

DIGITAL PUBLIC SERVICE MEDIA NETWORKS TO ADVANCE BROADBAND AND ENRICH CONNECTED COMMUNITIES

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“We recognize the dangers of lapsing into fuzzy-minded ecstasy over the unlimited social potential of the new electronic technology. . . . [H]owever t]he opportunity is at hand to bring us together through the teaching and inspiration possible in a noncommercial telecommunications alternative. . . . [f]rom the careful cultivation of a public discourse in its most expansive and profound sense.”¹

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1. CARNEGIE COMM’N ON THE FUTURE OF PUB. BROAD., A PUBLIC TRUST: THE REPORT OF THE CARNEGIE COMMISSION ON THE FUTURE OF PUBLIC BROADCASTING 298-99 (1979) [*hereinafter* CARNEGIE II].

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INTRODUCTION

In connection with the Federal Communications Commission’s (“FCC”) National Broadband Plan² and its ongoing Future of Media Project,³ as well as other initiatives, we have studied how redesigned systems of digital public service media might serve the public’s needs for information, communication, engagement, and meaningful narratives in the 21st century. This article is based on our comments to the Broadband Plan, which is currently being implemented.⁴

The Federal Communications Commission’s broadband workshops⁵ and several recent reports have documented national deficits in both the communications infrastructure and the narrative content necessary to involve the entire population in democratic decision making or foster widespread economic and social flourishing.⁶ Information gaps are

2. FED. COMM’NS COMM’N, CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN (2010) [*hereinafter* THE NATIONAL BROADBAND PLAN].

3. *Future of Media*, REBOOT.FCC.GOV, <http://reboot.fcc.gov/futureofmedia> (last visited Nov. 8, 2010).

4. Comments of Ellen P. Goodman & Anne H. Chen to the *Notice of Inquiry* a National Broadband Plan for Our Future, GN Dkt. No. 09-51 (Nov. 6, 2009), *available at* <http://fjallfoss.fcc.gov/ecfs2/document/view.action?id=7020347090> [*hereinafter* Goodman & Chen Comments].

5. *See, e.g., Workshop: Deployment Wired- General*, BROADBAND.GOV, http://broadband.gov/ws_deployment_wired.html (last visited Nov. 17, 2010); *Workshop: Deployment Unserved/Underserved*, BROADBAND.GOV, http://broadband.gov/ws_deployment_unserved.html (last visited Nov. 15 2010); *Workshop: Building the Fact Base: The State of Broadband Adoption and Utilization*, BROADBAND.GOV, http://broadband.gov/ws_adoption_fixed.html (last visited Nov. 8 2010).

6. *See, e.g.,* KNIGHT COMM’N ON THE INFO. NEEDS OF CMTY’S IN A DEMOCRACY, INFORMING COMMUNITIES: SUSTAINING DEMOCRACY IN THE DIGITAL AGE 23-32 (2009), (establishing findings for needs of information communities) [*hereinafter* KNIGHT COMM’N]; AM. UNIV. SCH. OF COMM’N CTR. FOR SOC. MEDIA, PUBLIC MEDIA 2.0: DYNAMIC, ENGAGED PUBLICS (2009), <http://www.centerforsocialmedia.org/future-public->

especially wide in the areas of investigative journalism, effective teaching materials, and content directed to underserved, minority, and poor populations.⁷ A number of these reports have called on digital public service media—building on, but also transcending, the legacy public broadcasting system—to help correct these deficits. Our research suggests that there are indeed opportunities to use digital public service media to drive broadband adoption and exploit broadband capacity for public purposes. But there are obstacles to doing so without significant restructuring of public service media systems.⁸ In theory, and in the best traditions and highest aspirations of American communications policy, these networks can maximize the “social dividend” of broadband technology.⁹ The potential is there and can be realized if public service media systems become more diverse, open, networked, innovative, technologically sophisticated, and focused on a service mission to meet public needs where the market will not go. This article offers specific proposals to further the efforts that many in the public service media community are undertaking to realize this potential.¹⁰

media/documents/white-papers/public-media-20-dynamic-engaged-publics [hereinafter PUBLIC MEDIA 2.0]; CORP. FOR PUB. BROAD., PUBLIC RADIO IN THE NEW NETWORK AGE: WIDER USE, DEEPER VALUE, COMPELLING CHANGE: REPORT AND RECOMMENDATIONS OF THE PUBLIC RADIO AUDIENCE GROWTH TASK FORCE 1-3 (2010) (discussing the need for public service media, and media organizations at large, to engage more directly with underserved and overlooked members of the population) [hereinafter GROW THE AUDIENCE].

7. See, e.g., DAVID WESTPHAL, PHILANTHROPIC FOUNDATIONS: GROWING FUNDERS OF THE NEWS 3-4 (2009) (discussing the expense of investigative journalism as a reason that commercial news organizations are declining to sponsor high-quality investigative reporting); KNIGHT COMM’N, *supra* note 6, at 27 (stating that journalistic “[c]overage falls short everywhere”); JOHN HORRIGAN, WIRELESS INTERNET USE 4 (2009), (referencing the digital divide in content that is provided for low-income minority groups); AFRICAN AM. PUB. RADIO CONSORTIUM ET AL., AN OPEN LETTER TO OUR PUBLIC MEDIA COLLEAGUES 4 (2009) (arguing that service failures to “America’s younger and more ethnically diverse audiences” make them “public service media’s great, untapped resource”).

8. See, e.g., Comments of Sesame Workshop to the *Notice of Inquiry* in American Recovery and Reinvestment Act of 2009: A National Broadband Plan for Our Future, GN Dkt. No. 09-51, at 5 (June 8, 2009), available at <http://fjallfoss.fcc.gov/ecfs/document/view?id=6520220222> (“... [T]he FCC should recognize the role that engaging, creative content can play in driving broadband demand. . . . Supporting the development of more high quality, educational content online will not only help children learn but can drive demand for broadband services by reminding parents of the educational benefits of this technology.”); Comments of One Economy Corp., to the *Notice of Inquiry* in American Recovery and Reinvestment Act of 2009: A National Broadband Plan for Our Future, GN Dkt. No. 09-51, at 6 (June 8, 2009), available at <http://fjallfoss.fcc.gov/ecfs/document/view?id=6520220204> (“prevalence of relevant content” will spur broadband adoption).

