis, for school districts that invest in teacher education programs in digital and media literacy.

Local Governments

School districts should dedicate funding to support a fast-track, 12-month coordinated staff development program at the district level. Training should make use of the instructional practices of digital and media literacy education. School districts could offer opportunities to “catalyst teachers” who would participate in ten full days of professional development in partnership with a college or university over the course of an academic year. Some of this training should be offered online.

Each local government should assemble a small community leadership panel with interests in digital and media literacy education. In each participating community, a local group should be charged with mapping a community’s existing programs in digital and media literacy, with a special focus on youth media programs.

Libraries and Museums

The Institute of Museum and Library Services (IMLS) and the American Library Association should coordinate a DML service outreach program to host a “Silver Surfers Week,” a library-based program designed to support the development of digital and media literacy competencies among Americans ages 55 and older.

Local libraries should host community screenings featuring the local youth media producers who contributed to statewide competition. In larger cities, a social media website could showcase all entries and offer localized “one-stop shopping” style information about digital and media literacy concepts that can be effective in the home and community.

Federal Communications Commission

The FCC can informally encourage media companies to support an entertainment-education campaign to target an ethically problematic but common online behavior (like teasing, spying, harassment, intolerance, cyber bullying or sexting) for exploration in sub-plots of prime-time programming.

A website that archives and offers examples of this programming could help parents and educators use TV clips to promote discussion and extend the learning experience in the home and classroom.

Philanthropies and Charitable Foundations

Support for local government is needed to map a community's existing programs in digital and media literacy, with a special focus on youth media programs for underserved populations.

Support for the development of an online video documentation tool is needed. Such a database would dramatically improve knowledge of "best practices" in teacher education for digital and media literacy education.

Foundations should support research on district-level teacher education initiatives to help develop a base of scholarship to support the field.

A marketing/visibility campaign is needed to target college and university faculty, K–12 educators, media professionals, youth media advocates, and other stakeholders with interests and experience in digital and media literacy. A major philanthropy or charitable foundation should support NAMLE over a three-year period in order for it to position itself as a unifying force for digital and media literacy as a national and community education movement.

A foundation should provide support for research that measures the impact of an entertainment-education campaign, demonstrating how mass media can support knowledge and skill development in digital and media literacy.

News Media Organizations

Using a host of innovative online news tools already on the market that help teachers and students to use and analyze news and current events as part of general education, companies should offer modest grants to support partnerships with key educational groups. School districts, community colleges, museums, libraries, colleges and universities could be invited to apply for these funds, which would support teacher education and outreach activities.

ISPs and Technology Companies

Support is needed for professional membership associations to develop a national leadership conference with an educator showcase competition to raise the visibility of digital and media literacy among policymakers, federal officials, and leading non-profit and charitable organizations.

The Creative Community

The creative community should host an entertainment-education collaboration over a four-year period to integrate exploration of ethical and social responsibility issues as they relate to digital media. The goal would be to integrate social norms about responsibilities and rights of producers and consumers into prime-time program sub-plots, scenes, and dialogue.

Youth Media Organizations

Working collaboratively, youth-oriented media organizations should host an annual statewide PSA competition, inviting video, audio or script/storyboard submissions from youth media organizations, public access centers, and individuals. Winners would attend a White House event recognizing their achievements.

Professional Membership Associations

Working collaboratively and with support from charitable foundations, professional organizations should develop an online video documentation tool so that educators and researchers can upload clips of their own teaching practices and download clips for use in teacher education.

Working collaboratively, professional organizations should develop a national leadership conference with an educator showcase competition to raise the visibility of digital and media literacy among policymakers, federal officials, and leading non-profit and charitable organizations.

Public Television and Local Community Access Centers

Statewide competitions of youth-produced works will result in winning entries in each of the 50 states, which should be distributed via both local access and public television stations across each state.

Conclusion: Imagining the Future

A global movement for digital and media literacy education is developing all over the world (Frau-Meigs & Torrent, 2009). For example, in the European Union, media literacy has been identified as a priority for the 21st century. Media literacy encompasses all media, including television and film, radio and recorded music, print media, the Internet and all other new digital communication technologies. It is a fundamental competence not only for the young generation but for people of all ages, for parents, teachers and media professionals. This issue is seen as so critical to the development of European social and cultural development that by 2011, all the countries of the European Union will have developed preliminary metrics to measure the levels of media literacy among their citizens.

Here in the United States, we are finally beginning to move beyond the “gee whiz” phase that’s been keeping us drooling over the just-beyond-the-horizon transformative potential of the Internet, hungry for the latest game, gadget or online widget to change our lives.

It is now time for Americans to pay equal attention to the human competencies and skills that people use when becoming effective authors, audiences and active participants in the digital age.

Many educators have been wary of the well-publicized hype about the unsubstantiated benefits of digital media in education because of their own real-life experience spending six hours a day with children and teens whose lives are more or less infused with cell phones, iPods and laptops. They know that simply using digital media tools is no educational panacea. A recent study of students in grades 5–8 showed that those from disadvantaged families got lower math and reading scores once the Internet arrived in the home. Analyzing the test scores of over 150,000 students in North Carolina, Duke University researchers compared children’s reading and math scores before and after they acquired a home computer and compared those scores to those of kids who never acquired a home computer (Vigdor & Ladd, 2010). The test scores of low-income kids who got computers at home declined more than children who did not get computers. For middle-school students, social networking, YouTube videos and online games can be a potent distraction from homework and other activities.