9. This term comes from CARNEGIE II, *supra* note 1, at 297.

10. See generally GROW THE AUDIENCE, *supra* note 6; AM. UNIV. SCH. OF COMM’N CTR. FOR SOC. MEDIA, SCAN AND ANALYSIS OF BEST PRACTICES IN DIGITAL JOURNALISM BOTH WITHIN AND OUTSIDE U.S. PUBLIC BROADCASTING 15 (2009) [hereinafter BEST PRACTICES]; GUPTA CONSULTING, EMBRACING DIGITAL: A REVIEW

The central goal of the FCC's broadband initiative is a familiar one: to foster universally available and technically superior communications services that encourage public dialog and learning.¹¹ That goal depends on adequate telecommunications infrastructure, but infrastructure alone is not enough. Infrastructure is the "what." The "why" of universal, fast, and reliable broadband is to connect people to information that improves their lives and the lives of others—communication that is essential to performing the functions of democratic citizenship. Linking individuals and communities to relevant information—the "how" of broadband policy—requires robust, flexible, and innovative networks. It also requires entities and individuals to *create* moving narratives, accountability reporting,¹² and a safe space to engage publics respectfully in issues of relevance to them; to *curate* information in ways that make it accessible, understandable, and visible; and to *connect* individuals to each other, to community institutions, to information that they need, and to stories that inspire.

We think of these components of broadband content circulation—creation, curation, and connection—as linking the first mile of content production to the last mile of engagement. It was to achieve this connectivity that the public broadcasting system was created in a pre-broadband era. The FCC and Congress, instigated by private philanthropic foundations, assembled the system in the 1960s from scattered local stations that were providing educational programming.¹³ In 1965, the independent Carnegie Commission called for a new system of "public television"¹⁴ that would use noncommercial programming to "deepen a sense of community in local life[,] . . . show us our community as it really is[,] . . . bring into the home meetings . . . where people of the community express their hopes, their protests, their enthusiasms, and

OF PUBLIC MEDIA EFFORTS ACROSS THE UNITED STATES (2009) [*hereinafter* EMBRACING DIGITAL]; FIRST ASPEN INST. ROUNDTABLE ON PUB. SERV. MEDIA, SUMMARY DOCUMENT FROM THE FIRST MEETING IN THE ASPEN ROUNDTABLE SERIES Feb. 1-3 (2009); *Digital Think In*, NPR, <http://digitalthinkin.ning.com> (last visited Nov. 15, 2010).

11. See A National Broadband Plan for Our Future, *Notice of Inquiry*, FCC 09-31, GN Dkt. No. 09-51, (2009) at ¶¶ 70, 88 [*hereinafter* NOI] (the Commission is designing "a plan for use of broadband infrastructure and services in advancing . . . civic participation, . . . education") (*citing* Recovery Act §6001 (k)(2)(D)).

12. LEONARD DOWNIE, JR. & MICHAEL SCHUDSON, THE RECONSTRUCTION OF AMERICAN JOURNALISM 5 (2009) (discussing the increase of "accountability reporting" by newspapers that target those who hold power and influence over members of society, including businesses, educational institutions, and cultural institutions as well as government bodies).

13. CARNEGIE II, *supra* note 1, at 33-35.

14. CARNEGIE COMM'N ON EDUC. TELEVISION, PUBLIC TELEVISION, A PROGRAM FOR ACTION, REPORT AND RECOMMENDATIONS OF THE CARNEGIE COMMISSION ON EDUCATIONAL TELEVISION (1967) [*hereinafter* CARNEGIE I].

their will.”¹⁵ This system would indeed be a *system* of stations, focused on local life, but networked to provide national programming and to connect communities to the national project.¹⁶ The Public Broadcasting Act of 1967 closely followed the Carnegie Commission’s recommendations.¹⁷

Broadband technology now allows public service media to achieve the vision that, for the past 60 years, has been largely aspirational. The federal government has invested well over \$10 billion in the public broadcasting system.¹⁸ States have invested billions more. Today there is an opportunity to leverage that public investment in public service broadcasting to create public service broadband. This article identifies features of new public service media systems that would nurture the community connections, respectful dialog, trusted journalism, and educational narratives that public broadcasting has fostered even within the constraints of its technological and structural mandates.

To be sure, there have been powerful moments in the history of public broadcasting. In many instances, it went where no one else would: gavel-to-gavel coverage of the Watergate hearings; the creation of quality children’s television; the pioneering development of science and documentary programming.¹⁹ However, public broadcasting has not

15. *Id.* at 92-99.

16. *Id.* at 3 (finding that “a well-financed and well-directed educational television system, substantially larger and far more pervasive and effective than that which now exists in the United States, must be brought into being if the full needs of the American public are to be served”).

17. Public Broadcasting Act of 1967, 47 U.S.C. § 396(a)(5) (2000) (providing that to further the general welfare, noncommercial television should be “responsive to the interests of people both in particular localities and throughout the United States, [and] which will constitute an expression of diversity and excellence . . .”).

18. *Federal Appropriation History*, CORP. FOR PUB. BROAD., <http://www.cpb.org/aboutcpb/financials/appropriation/history.html> (last visited Nov. 13, 2010) (listing general appropriations amount, though not including appropriations for digital transition and interconnection capital); CPB Appropriations History 1969-2011 (on file with authors) (listing general appropriations, appropriations for digital transition, and for interconnection capital for a total of over \$10 billion, and an average of \$35.7 million per year (ranging from \$25 to \$50 million per year) appropriated for digital infrastructure since 2002); see also *Summary of Public Television’s Legislative Requests*, APTS ACTION, INC., <http://www.pts.org/legislative/appropriations> (last visited Nov. 13, 2010) (listing approved funding to Corporation for Public Broadcasting (CPB) and CPB digital for 2008-2009 and funding requests for 2010).

19. See RICHARD SOMERSET-WARD, *QUALITY TIME?: THE REPORT OF THE TWENTIETH CENTURY FUND TASK FORCE ON PUBLIC TELEVISION* 24, 88, 125 (1993) [*hereinafter* *QUALITY TIME?*] (describing such high-quality science programming as the math series *Futures*, the Children’s Television Workshop’s science series, as well as PBS’s “gavel-to-gavel” coverage of the Senate Watergate hearings); JOHN WITHERSPOON & ROSELLE KOVITZ, *THE HISTORY OF PUBLIC BROADCASTING* 68 (Robert K. Avery & Alan G. Stavitsky rev. eds., Educ. Broad. Corp. 1987) [*hereinafter* *THE HISTORY OF PUBLIC BROADCASTING*] (noting children’s programming was a core mission since its earliest days, manifested in trusted television shows such as the *Friendly Giant* and the *Children’s Corner* in

performed adequately in sponsoring and catalyzing local content creation. With some exceptions, local broadcasting entities have not maximally exploited their physical presence in hundreds of communities to engage and serve the interests of the public. Nor has the system adequately supported independently produced content or service to the underserved.

These deficiencies have many sources, and it is not the purpose of this article to detail or justify them. It suffices to say that however public broadcasting might have been structured and its practitioners motivated, broadcast technology could never have supported the lofty aspirations of 1967. As a capacity-constrained and one-way medium, broadcasting alone has never been capable of truly engaging diverse local populations while also networking effectively on a national level with a wide array of partners. The promise of public service media can come about only if public service media networks become open, inclusive, and mission-oriented confederations of content creators, curators, and connectors, working in collaboration with the public to circulate information, incubate innovation, and stimulate conversation.

Public service media should be understood to include noncommercial entities operating on and producing for broadcast, cable and satellite, Web-only, and mobile platforms. Sometimes public service media is produced by public broadcasters; sometimes by museums, libraries, and community groups; and sometimes by individual citizens. What public service media entities might be said to share is not membership in an organization or receipt of public funds (although this is common), but the principal mission of engaging publics with information that is relevant to improving lives as lived in particular communities and shared polities. To be clear, what is distinctive about this mission is that it eschews the agendas of profit-making, partisanship, and special interests, and focuses solely on the provision of information in as useful and balanced a form as possible.

Today, public service media entities are doing much with meager resources to exploit digital technology for mission-driven purposes. Section I illustrates these efforts, focusing on the ways in which these efforts depend upon and stimulate broadband use. The fact is, however, that most of public service media resources are tied up in a public broadcasting network that is structured for 20th century communications, both as a matter of law and practice. Changes in law are needed to free resources for the most effective broadband content, curation, and connection strategies in order to realize the ambitious goals

the 1950s, and *Mister Rogers' Neighborhood* and *Sesame Street* a decade later); see also *infra* note 151 and accompanying discussion of pioneering documentary work.

of the broadband project. Changes in the way public service media is practiced are needed as well, and public policy should incentivize them. Section II outlines the public service media characteristics that would further what the Knight Commission has called healthy, “informed communities” in the digital age.²⁰

The mission of public service media is to engage publics with information relevant to improving lives in particular communities and shared polities in ways that commercial media do not.²¹ Defining public service media systems with reference to the following characteristics would support and strengthen this mission.

The first characteristic is *accessibility*. Public service media should be optimized to include as many voices, to make available as much information, and to engage as many people as possible, where and how they can best be engaged, with media and information that matters to them.

The second characteristic is *modularity*. Public service media should be structured so that noncommercial entities (such as broadcast stations, public access stations, independent producers, community media centers, museums and libraries) are able and encouraged to specialize in particular subject matter “verticals” (e.g., science, health, environment, labor), particular services (e.g., educational production, journalism, archiving, training), and particular technical competencies (e.g., applications, games, interfaces, platforms). These specialties can then be shared through digital networks over common platforms, and tailored for local needs.²²

20. KNIGHT COMM’N, *supra* note 6, at 2.

21. As the Corporation for Public Broadcasting put it:

In brief, CPB’s mission is to facilitate the development of, and ensure universal access to, noncommercial high-quality programming and telecommunication services. . . . The fundamental purpose of public service media is to provide programs and services that inform, enlighten, and enrich the public. CPB has particular responsibility to encourage the development of programming that involves creative risks and that addresses the needs of unserved and underserved audiences, particularly children and minorities.

CPB’s Goals and Objectives, CORP. FOR PUB. BROAD., <http://www.cpb.org/aboutcpb/goals/goalsandobjectives> (last visited Nov. 13, 2010).

22. This model of vertical content centers, designed to provide content that can be customized for particular purposes and localities throughout the system, animates the new CPB sponsorship of Local Journalism Centers. *See, e.g.*, Comments of the Public Broadcasting Service, to the *Notice of Inquiry* in FCC Launches Examination of the Future of Media and Information Needs of Communities in a Digital Age, GN Dkt. No. 10-25, at 15 (May 7, 2010), *available at* <http://fjallfoss.fcc.gov/ecfs/document/view?id=7020449911> (describing Local Journalism Centers as hubs specialized to provide multimedia coverage on topics of regional interest); Karen Everhart, *CPB to Aid 7 Local Journalism Centers: About 50 New Employees Will Staff Stations’ Specialized Regional Teams*, CURRENT (Apr. 5, 2010), <http://www.current.org/news/news1006localcenters.shtml>.

The third characteristic is *engagement*. Public service media systems should put engagement at the core, and develop content and curation strategies from the start to reach out to individuals, communities and, where desired, schools and other institutions. These strategies should engage people in information and narratives, provide tools for acting upon information, and finally, encourage members of the public to themselves contribute information and knowledge back through the networks.²³

The fourth characteristic is *networked*. In addition to formal networks of national and local organizations, public service media systems should allow virtual networks to arise by using technological platforms and open standards that enable entities and individuals to share content and innovate with new content and applications. National Public Radio's API is an example of this kind of platform, which has allowed many different entities to use public radio content in new ways.²⁴ More robust and expansive platforms, supporting a broader array of content, would foster partnerships among different kinds of institutions, as well as ad hoc innovation based on access to public service media materials and tools.

The fifth characteristic is *diversity*. The public service media system should be intentionally constructed to include contributions from an ethnically, economically, ideologically, and geographically diverse population; to be a platform for diverse voices; and to focus especially on the needs of those with insufficient access to relevant information.

The sixth characteristic is *innovative*. Public service media systems should be hospitable to daring experiments in journalism, storytelling, information gathering and presentation, public engagement, trans-media learning, business models, metrics, and technology.

Finally, media systems should be *transparent*. They should be meaningfully open with respect to the flow of public resources, the process of reporting and story-creation, the criteria for publicly funded grants, the projects and partnerships undertaken, impact measurements, and diversity.