Even young people themselves are recognizing some limitations of life online. Some are concerned that screen interaction will replace face-to-face social relationships and others wonder if online civic acts are merely “token activism,” creating an illusion of civic engagement while actually distancing people from their causes. “Such nuanced stances reveal that teens and adults are engaged in thoughtful consideration of the civic potentials of online life” (Global Kids, The Good Play Project and Common Sense Media, 2009, p. 17).

Generation after generation, we keep having to discover the obvious: technology itself is no savior. Cell phones, video games, social networking, electronic whiteboards and the Internet will not automatically improve education, any more than radio or television did. Although children and young people are using digital media, they are not necessarily becoming either smarter or more digitally literate. Novel forms of digital technologies may actually widen the achievement gap by offering potent time-consuming distractions that interfere with homework and other activities. We must not confuse just owning technology, playing video games, or using online social networks with having the habits of mind, knowledge, skills and competencies needed to be successful in the 21st century. As the Duke University study showed, computers at home are used primarily as an entertainment device unless an active, learning-oriented approach is cultivated.

Fortunately, it is possible to imagine that, in the next few years, our appreciation of the delicate balance of protection and empowerment will lead us to better

manage our “constantly connected” lives. When digital and media literacy become a fundamental part of contemporary education both in and out of schools, we will achieve these results:

- Parents will pay attention to why and how screen media is used by their children and teens at home and balance on-screen activities with other forms of play and learning to both protect and empower children and youth.
- People of all ages will internalize the practice of asking critical questions about the author, purpose and point of view of every sort of message—whether it be from political campaigns, pharmaceutical advertisements, reports and surveys issued by think-tanks, websites, breaking news, email, blogs, or the opinions of politicians, pundits and celebrities.
- Teachers will use engaging instructional methods to explore the complex role of news and current events in society, making connections to literature, science, health and history, building bridges between the classroom and the living room that support a lifetime of learning.
- People of all ages will be responsible and civil in their communication behaviors, treating others with respect and appreciating the need for social norms of behavior that create a sense of personal accountability for one’s online and offline actions.
- As a fundamental part of instruction, students will compose and create authentic messages for real audiences, using digital tools, images, language, sound and interactivity to develop knowledge and skills and discover the power of being an effective communicator.
- People from all walks of life will be able to achieve their goals in finding, sharing and using information to solve problems, developing the ability to access, analyze, evaluate, communicate and share ideas and information, participating in meaningful social action in their neighborhoods, communities, nation and the world.

In the process, teamwork, collaboration, reflection, ethics and social responsibility will flourish. Teachers will not have to complain about a generation of young people who lack the ability to identify appropriate keywords for an online search activity, those who are not aware of which American city was devastated by Hurricane Katrina, and those who cannot identify the author of a web page.

Media professionals in news and journalism, digital media, advertising, and cable and broadcast television are beginning to recognize that everybody wins when consumers are more active, engaged, intentional and strategic about their media use habits. When people have high expectations for the quality of news and entertainment, there will be more opportunity to produce quality products. By working together to build coalitions and partnerships, we must support digital and media literacy as a community education movement for all people in the United States.

References and Bibliography

Alvermann, D. (2004). Media, information communication technologies (ICT), and youth literacies: A cultural studies perspective. *American Behavioral Scientist*, 48(1), 78–83.

American Academy of Child and Adolescent Psychiatry. (2002). *Children and the news. Facts for families* (Number 67). Retrieved from http://www.aacap.org/cs/root/facts_for_families/children_and_the_news

Arnold, M. (2010). *NIE in 2010: Leaner + locally focused + digital*. Alexandria, Va.: Newspaper Association of America Foundation.

Bazalgette, C., Harland, J., & James, C. (2008). *Lifeblood of democracy? Learning about broadcast news*. Retrieved from the Office of Communications (OFCOM), Great Britain, website: http://www.ofcom.org.uk/advice/media_literacy/medlitpub/lifeblood/

Becker, S., Crandall, M., Fisher, K., Kinney, B., Landry, C., & Rocha, A. (2010). *Opportunity for all: How the American public benefits from Internet access at U.S. libraries*. Retrieved from the U.S. Impact Studies website: http://impact.ischool.washington.edu/documents/OPP4ALL_FinalReport.pdf

Berends, M., Cannata, M., Goldring, E., & Penalzoza, R. (2009, April). *Innovation in schools of choice*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, Ca.

Berry, A., & Wintle, S. (2009). *Using laptops to facilitate middle-school science learning: The results of hard fun*. Retrieved from the University of Southern Maine Center for Education Policy, Applied Research and Evaluation website: http://usm.maine.edu/cepare/pdf/Bristol_Final_Copy_cover.pdf

Buckingham, D. (2007). Media education goes digital: An introduction. *Learning, Media and Technology* 32(2), 111–119.

Cantor, J., & Nathanson, A. (1996). Children's fright reactions to television news. *Journal of Communication*, 46(4), 139–152.