23. Increasingly, public service media producers are being encouraged to build engagement strategies into the production of content, and to achieve best practices in the distribution of content flexibly through multiple platforms and collaborations. The National Center for Media Engagement, for example, is designed to provide leadership, guidance, and resources to help public media more effectively engage its community through new technologies and best practices. See, e.g., *About Us*, NAT'L CTR. FOR MEDIA ENGAGEMENT, <http://mediaengage.org/connect/about.cfm> (last visited Nov. 13, 2010).

24. *API Overview*, NPR TECH CTR. (BETA), <http://www.npr.org/api/index> (last visited Nov. 13, 2010); see also Rekha, *New, Improved Public Radio Player Now Live in iTunes*, PUB. RADIO EXCHANGE BLOG (Mar. 2, 2010), <http://blog.prx.org/2010/03/new-improved-public-radio-player-now-live-in-itunes> (describing the use of NPR API as a source of station schedule data and on-demand programs).

Accessible, modular, engaging, networked, diverse, innovative and transparent: AMEND-IT. In comments to the FCC, we called for amendments to the Public Broadcasting Act to effectuate these goals.²⁵ Below, we include a modified version of that legislative proposal. We were encouraged to see that in its National Broadband Plan, the FCC acted on our request to acknowledge the role of enhanced digital public service media networks in the broadband future.²⁶ Specifically, the Plan recognized that “public media will play a critical role in the development of a healthy and thriving media ecosystem,” identifying its “vital and unique role in our democracy” by informing individuals, leading public conversation, and building cohesion and participation in communities.²⁷ It recommended that Congress consider increasing funding to public media for broadband-based distribution and content.²⁸ It also recommended that a portion of broadcast spectrum auction proceeds be used to create a fund for public service media.²⁹ Further steps will be needed at both the FCC and in Congress to move public service media systems forward to meet 21st century needs.

I. EMERGENT DIGITAL PUBLIC SERVICE MEDIA PRACTICES: MAKING BROADBAND SERVE PUBLIC PURPOSES

The FCC produced a National Broadband Plan in response to Congress’s instruction that it consider how broadband infrastructure could be used to advance “*a broad array of public interest goals, including consumer welfare, civic participation, public safety and homeland security, community development, health care delivery, energy independence and efficiency, education, worker training, private sector investment, entrepreneurial activity, job creation and economic growth, and other national purposes.*”³⁰ The resulting Broadband Plan, in its vision and its particulars, recognizes that broadband infrastructure alone will not fulfill the enumerated national public purposes and other essential public welfare goals.³¹ Commercial interests and individual creativity alone will not supply the content, community connections, and access to information to

25. See Public Broadcasting Act of 1967, 47 U.S.C. § 396 (2000).

26. Goodman & Chen Comments, *supra* note 4, at 29-30.

27. THE NATIONAL BROADBAND PLAN, *supra* note 2, at 303.

28. *Id.* at 303-304.

29. *Id.* at 304.

30. NOI, *supra* note 11, at ¶9.

31. THE NATIONAL BROADBAND PLAN, *supra* note 2, at 303-305 (discussing the value of systems such as public media—and not just broadband connectivity or access—to accomplish democratic goals of government accountability, civic engagement, and citizen participation in government processes and decision-making).

maximize the utility of broadband infrastructure for the public good.³²

As the Carnegie Commission found in 1979, in addressing the possibilities for a more robust system of “public telecommunications”:

[T]he non-profit sector – in education, public service, and the arts – has a different bottom line from the business community. In an ultimate sense, its contributions to human betterment constitute its ‘profit.’ This is a unique form of social dividend that Western society has devised as a counterweight to the implacable economic laws of the marketplace.³³

A system of digital public service media—or more accurately, cooperative *systems* of public service media—can deploy broadband content to forge connected communities. From the start, the Public Broadcasting Act recognized that the value of “public telecommunications services” was not limited to broadcast technologies.³⁴ It recognized the potential of such services to “constitute valuable local community resources for utilizing electronic media to address national concerns and solve local problems through community programs and outreach programs.”³⁵ This vision was particularly far-reaching, considering the fact that broadcast technology of the 1960s was not well suited to meet these goals. Broadband technology, on the other hand, if combined with the creative and community assets of existing and new public service media entities, really can.

A. Functions: How Public Service Media Can “Address National Concerns and Solve Local Problems”

We have identified three core functions of digital public service

32. See *supra* citations accompanying note 7; PERSEPHONE MIEL & ROBERT FARIS, NEWS & INFORMATION AS DIGITAL MEDIA COMES OF AGE 1, 42 (2008) (describing how newspapers are reducing and shifting the scope of their original reporting, leaving a gap for more costly, less commercially viable sectors such as international news and specialized subject areas—one that participatory media entities are neither designed nor able to fill); PAT AUFDERHEIDE & JESSICA CLARK, PUBLIC BROADCASTING & PUBLIC AFFAIRS: OPPORTUNITIES AND CHALLENGES FOR PUBLIC BROADCASTING’S ROLE IN PROVISIONING THE PUBLIC WITH NEWS AND PUBLIC AFFAIRS (2008) (describing the fragmentation of the commercial media marketplace and public service media’s potential to play a role for the future nonprofit media sector); see also Howard A. White, *Fine Tuning the Federal Government’s Role in Public Broadcasting*, 46 FED. COMM. L.J. 491, 495 (1994) (describing the historical need for programming in such areas as classical music, instructional programming, and local cultural or community events as a meaningful alternative to the “entertaining, but generally uninspiring,” programs offered by commercial stations or networks).

33. CARNEGIE II, *supra* note 1, at 297.

34. Public Broadcasting Act of 1967, 47 U.S.C. § 396(a)(2) (2000).

35. *Id.* at § 396 (a)(8).

media based on the directives of the Public Broadcasting Act and research on best practices in the field. These functions are (1) to create content—particularly in the form of journalism, documentaries, educational content, and service to the rural and poor—that markets will not and that is important to individual and social flourishing;³⁶ (2) to curate content, serving to make available content that the public cannot easily access and to highlight content that might otherwise get lost; and (3) to connect individuals to information and to each other in service of important public purposes.