Cavanaugh, S. (2009, September 14). Tech group critical of proposed NAEP standards [Web log post]. Retrieved from http://blogs.edweek.org/edweek/curriculum/2009/09/tech_group_critical_of_propose.html

Centers for Disease Control and Prevention. (2008). *Electronic media and youth: A CDC issue brief for educators and caregivers*. Retrieved from <http://www.cdc.gov/violenceprevention/pdf/EA-brief-a.pdf>

Cheney, D. (2010, June 24). Fuzzy logic: Why students need news and information literacy skills. *Youth Media Reporter*. Retrieved from http://www.youthmediareporter.org/2010/06/fuzzy_logic_why_students_need.html

Cheney, D., Knapp, J., Alan, R., & Czaplá, P. (2006). Convergence in the library's news room: Enhancing news collections and services in academic libraries. *College and Research Libraries*, 67, 395–417.

Coiro, J. (2007). *Exploring changes to reading comprehension on the Internet: Paradoxes and possibilities for diverse adolescent readers* (Unpublished doctoral dissertation). Retrieved from <http://proquest.umi.com/pqdlink?did=1372023711&Fmt=6&VType=PQD&VInst=PROD&RQT=309&VName=PQD&TS=1286780762&clientId=79356>

Common Core State Standards Initiative. (2010). *English language arts standards*. Retrieved from <http://www.corestandards.org/the-standards/english-language-arts-standards/introduction/key-design-considerations>

Dewey, J. (1923/1999). *Democracy and education*. New York, N.Y.: BiblioLife.

Eysenbach, G., & Kohler, C. (2002). How do consumers search for and appraise health information on the World Wide Web? Qualitative study using focus groups, usability tests, and in-depth interviews. *British Medical Journal*, 324, 573–77.

Finn, C. (2010, March 20). The case for Saturday school. *The Wall Street Journal*, p. W1.

Fox, S. (2006). *Online Health Search 2006*. Retrieved from the Pew Internet & American Life Project website: http://www.pewinternet.org/PPF/r/190/report_display.asp

Frau-Meigs, D., & Torrent, J. (2009). *Mapping media education policies around the world: Visions, programmes and challenges*. New York, N.Y.: United Nations Alliance of Civilizations.

Frau-Meigs, D. (2008). Media education: Crossing a mental rubicon. In U. Carlsson, S. Tayie, G. Jacquinet-Delaunay & J. Manuel Perez Tornero (Eds.), *Empowerment through media education: An intercultural dialogue*, 169–180. Goteborg University, Sweden: The International Clearinghouse on Children, Youth and Media, Nordicom in cooperation with UNESCO.

Freire, P. (1968/1996). *Pedagogy of the oppressed*. New York, N.Y.: Penguin.

Gainer, J., & Lapp, D. (2010). *Literacy remix: Bridging adolescents' in and out of school literacies*. Newark, Del.: International Reading Association.

Global Kids, The Good Play Project and Common Sense Media. (2009). *Meeting of minds: Cross-generational dialogue on the ethics of digital life*. Retrieved from <http://www.globalkids.org/meetingofminds.pdf>

Gray, L., Thomas, N., & Lewis, L. (2010). Teachers' use of educational technology in U.S. public schools: 2009 (NCES 2010–040). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, D.C.

Hargittai, E., & Walejko, G. (2008). The participation divide: Content creation and sharing in the digital age. *Information, Communication and Society*, 11(2), 239–256.

Harris, F. (2008). Challenges to teaching credibility assessment in contemporary schooling. In M. Metzger & A. Flanagan (Eds.), *Digital media, youth and credibility*, 155–179. Cambridge, Mass.: MIT Press.

Hobbs, R., Ebrahimi, A., Cabral, N., Yoon, J., & Al-Humaidan, R. (2010). *Combating Middle East stereotypes through media literacy education in elementary school*. Unpublished manuscript, Media Education Lab, Temple University, Philadelphia, Pa.

Hobbs, R., Jaszi, P., & Aufderheide, P. (2009). How media literacy educators reclaimed copyright and fair use. *International Journal of Learning and Media*, 1(3), 33–48.

Hobbs, R. (2008). Debates and challenges facing new literacies in the 21st century. In S. Livingstone & K. Drotner (Eds.), *International handbook of children, media and culture*, 431–447. London, England: Sage.

Hobbs, R. (2007). *Reading the media: Media literacy in high school English*. New York, N.Y.: Teachers College Press.

Hobbs, R. (2001). Media literacy skills: Interpreting tragedy. *Social Education* 65(7), 406–411. Retrieved from <http://downloads.ncss.org/lessons/650702.pdf>

Hobbs, R. (1998). Building citizenship skills through media literacy education. In M. Salvador & P. Sias (Eds.), *The public voice in a democracy at risk*, 57–76. Westport, Conn.: Praeger.

Horton, F. W. (2007). *Understanding information literacy: A primer*. Paris, France: Information Society Division, Communication and Information, UNESCO.

Ingersoll, R. (2009). *The aging teaching workforce: A snapshot*. Retrieved from http://www.nctaf.org/documents/NCTAFAgeDistribution408REG_000.pdf

Ito, M., Horst, H., Bittanti, M., Boyd, D., Herr-Stephenson, B., Lange, P., Pascoe, C.J., & Robinson, L. (2008). *Living and learning with new media: Summary of findings from the digital youth project*. Retrieved from the The John D. and Catherine T. MacArthur Foundation website: http://www.macfound.org/atf/cf/%7BB0386CE3-8B29-4162-8098-E466FB856794%7D/DML_ETHNOG_WHITEPAPER.PDF

Jenkins, H., Clinton, K., Purushotma, R., Robison, A., & Weigel, M. (2006). *Confronting the challenges of participatory culture: Media education for the 21st century*. Retrieved from the John D. and Catherine T. MacArthur Foundation website: http://digitalllearning.macfound.org/atf/cf/%7B7E45C7E0-A3E0-4B89-AC9C-E807E1B0AE4E%7D/JENKINS_WHITE_PAPER.PDF

- Johnston, J., Brzezinski, E., & Anderman, E. M. (1994). *Taking the measure of Channel One: A three-year perspective*. Ann Arbor, Mich.: Institute for Social Research.
- Kaiser Family Foundation. (2010). *Generation M2: Media in the lives of 8- to 18-Year Olds*. Retrieved from <http://www.kff.org/entmedia/mh012010pkg.cfm>
- Kaiser Family Foundation. (2003). *Children and the news: Coping with terrorism, war and everyday violence*. Retrieved from www.kff.org/entmedia/upload/Key-Facts-Children-and-the-News.pdf
- Knight Commission on the Information Needs of Communities in a Democracy. (2009). *Informing communities: Sustaining democracy in the digital age*. Washington, D.C.: The Aspen Institute.
- Levin, B. (2010). *Universal broadband: Targeting investments to achieve meaningful broadband access for all Americans*. The Aspen Institute Communications and Society Program, Washington, D.C.: The Aspen Institute.
- Levine, P. (2008). A public voice for youth: The audience problem in digital media and civic education. In W. L. Bennet (Ed.), *Civic life online: Learning how digital media can engage youth*, 119–138. Cambridge, Mass.: MIT Press.
- Manzo, K. (2009, March 7). Testing tech literacy [web log post]. Retrieved from http://blogs.edweek.org/edweek/DigitalEducation/2009/03/testing_tech_literacy.html
- McDevitt, M., & Chaffee, S. H. (2000). Closing gaps in political communication and knowledge: Effects of a school intervention. *Communication Research*, 27, 259–292.
- Media Education Lab (2010). Powerful voices for kids. Retrieved from <http://mediaeducationlab.com>
- Metzger, M. J. (2009). Credibility research to date. Retrieved from the Credibility and Digital Media @ UCSB website: http://www.credibility.ucsb.edu/past_research.php
- Metzger, M. J. (2007). Making sense of credibility on the web: Models for evaluating online information and recommendations for future research. *Journal of the American Society for Information Science and Technology*, 58(13), 2078–2091.
- Mihailidis, P. (2009). Media literacy: Empowering youth worldwide. Retrieved from the Center for International Media Assistance website: http://cima.ned.org/sites/default/files/CIMA-Media_Literacy_Youth-Report.pdf
- National Association for Media Literacy Education. (2007). Core principles of media literacy education in the United States. Retrieved from <http://namle.net/wp-content/uploads/2009/09/NAMLE-CPMLE-w-questions2.pdf>
- National Communication Association. (1998). *Competent communicators: K–12 speaking, listening and media literacy standards and competencies*. Washington, D.C.
- National Council for the Accreditation of Teacher Education. (2007). *Professional standards for the accreditation of teacher preparation institutions*. Retrieved from <http://www.ncate.org/public/standards.asp?ch=4>
- National Council of Teachers of English. (2003). *Position statement on multimodal literacies*. Retrieved from <http://www.ncte.org/positions/statements/multimodalliteracies>
- Newspaper Association of America Foundation. (2004). *Growing lifelong readers: A Study of the impact of student involvement with newspapers on adult readership*. Retrieved from <http://www.nieworld.com/lifelongreaders.htm>
- Office of Communications, OFCOM. (2010). *Silver surfers day*. Retrieved from <http://www.ofcom.org.uk/consumer/2010/05/silver-surfers-day-2>
- Partnership for 21st Century Skills. (2009). *Professional development: A 21st century skills implementation guide*. Retrieved from http://p21.org/documents/p21-stateimp_professional_development.pdf
- Partnow, J. (2010, June 24). Media and news media in Seattle. *Youth Media Reporter*. Retrieved from http://www.youthmediareporter.org/2010/06/media_and_news_literacy_in_sea.html