1. Create

Public service media should create content where there are market failures and in accordance with a public service objective.³⁷ Public service media contributions are especially needed in the areas of enterprise journalism (particularly at the local level), educational content, and content that illuminates issues of particular relevance to minority and underserved audiences.³⁸ The following successful recent projects and

36. Educational literature acknowledges the value of narratives in enhancing learning and enriching educational models. See, e.g., David Parker, *Moving Image, Media, Print Literacy and Narrative*, BFI, <http://www.bfi.org.uk/education/research/teachlearn/nate.html> (last updated Mar. 22, 2010) (discussing how narrative has long been a tool in education, particularly that of children); Bradford W. Mott et al., *Towards Narrative-Centered Learning Environments*, in *NARRATIVE INTELLIGENCE: PAPERS FROM THE 1999 AAAI FALL SYMPOSIUM* 78-82 (M. Mateas & P. Sengers, eds., 1999); Martin J. Weller, *The Use of Narrative to Provide a Cohesive Structure for a Web Based Computing Course*, J. INTERACTIVE MEDIA IN EDUC. (2000).

37. See LEONARD DOWNIE, JR. & MICHAEL SCHUDSON, *THE RECONSTRUCTION OF AMERICAN JOURNALISM* 14-25 (2009) (detailing the different kinds of journalism that the market fails to support); DEPT. FOR BUS. INNOVATION & SKILLS, *DIGITAL BRITAIN FINAL REPORT* 146-47 (2009) (discussing market failure in children's programming in Britain); *Annex 11: Market Failure in Broadcasting*, in *THE DIGITAL OPPORTUNITY: OFCOM'S SECOND PUBLIC SERVICE BROADCASTING REVIEW* (2008) (examining market failure in broadcasting with reference to the broader social value of media and communications services); Jonathan M. Phillips, *Freedom By Design: Objective Analysis and the Constitutional Status of Public Broadcasting*, 155 U. PENN. L. REV. 991, 995-96 (2007) ("Myriad justifications for public service broadcasting orbit the universe of media theory, but they all largely revolve around the idea of market failure," where market pressures drive commercial media to under-produce content thought valuable to society); Ellen P. Goodman, *Media Policy Out of the Box: Content Abundance, Attention Scarcity, and the Failures of Digital Markets*, 19 BERKELEY TECH. L.J. 1389, 1415-19 (2004) [*hereinafter Media Policy Out of the Box*] (discussing market failure theory of public service media); Monroe E. Price, *Public Broadcasting and the Crisis of Corporate Governance*, 17 CARDOZO ARTS & ENT. L.J. 417, 427 (1999) (describing rationales behind public television, including market failure).

38. Indeed, a core function of public service media has long been to reach these underserved segments. 47 U.S.C. § 396(a)(6) (citing as a policy goal to serve "unserved and underserved" audiences); *QUALITY TIME?*, *supra* note 19, at 22 (stating that an inherent component of the mission of public television is "its role as an alternative to commercial television, which is driven by concern for the marketplace, and therefore fails to capture many of the values we hold dear," and that "[p]ublic broadcasting has deep roots in education."); *THE HISTORY OF PUBLIC BROADCASTING*, *supra* note 19, at 3, 69 ("Public broadcasting's

promising future initiatives demonstrate what public service media entities can generate when acting in the public interest. All depend on broadband connectivity, while many would be dramatically better with better broadband.

Local Enterprise Journalism. The Argo Network, a pilot project of National Public Radio (NPR) funded by the Knight Foundation and the Corporation for Public Broadcasting (CPB), is designed to increase local reporting capacity among public broadcasting stations by creating, curating, and distributing Web-original content and original reporting in specialized, under-developed subject areas such as environmental policy, rural economic diversification, and public health. Content of both local and national interest is built on a common platform that allows each participant group to easily access other groups' work. The front-end platform is also designed to offer Web. 2.0 services, including blogging, search and aggregation, and social media tools.³⁹

Analysis. Chicago Public Radio developed plain-spoken coverage of the recent economic crisis on *This American Life*, which later spun off into NPR's *Planet Money*, a multimedia team covering the global economy. The output includes a high-quality podcast, Twitter feeds, a Facebook group, and a discussion-centric blog where members of the public are encouraged to comment and offer their own feedback.⁴⁰

Education. The Teacher's Domain is a free collection of over 2,000 standards-based digital resources covering a wide range of content for students and teachers.⁴¹ Developed by the Boston public station WGBH and drawing from trusted sources such as *NOVA* and *A Science Odyssey*, Teacher's Domain offers a multimedia mix of video, audio, Flash Interactive images, articles, lesson plans, and student-oriented activities for the more than 333,000 registered users in over 177 countries worldwide. Specialized content includes online professional development courses on how to use science-related media for K-12 science teachers,

programming mission traditionally has centered on alternative programming: programs which probably could not survive in the ratings-oriented commercial system, but which are perceived to be of value to particular audiences. . . . including programs for minorities; targeted groups, such as the elderly and children; and the handicapped."); Susan D. Charkes, *Editorial Discretion of State Public Broadcasting Licenses*, 82 COLUM. L. REV. 1161, 1165 (1982) (citing H.R. Rep. No. 572, at 10-11 (1967), reprinted in 1967 U.S.C.C.A.N 1799, 1801).

39. *About the Argo Network*, NPR (July 26, 2010) <http://www.npr.org/templates/story/story.php?storyId=128777262>; Laura McGann, *NPR's Argo Project Becomes the Argo Network, Mixing the Local and the National on Reported Blogs*, NIEMAN JOURNALISM LAB (Aug. 25, 2010, 12:45PM ET), <http://www.niemanlab.org/2010/08/nprs-argo-project-becomes-the-argo-network-mixing-the-local-and-the-national-on-reported-blogs>.

40. BEST PRACTICES, *supra* note 10, at 15.

41. Comments of the Ass'n of Pub. Television Stations, to the *Notice of Inquiry in A Nat'l Broadband Plan for Our Future*, GN Dkt. No. 09-51, at 2-3 (July 21, 2009), available at <http://fjallfoss.fcc.gov/ecfs/comment/view?id=6015070069>.

and an adolescent literacy media resource collection.⁴²

Bridging the Information Divide. One Economy Corporation's Public Internet Channel is another example of a non-commercial, mission-driven project. It focuses on serving low-income users by combining video series about topics such as economics and family life with interactive resources. The Channel's Web pages, for example, display a "toolbox" of options for learning, such as links to other articles and relevant information resources.⁴³ Its tutorial in everyday economics links to internal articles explaining how to file taxes online, how to properly write checks, and additional resources for understanding 401(k) plans.

2. Curate

As the amount of media content proliferates, trusted public service media entities have an important role to play as information curators. They can use their brands, community connections, technology, and editorial capacities to raise the profile of important, reliable, and innovative content.⁴⁴ They also can play a vital and currently unserved function of maintaining public archives of historically important audio and video. Such an archive, which would make vast quantities of digital information searchable and available for the public to use, could serve as an electronic public park.⁴⁵ Some of the most interesting curatorial efforts are illustrated by the following examples:

42. PBS Education has also been working on the Digital Learning Library ("DLL"), an initiative to make available a library of "purpose-built" digital learning objects (currently nearing 10,000 and growing) to every station. PBS DIGITAL LEARNING LIBRARY, <http://www.pbsdigitallibrary.org> (last visited Oct. 23, 2010); *Introducing the PBS Digital Learning Library*, PBS TEACHERS, <http://www.pbs.org/teachers/dll/> (last visited Oct. 23, 2010); Seven leading local stations will begin testing the Library in September 2010, with a focus on the teacher's experience and value of digital media in instruction. E-mail from Rob Lippincott, PBS, to Ellen P. Goodman (Aug. 30, 2010, 14:58 EDT) (on file with author).

43. BEST PRACTICES, *supra* note 10, at 23.

44. JAMES BARKSDALE & REED HUNDT, THE DIGITAL FUTURE INITIATIVE PANEL, FINAL REPORT: CHALLENGES AND OPPORTUNITIES FOR PUBLIC SERVICE MEDIA IN THE DIGITAL AGE 45 (2005) [*hereinafter* THE DIGITAL FUTURE INITIATIVE PANEL].

45. Public service media leaders have recently testified to the need for such an archive: Highly-trusted content of enormous value is languishing on the shelves of public television and radio stations. Billions of dollars worth of content assets, largely purchased with public money, are effectively lost to educators, inventors, government officials and private citizens because they have not been indexed and stored on accessible digital media. Worse still, some of these assets are in real danger of physical loss through disintegration and obsolescence.

Letter from Patricia Harrison, President & CEO, Corp. Pub. Broad., Paula Kerger, President & CEO, Pub. Broad. Serv., & Dennis Haarsager, Interim President & CEO, Nat'l Pub. Radio, to President-Elect Barack Obama (Jan. 2, 2009) [*hereinafter* Public Broadcasting Stimulus Letter] (public broadcasting stimulus request), *available at* <http://www.current.org/pbpb/documents/stimulus-request-Jan09.pdf>.

Open Platforms for Submitting and Vetting Content. Public Radio Exchange (PRX) curates independently produced radio content.⁴⁶ It now has more than 20,000 radio programs and approximately 1,000 producers available on the website, and also hosts a social network to connect young radio producers and teachers. The platform give public radio stations a much broader array of content and voices to choose from when programming their airtime, and it takes care of all the licensing and back-end business. Users can participate as well by writing reviews, creating playlists, and offering feedback to public radio station producers.⁴⁷

Aggregation of Content for Underserved Populations. New America Media (NAM) is a nationwide association of over 700 ethnic media associations that heavily relies on a networking component to curate high-quality content and reach diverse audiences.⁴⁸ It makes the content of individual outlets more accessible to general audiences, and serves as a portal by which outlets and users can connect across shared concerns. It curates and organizes multimedia content by ethnicity, by particular news beats, and by age, with a special YO! Youth Outlook project for youth media content with a strong new media focus.⁴⁹

Subject Matter Specialization. Yale Environment 360 is a new media resource that provides in-depth knowledge and curates content about the environment.⁵⁰ It fills an increasingly large gap in the area of environmental reporting, attracting young journalists, experienced reporters, and a mix of policymakers and academics to create high-quality content on its site.

Crowdsourcing Research. ProPublica, a nonprofit news venture that produces investigative journalism on under-covered political stories, recently launched an award-winning new “distributed reporting” initiative that partners with other grassroots and news organizations to collect intelligence on stories and generate story leads.⁵¹

3. Connect

The Public Broadcasting Act specifically charged public service media entities with the task of reaching out to the public and engaging

46. KNIGHT COMM’N, *supra* note 6, at 51; PUBLIC MEDIA 2.0, *supra* note 6, at 14; Josh Silver, *Public Media’s Moment*, in CHANGING MEDIA: PUBLIC INTEREST POLICIES FOR THE DIGITAL AGE 257, 276 (2009).

47. See Silver, *supra* note 46, at 276.

48. NEW AMERICA MEDIA, <http://newamericamedia.org> (last visited Oct. 23, 2010); BEST PRACTICES, *supra* note 10, at 24.

49. BEST PRACTICES, *supra* note 10, at 24.

50. *Id.* at 20-21.

51. PROPUBLICA REPORTING NETWORK, <http://www.propublica.org/ion/reporting-network> (last visited Sept. 5, 2010); see also PUBLIC MEDIA 2.0, *supra* note 6, at 40.

people with media content and information.⁵² Traditional methods of doing this have included producing teaching guides and other ancillary program-related material, as well as convening community events.⁵³ Public service media entities can now engage individuals and communities more vigorously across many platforms in the production, discussion, and use of media content. Broadband technology can connect expression to action; citizens to each other and to information; and local communities to national and global ones. Some promising new efforts include social networking sites, interactive games, maps, and community partnerships.

Social Media and Networking Tools are helping public service media entities connect with the public. Individual reporters are using Twitter for on-the-scene coverage, tag-based aggregation of links and commentary, and crowd-sourced reporting.⁵⁴ NPR participated in Twitter Vote Report and Inauguration '09, two innovative experiments that used Twitter to engage users in the election.⁵⁵ WNYC's You Produce Wiki program asks listeners through a wiki module to contribute story ideas, suggest guests, and identify fresh angles for their stories.⁵⁶ And Frontline—the well-respected PBS documentary series—is using Twitter to allow users to follow reporters as they develop and research stories in several subject-matter areas so that the creation of hour-long documentaries is more transparent and users get the benefits of the reporting that ends up on the cutting-room floor.⁵⁷

Games help connect the public service media entities with the public. The Independent Television Service (“ITVS”) has produced a series of issues-oriented games, such as World Without Oil, where nearly 2,000 gamers from over 40 countries used new media tools to simulate a response to a sustained energy crisis, and FatWorld, an online video game about the relationship between American obesity, nutrition, and socioeconomics.⁵⁸ In Games for Change, media makers promote new kinds of games that engage contemporary social issues such as

52. 47 U.S.C. § 396(a)(8) (2010) (declaring that public telecommunications services are valuable community resources for addressing national concerns and solving local problems through community and outreach programs).