- PBS. (2010). *Digitally inclined: Teachers increasingly value media and technology*. Washington, D.C.: Grunwald Associates.
- Pew Internet & American Life Project. (2009). Teens and sexting [Press release]. Retrieved from <http://www.pewinternet.org/Press-Releases/2009/Teens-and-Sexting.aspx>
- Pinkham, C., Wintle, S., & Silvernail, D. (2008). *21st century teaching and learning: An assessment of student website evaluation skills*. Retrieved from the University of Southern Maine Center for Education Policy, Applied Research and Evaluation website: http://usm.maine.edu/cepare/pdf/Sanford_rpt_dec_08.pdf
- Place, E., Kendall, M., Hiom, D., Booth, H., Ayres, P., Manuel, A., & Smith, P. (2006). *Internet detective: Wise up to the web* (3rd ed.). Intute Virtual Training Suite. Retrieved from <http://www.vts.intute.ac.uk/detective/>
- Rothkopf, A. (2009). Keynote address to the National Forum on Information Literacy. Washington, D.C., October 15.
- Salomon, G. & Perkins, D. (1989). Rocky roads to transfer: Rethinking mechanisms of a neglected phenomenon. *Educational Psychologist*, 24(2), 113–142.
- Staksrud, E., Livingstone, S., Haddon, L., & Ólafsson, K. (2009). *What do we know about children's use of online technologies? A report on data availability and research gaps in Europe* (2nd ed.). London School of Economics and Political Science, London, England: EU Kids Online.
- Stephens, R., & Scott, E. (2009). White paper: Ensuring workforce skills of the future. Retrieved from <http://birth2work.org/main.php>
- Texas Education Agency. (2006). *Texas educator certification preparation manual. English Language Arts and Reading 8–12*. Retrieved from http://www.texas.ets.org/assets/pdf/testprep_manuals/131_elar8_12_55003_web.pdf
- Trotter, A. (2009, January 21). Tech literacy confusion. *Education Week*.
- 21st Century Skills Incentive Fund Act, S. 1029, 111th Cong. (2009).
- U.S. Department of Education, Office of Educational Technology. (2010). *Transforming American education: Learning powered by technology*. Retrieved from <http://www.ed.gov/technology/netp-2010>
- U.S. Department of Education. (2010). *Teachers use of educational technology in U.S. public schools: 2009* (NCES 2010–040). Retrieved from <http://www.nces.ed.gov/pubs2010/2010040.pdf>
- U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance. (2008). *Improving adolescent literacy: Effective classroom and intervention practices: A practice guide* (NCEE #2008-4027). Retrieved from http://ies.ed.gov/ncee/wwc/pdf/practiceguides/adlit_pg_082608.pdf
- Vaidhyathan, S. (2008, September 19). Generational myth: Not all young people are tech-savvy. *The Chronicle Review*. Retrieved from <http://chronicle.com/article/Generation-Myth/32491>
- Vahlberg, V., Peer, L., & Nesbit, M. (2008). If it catches my eye: An exploration of online news experiences of teenagers. Retrieved from the Media Management Center, Northwestern University website: <http://www.media-managementcenter.org/research/teeninternet.pdf>
- Vigdor, J., & Ladd, H. (2010). *Scaling the digital divide: Home computer technology and student achievement*. Retrieved from http://www.hks.harvard.edu/pepg/PDF/events/colloquia/Vigdor_ScalingtheDigitalDivide.pdf
- Walma van Der Molen, J. (2003, May). *Direct fright or worry? A survey of children's fear reactions to violence in fiction and news*. Paper presented at the annual meeting of the International Communication Association, San Diego, Ca.
- Winsten, J. (2009, December 28). *The designated driver campaign: Why it worked*. Retrieved from http://www.huffingtonpost.com/jay-winston/designated-driver-campaig_b_405249.html
- Witherspoon Institute. (2010). *The social costs of pornography: A statement of findings and recommendations*.
- Wojcicki, E. (2010, Summer). Journalism: English for the 21st Century. Nieman Reports. Retrieved from <http://www.nieman.harvard.edu/reportsitem.aspx?id=102407>

APPENDIX



Portraits of Success

Dozens of digital and media literacy programs are taking hold across the nation and around the world. The following portraits of success offer some illustration of the many creative initiatives that bring together diverse stakeholders. This list, assembled from information provided by the author and the organizations' websites, is intended to illustrate the variety of programs engaging people of all ages in acquiring the critical skills for digital citizenship.

Adobe Youth Voices Launched in June 2006 by the Adobe Foundation, Adobe Youth Voices is designed to provide youth in underserved communities with the critical digital communication skills they need to become active and engaged members of their communities and the world at large. Participating youth ages 13 to 18 use cutting-edge multimedia tools to create videos, animations, photo essays, presentations, music and other pieces and share their ideas about topics that concern or interest them, such as peer pressure, religious and cultural identity, substance abuse, environmental degradation and the impacts of war. These works are then shared through Youth Voices' global network of over 500 participating sites, grantees and organizations in 32 countries that engage youth and educators in schools and out-of school programs. Visit <http://youthvoices.adobe.com/about>

BBC School Report One of the most ambitious news literacy programs ever developed is the BBC "School Report" project. This program enables 25,000 children in more than 700 U.K. schools to learn about the practice of journalism and news production. Children develop community-based television and radio news reports that air locally and nationally during a specific time period. School Report's mission is to engage young people with news, bring their voices and stories to a wider audience and share some of the public service values behind content creation, such as fairness, accuracy, and impartiality, since so many young people are content creators and distributors. The main aim of BBC News School Report is to interest young people in news of all sorts, and the world around them, by giving them the chance to make their own news. The program helps students develop skills of gathering information, teamwork and time management, while providing an opportunity to discuss the responsibilities involved in broadcasting to a worldwide audience. Visit http://news.bbc.co.uk/2/hi/school_report