53. See, e.g., *Media Policy Out of the Box*, *supra* note 37, at 1469-71 (listing examples of public service media initiatives that reach out to schools, libraries, museums, and the workplace to engage a wider audience).

54. BEST PRACTICES, *supra* note 10, at 36.

55. *Id.* at 37.

56. Silver, *supra* note 46, at 278.

57. Megan Garber, *Frontline Looks to Expand Its Docs into a Continual Conversation*, NIEMAN JOURNALISM LAB (Nov. 17, 2010, 2:30PM ET), <http://www.niemanlab.org/2010/11/the-neverending-broadcast-frontline-looks-to-expand-its-docs-into-a-continual-conversation>.

58. *Id.*

poverty, human rights, global conflict, and climate change.⁵⁹ It also serves as a knowledge base and resource hub to help organizations network and develop video game projects.

Maps are another way of connecting the public and public service media content. Online and mobile maps and visualizations can also serve a variety of reporting and educational functions. KCET Departures designs its educational curriculum so that a map is the central point for learning, where students become “narrative cartographers” by mapping out their local community and embedding pictures, stories, and multimedia with the platform itself.⁶⁰ WNYC’s *Are You Being Gouged?* asked users to report prices of milk, beer, and lettuce onto a crowdsourced map.⁶¹ In covering the economic crisis, WNYC also asked listeners to report stories of Uncommon Economic Indicators, which were then visually mapped by location.⁶²

Mashups help the public to engage more deeply with public service media content. Tools that allow users to remix video, audio, and text enable public service media to encourage user participation and create content in fresh ways. ITVS’s Filmocracy competition, for example, invited users to employ an EyeSpot online editing tool to create their own mash-ups of publicly available photographs, film footage, and video clips.⁶³

Micro-Storytelling Kiosks. A documentary project developed by the Bay Area Video Coalition and journalist Pete Nicks on Highland Hospital in Oakland involves kiosks set up in hospital waiting rooms across the country to capture and archive many diverse stories connected to the health care crisis.⁶⁴ The independent nonprofit StoryCorps also uses booths and kiosks to draw out the oral histories of thousands, many of which are then broadcast on public radio and the Internet.⁶⁵ CPB’s Public Broadcasting in Public Places, a digital initiative to bring prime-time national PBS programming to new audiences, uses interactive digital kiosks as well. For example, these kiosks in California featured edited clips from PBS’s California and American Dream Series.⁶⁶

59. GAMES FOR CHANGE, <http://www.gamesforchange.org/> (last visited Oct. 23, 2010).

60. Amanda Hirsch, *KCET’s ‘Departures’ Exemplifies Community Collaboration*, PBS MEDIASHIFT (Aug. 24, 2010), <http://www.pbs.org/mediashift/2010/08/-kcets-departures-exemplifies-community-collaboration236.html>.

61. BEST PRACTICES, *supra* note 10, at 37.

62. Silver, *supra* note 46, at 278.

63. *Id.*

64. Wendy Levy, *What R U Waiting For?*, BAY AREA VIDEO COALITION (July 14, 2009), http://www.bavc.org/index.php?option=com_content&task=view&id=1801&Itemid=1740.

65. STORYCORPS, <http://storycorps.org/your-community> (last visited Oct. 23, 2010).

66. *California and the American Dream*, CORP. FOR PUB. BROAD., <http://www.californiadreamseries.org/pbipp.htm> (last visited Oct. 23, 2010).

Higher Education Collaborations. KCET Web Stories is a set of online videos and narratives that examines and partners with communities in Los Angeles. KCET worked with students from Occidental College to produce a story on the community of Eagle Rock.⁶⁷ It is currently building a curriculum for schools and colleges in those communities to educate students about the culture, individual lives, and history of their own neighborhoods. The station will then showcase the students' work product on its website.

Institutional Partnerships. Public service media entities increasingly design documentary films in order to stimulate dialog and connections among interested publics.⁶⁸ For example, the film *Lioness*, which appeared on the ITVS television series *Independent Lens*, probed the role of women in the military and was screened at military bases, community centers, and veterans service organizations.⁶⁹

Community Partnerships. In the San Francisco Bay Area, KQED *Quest* uses its website as a multimedia hub to integrate its radio, TV, and online coverage of the community, featuring regional maps, a community blog, partnerships and activities with local libraries, museums, universities, journalism schools, and at least 25 other news outlets.⁷⁰ Unique features include an interactive map with GPS technology identifying locations where *Quest* segments were recorded; online nature hikes and walks; continuous coverage of climate-related news; a community science blog with contributions from scientists, educators, and students; and discussion and photo sharing tools.⁷¹ Philadelphia's WHYY broadcast station also partnered with the *Philadelphia Daily News* to produce a multimedia civic engagement blog, *It's Our City*, which solicits essays from users on topics related to city issues and leadership.⁷²

State Partnerships. *Workforce Learning Link* is an educational initiative between the New Jersey Network and the New Jersey Department of Labor and Workforce Development.⁷³ It uses digital television technology, streaming video, computer software, and online and print materials to provide customized, interactive training services

67. EMBRACING DIGITAL, *supra* note 10, at 21.

68. BEST PRACTICES, *supra* note 10, at 29.

69. PUBLIC MEDIA 2.0, *supra* note 6, at 20; EMBRACING DIGITAL, *supra* note 10, at 21.

70. BEST PRACTICES, *supra* note 10, at 29-30.

71. Katie Donnelly, *While Others Shrink, KQED Expands Cross-Platform News*, PBS MEDIASHIFT (Aug. 25, 2010), <http://www.pbs.org/mediashift/2010/08/while-others-shrink-kqed-expands-cross-platform-news237.html>; Comments of the Ass'n of Pub. Television Stations, *supra* note 41, at 4-5.

72. *It's Our City*, WHYY, <http://why.org/blogs/itsourcity/> (last visited Oct. 23, 2010).

73. Comments of the Ass'n of Pub. Television Stations, *supra* note 41, at 9.

and educational opportunities for welfare registrants, dislocated workers, and other job seekers.