Center for News Literacy The Center for News Literacy at Stony Brook University teaches students how to use critical thinking skills to judge the reliability and credibility of news reports and news sources. The Center recruits experienced journalists in career transitions to be News Literacy Fellows for two years and works with them to launch new undergraduate courses with curricula that meet the needs of

the host universities. With initial funding from the John S. and James L. Knight Foundation, the Center also is at work developing curriculum materials for high schools and the general public and a National News Literacy website through which students can collaborate on news literacy projects. Visit <http://www.stonybrook.edu/journalism/newsliteracy>

City Voices, City Visions Since 2000, the University at Buffalo's Graduate School of Education has been working in collaboration with the Buffalo Public Schools to help bring digital and media literacy to teachers and students through the project City Voices, City Visions (CVCV). CVCV promotes student academic achievement and empowerment through the use of digital video tools and an emphasis on visual and analytic thinking and understanding. The program includes professional development for urban teachers to learn the use of digital video arts and communication technologies to help students meet higher learning standards in literacy and the academic disciplines. CVCV publishes and archives digital videos produced by students and teachers as curriculum and community resources. Visit <http://gse.buffalo.edu/org/cityvoices>

Common Sense Media This San Francisco-based non-profit organization provides independent information and tools about media and technology in the home so that families can make informed choices and have a voice about the media they consume. The Common Sense Media website includes reviews and ratings of movies, games, mobile apps, websites, books and music by professional reviewers, parents and kids. There are also resource materials specifically designed for parents and educators. Visit <http://www.commonsensemedia.org>

DigMe The Digital Media (DigMe) Program at Roosevelt High School in Minneapolis uses digital media to help urban high school students learn to think critically, build meaning and demonstrate their understanding across the subjects. The curriculum is based on the national standards in Media Literacy and 21st Century Skills. Students participate in daily reading, writing, analyzing, and discussion activities, and design and produce projects that demonstrate learning in a variety of ways, often using digital media tools. The school partners with faculty from the University of Minnesota from the fields of education, new technologies and journalism. They aim for strong school-to-work connections by establishing relationships and internships with local technical schools, artists, studios and businesses in the field of new media and digital media. Visit http://roosevelt.mpls.k12.mn.us/Digital_Media.html

Finding Dulcinea This website addresses the "context deficit" that occurs with online searching. The name of the website is a reference to Miguel Cervantes'

classic work of fiction, the hero Don Quixote searches for an imaginary, idealized woman named Dulcinea. The website offers a section, “Behind the Headlines,” which provides contextual background information on news and current events, while another section, “Suspicious Sites,” offers an analysis of how sites with inaccurate and misleading information can be made to seem credible. Visit <http://www.findingdulcinea.com>

Global Kids This organization uses digital media to promote global awareness and youth civic engagement. Students develop digital literacy competencies, engage in substantive online dialogues and participate in civic action. For example, in the Virtual Video Project, students learn about critical human rights issues and filmmaking and then create educational “machinima”—short animated films created using virtual worlds—to promote awareness and action. Visit <http://www.globalkids.org>

IFC Media Project This television series airs on the Independent Film Channel (IFC). This documentary series examines America’s news media and seeks to uncover the truth about the news. In its first two seasons it was hosted by award-winning journalist Gideon Yago and featured in-depth reporting on controversial topics facing today’s media, including how the U.S. is portrayed in world media and the impact of the economic downturn on the news industry. Visit <http://www.ifc.com/about>

Kids Voting A media education program that gets students involved in civics, this program offers K–12 curriculum for use during an election campaign. The program integrates civics education and preparation for voting with newspaper reading and media analysis. The program now reaches an estimated 4.3 million students, 200,000 teachers, 10,600 schools, and 20,000 voter precincts. Students are encouraged to analyze and critique political advertisements, news stories, and candidate debates. Careful studies of Kids Voting show that after children are involved in the program, there are strong increases in reading newspapers, paying attention to campaign and related news on television, and discussing campaign-related issues with peers and parents (McDevitt & Chaffee, 2000). Visit <http://www.kidsvotingusa.org>

Know the News Developed by Link TV, Know the News is an online learning tool for journalism students and citizen journalists, exploring the issues that shape television news, including bias, authorship, authenticity, ethics, and media ownership. Funded by the John S. and James L. Knight Foundation, the website is designed to help users think critically about TV news by framing news coverage in a global context based on Link TV’s original productions, *Global Pulse* and *Latin*

Pulse, which compare, contrast and analyze news coverage from more than 70 broadcasters worldwide.

National Association for Media Literacy Education (NAMLE) This national membership organization is dedicated to ensuring that all people have the skills needed to critically analyze and create messages using the wide variety of communication tools now available. NAMLE brings together a broad-based coalition of media literacy practitioners and advocates from diverse fields, professions, and perspectives in a national, non-profit membership organization to act as a key force in bringing high quality media literacy education to all students in the United States, their parents, teachers, health care providers, counselors, clergy, political representatives, and communities. It holds conferences every two years and publishes an online, open access, peer-reviewed journal, the *Journal of Media Literacy Education*. Visit <http://namle.net>

National Writing Project The NWP is a nationwide network of educators working to improve the teaching of writing and learning in the nation's schools and communities. They provide high-quality professional development programs to teachers across disciplines and at all levels, from early childhood through college. NWP's national network includes more than 200 university-based sites located in all 50 states. They have begun to explore digital and media literacy with a special program for their members called "Digital Is" where educators share work and practice and think across a variety of learning environments about elements that support effective digital writing and learning for students. Visit <http://www.nwp.org>

Powerful Voices for Kids This university-school partnership is a collaborative program supported by the Media Education Lab at Temple University's School of Communications and Theater and the Russell Byers Charter School in Philadelphia. The program offers a comprehensive media literacy and technology integration program for children ages 5–12 that includes a 4-week summer learning program for children, a staff development program for educators, in-school and after-school mentoring, and a research and assessment component. The program is designed to strengthen children's abilities to think for themselves, communicate effectively using language and technology tools, and use their powerful voices to contribute to the quality of life in their families, their schools, their communities, and the world. Evidence from the program reveals statistically significant gains in children's ability to identify the author, purpose and target audience of a media message. Visit <http://mediaeducationlab.com/powerful-voices-kids>

Project Look Sharp Developed at Ithaca College, this program provides materials, training and support for the effective integration of media literacy with critical

thinking into classroom curricula at all education levels. They offer professional development programs to educators across the state of New York, working in close coordination with the local school districts in the surrounding communities. Their multimedia materials enable social studies and science teachers to integrate critical analysis of news media into the K–12 curriculum. For example, Media Construction of War includes a 125-page kit that analyzes *Newsweek* magazine’s coverage of the Vietnam War, Gulf War and the war in Afghanistan. The kit includes three dozen slides of carefully-selected *Newsweek* covers with teacher guides for each, histories of all three wars, a 12-minute video and a lesson plan on media coverage of the Persian Gulf War. Students score information about the wars in Vietnam, the Persian Gulf, and Afghanistan while examining how media influences public opinion of current events and how to ask key media literacy questions about author, purpose and point of view. Visit <http://www.ithaca.edu/looksharp>

Project New Media Literacies Located at USC’s Annenberg School for Communication, this program explores how to best equip young people with the social skills and cultural competencies needed for full participation in an emergent media landscape. They have developed resources for both in and out of the classroom for educators and learners who are interested in further understanding the new media literacies and integrating them into their learning environments. Visit <http://newmedialiteracies.org>

Salzburg Academy on Media and Global Change This summer education program gathers 60 university-level students and a dozen faculty from five continents for three weeks in Austria. The program explores media’s role in global citizenship, examining these questions: “How do news media affect our understanding of cultures and politics?” and “How can media better cover global problems and report on possible solutions?” The program was created by the International Center for Media and the Public Agenda, an academic institute based at the University of Maryland. Students and faculty work together to create a series of curriculum materials to explore the intersections of global media, freedom of expression, and civil society. The first half of the curriculum emphasizes basic media literacy skills—comprehension, analysis, and evaluation. Students learn to identify what news is and how media, as well as other actors, decide what information matters. They monitor, analyze and compare media coverage of people and events and understand media’s role in shaping global issues. The second half of the curriculum highlights the connections between media literacy and civil society and informs individuals about the importance of exercising their rights to freedom of expression. Visit <http://www.salzburg.umd.edu/salzburg/new>

Silver Surfers Day In England, the Office of Communications, the British national government agency responsible for communications regulation, hosts a national

event, Silver Surfers Day, with more than 1,500 events across the country specifically for people aged 55 and older to get a gentle introduction to the Internet. Participating businesses and organizations in the community determine how they will participate and what events they will offer. Older adults may learn about sharing photos, online banking, finding health care information or other activities tailored to their needs and interests. Visit <http://silversurfers.digitalunite.com>

St. Louis Gateway Media Literacy Partners This collaborative partnership brings together educators, parents, media professionals and citizens in the St. Louis metropolitan area. For four years, they have hosted Media Literacy Week, which offers a myriad of public events supported by nearly a dozen community organizations, including universities and colleges, school districts, non-profit organizations and health care organizations. The partnership helps spread the word on the importance of media literacy and media literacy education, including the connection between digital and media literacy skills and economic development, with partners sharing the costs of developing programs and services for the community. Their citizen base includes public and private pre- K–12 teachers, parents and administrators; higher-education faculty and administrators from various academic disciplines; after-school program leaders and employees; arts and culture leaders; health and allied-health professionals; media businesses; media communicators and producers; public-policy makers; public and private librarian-technologists, and business professionals. Visit <http://www.gmlpstl.org>

The News Literacy Project This is an educational program that is bringing experienced journalists into middle school and high school classrooms to teach students the critical thinking skills they need to be smarter and more frequent consumers and creators of credible information across all media. Students are learning how to distinguish verified information from raw messages, spin, gossip and opinion and are being encouraged to seek news and information that will make them well-informed citizens and voters. The project was founded in early 2008 by Alan Miller, an investigative reporter for the *Los Angeles Times*, after speaking to his daughter's Bethesda, Md. middle school class about why journalism matters. Visit <http://www.thenewsliteracyproject.org>

Youth Media Reporter YMR is a professional multimedia journal that serves practitioners, educators and academics in the youth media field. The journal helps to build the field by documenting the insights and leading lessons in engaging young people in video, film, television, radio, music, web, art, and print. Managed by the Academy for Educational Development and supported by the Open Society Institute and the McCormick Foundation, YMR is a multi-media web journal that publishes 6–8 high quality articles every other month. Visit <http://www.youthmediareporter.org>

About the Author

Renee Hobbs has spent a lifetime helping educators around the nation and around the world to integrate digital and media literacy into education through research, curriculum development and advocacy.

She is a Professor of Communication at Temple University's School of Communications and Theater, where she founded the Media Education Lab in the Department of Broadcasting, Telecommunications and Mass Media. Over her career, she has contributed dozens of scholarly articles, multimedia curriculum resources and professional development programs to advance the quality of media literacy education in the United States and around the world.

Hobbs is a field builder. She created the first national-level teacher education program for the media literacy movement in 1993 at the Harvard Graduate School of Education. She helped create the Partnership for Media Education, which evolved into the National Association for Media Literacy Education (NAMLE), the national membership organization for media literacy. She served as president in 1998. She is co-editor of the *Journal for Media Literacy Education*, an open-access, online, peer-review journal. She also created *Assignment: Media Literacy*, a comprehensive K–12 curriculum and staff development program for media literacy sponsored by Discovery Communications and the Maryland State Department of Education.

In 2008, Renee collaborated with Philadelphia school leaders to create Powerful Voices for Kids, a university-school partnership to address the needs of low-income and minority children in terms of media, technology and digital learning. Powerful Voices for Kids is a comprehensive program for elementary schools that offers a summer enrichment program for children, staff development for educators, hands-on mentoring and curriculum development support for teachers, and a program of research designed to develop alternative assessment methodology to document the development of children's critical thinking and communication skills.

Hobbs' scholarly work explores the intersection of the fields of media studies and education. Her book *Teaching the Media: Media Literacy in High School English* (Teachers College Press, 2007) provides the first large-scale, empirical evidence of the impact of media literacy education on reading comprehension skills. Exploring the value of online games for learning, and with support from the U.S. Office on Women's Health, she created My Pop Studio (www.mypopstudio.com), a free, award-winning multimedia edutainment website that introduces tween girls to media literacy concepts by taking them "behind the scenes" of popular music, television, magazines, and online media where they can compose their own music, comics, and movie trailers.

In 2007, Renee became the recipient of a research grant from the John D. and Catherine T. MacArthur Foundation with her colleagues Pat Aufderheide and Peter Jaszi at American University in Washington, D.C. to work on copyright and fair use issues in media literacy education. Her book *Copyright Clarity: How Fair Use Supports Digital Learning* (Corwin/Sage, 2010) helps teachers understand their rights and responsibilities under copyright law as it applies to digital learning.

Teachers benefit from instructional strategies that help them explore the power of mass media and social media as tools for learning. With support from PBS, she created *Access, Analyze, Act: A Blueprint for 21st Century Civic Engagement*, an interactive website for teachers designed to strengthen their ability to teach about the 2008 presidential election using news and social media tools developed by the PBS community.

The Aspen Institute

Communications and Society Program

www.aspeninstitute.org/c&s

The Communications and Society Program is an active venue for global leaders and experts to exchange new insights on the societal impact of digital technology and network communications. The Program also creates a multi-disciplinary space in the communications policy-making world where veteran and emerging decision-makers can explore new concepts, find personal growth, and develop new networks for the betterment of society.

The Program's projects fall into one or more of three categories: communications and media policy, digital technologies and democratic values, and network technology and social change. Ongoing activities of the Communications and Society Program include annual roundtables on journalism and society (e.g., journalism and national security), communications policy in a converged world (e.g., the future of international digital economy), the impact of advances in information technology (e.g., "when push comes to pull"), and serving the information needs of communities. For the past three years, the Program has taken a deeper look at community information needs through the work of the Knight Commission on the Information Needs of Communities in a Democracy, a project of the Aspen Institute and the John S. and James L. Knight Foundation. The Program also convenes the Aspen Institute Forum on Communications and Society, in which chief executive-level leaders of business, government and the non-profit sector examine issues relating to the changing media and technology environment.

Most conferences utilize the signature Aspen Institute seminar format: approximately 25 leaders from a variety of disciplines and perspectives engaged in roundtable dialogue, moderated with the objective of driving the agenda to specific conclusions and recommendations.

Conference reports and other materials are distributed to key policymakers and opinion leaders within the United States and around the world. They are also available to the public at large through the World Wide Web, www.aspeninstitute.org/c&s.

The Program's Executive Director is Charles M. Firestone, who has served in that capacity since 1989, and has also served as Executive Vice President of the Aspen Institute for three years. He is a communications attorney and law professor, formerly director of the UCLA Communications Law Program, first president of the Los Angeles Board of Telecommunications Commissioners, and an appellate attorney for the U.S. Federal Communications Commission.