Social Change Partnerships. Saving the Sierra: Voices of Conservation in Action documented what citizens were doing to preserve the Sierra Nevada Mountains.⁷⁴ Starting first with community outreach, the project invited local community organizations in the Sierra Nevada area to participate. The result was a multimedia website, which offered online Web stories and news from local residents and groups engaged in conservation, and later a National Public Radio documentary. With its mission to “put a human face on public policy,” Active Voice is an organization that uses film, television, and multimedia to highlight and humanize social issues such as immigration, criminal justice, health care, and sustainability. It works with media makers, funders, advocates, and thought leaders to develop key messages, repurpose digital content for distribution, and produce ancillary and educational resources through national and local partnerships.⁷⁵

Community Media Centers. channelAustin is an example of a non-commercial, community-based digital media center.⁷⁶ It provides access to open source Web tools, computer labs, Web streaming and digital cable distribution, and networked content management in order to target youth in after-school programs, neighborhood organizations, and non-profits for training.⁷⁷ It aims to be a regional hub for digital community media, connecting underdeveloped areas to cultural and economic opportunities in the rest of the city.⁷⁸

B. *Structure: Designing Systems of Digital Public Service Media for the 21st Century*

We could fill this paper with many more examples like those above, but could cite to even more projects never launched because public service media structures could not support them or broadband capabilities could not sustain them. The examples included, and the ones not included, say something about public service media’s potential to

74. Jesikah Maria Ross & Catherine Stifter, *Collaboration in Action: Strategies for Developing and Distributing Multiplatform Documentaries*, AM. U. SCH. OF COMM. CTR. FOR SOC. MEDIA, <http://www.centerforsocialmedia.org/making-your-media-matter/documents/case-studies/collaboration-action-strategies-developing-and-distr> (last visited Oct. 23, 2010).

75. ACTIVE VOICE, <http://activevoice.net/> (last visited Oct. 23, 2010).

76. MARTHA FUENTES-BAUTISTA, BEYOND TELEVISION: THE DIGITAL TRANSITION OF PUBLIC ACCESS 1-2 (2009) (providing an in-depth examination of channelAustin as a case study for noncommercial digital community media centers) [*hereinafter* BEYOND TELEVISION].

77. *Id.* at 12-14.

78. *Id.* at 24.

contribute to civic engagement and informed communities using broadband and other technologies. Even more importantly, however, they point to lost opportunities and latent capacities. Highly localized or niche experiments are not good enough. This country could have much better systems of public service media and much more powerful contributions to public life if there were reforms within the legacy public broadcasting structure and integration of the legacy system with non-broadcast public service media entities. For this to happen, the Public Broadcasting Act must be amended—a point covered in the next section. Just as importantly, the practices of noncommercial media entities and the incentives created by their funders must change.

What would a fully realized system of digital public service media look like? What structures would best support the functions of creating, curating, and connecting for an increasingly diverse population? What structures would generate commercially unviable content that is composed of “the reverent and the rude, the disciplined and the rambunctious – a celebration of American freedom in all its unpredictable varieties”?⁷⁹ What structures would allow us to “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. . . [?]”⁸⁰

Based on our review of best practices in the field, we believe that the following characteristics are desirable in any future set of digital public service media networks in order to realize the goals of the Act in the digital context—to AMEND-IT so that the law aligns with today’s technological capabilities and needs.

1. Accessible

The Public Broadcasting Act envisioned a universally available service that met the needs of the entire population to engage with information.⁸¹ Making this ideal of public access and public service operational requires a degree of collaboration and openness that is uncommon among public service media entities today. The public must be able to easily access content created with a public service mission, especially burgeoning noncommercial journalism efforts. Likewise, those creating such content must be able to easily access the public. Moreover, meaningful access means that public service media must be available to all over all widely used communications platforms, particularly mobile

79. CARNEGIE II, *supra* note 1, at 300.

80. *Id.*

81. 47 U.S.C. § 396(a)(9) (2009) (declaring it in the public interest for the government to ensure that “all citizens of the United States have access to public telecommunications services”).

devices.

There are some promising beginnings of collaboration both among public broadcasters themselves and between broadcasters and other public service media entities (e.g., cable access stations or local journalism non-profits).

Station Collaborations. In Cleveland, WVIZ and WCPN (the city's PBS and NPR stations) jointly created ideastream, a public service multiple media organization that brings together different educational and public service media programs to better serve the Cleveland community.⁸² It now includes local public radio and television channels, educational and public service cable channels, broadband interactive video distance learning, and Internet-only sources.

Public-Private Hybrids. The Bay Area Video Coalition Producer's Institute pairs independent and public service media makers with commercial Web tools to help them engage public participation by working with digital media.⁸³ For example, in *iWitness*, an online project of the PBS series *Frontline/World*, BAVC trainers worked with producers to build tools for citizen journalism by combining webcams with Skype. The project resulted in unique pieces on the Johannesburg riots.⁸⁴

Community Media Partnerships. Denver's Open Media Project is a collaborative initiative that connects six public access facilities to implement open source and Web-based tools for public access producers and staff.⁸⁵ It has helped other community media groups like channelAustin to develop an open source video content management system that allows users to conduct most of their transactions through the Web.

Involving New Networks of Users and Makers. The Public Broadcasting Act envisioned that public service media would amplify voices seldom heard through commercial media.⁸⁶ Today, the possibilities for inclusion are greater than ever. Public service media can, as *The Public Insight Journal Network* (a partnership between American Public Media and Gather) has, create networks of individuals willing to serve as expert sources about particular trends in their cohorts and

82. *ideastream*, http://www.ideastream.org/ideastream/about/about_ideastream (last visited Nov. 28, 2010).

83. PUBLIC MEDIA 2.0, *supra* note 6, at 26.

84. *Id.*

85. BEYOND TELEVISION, *supra* note 76, at 13.

86. 47 U.S.C. § 396(a)(6) (2000) (declaring it in the public interest to encourage the development of programming specifically for the needs of unserved and underserved audiences, and especially children and minorities); *see also supra* text accompanying note 38 (describing the drive to reach underserved audiences as a core component of public service media).

communities.⁸⁷ In San Francisco, KQED has been able to open access to many new voices by inviting community partners and individuals, for a \$35 fee, to write and podcast content for the station's blog in arts, science, and food.⁸⁸ Native American Public Telecommunications also uses podcasts on AIROS, its Native radio station, to feature new voices in Native American media. The podcasts recently surpassed a quarter million (250,000) audio downloads.⁸⁹

Public service media was meant to provide access to news and information that the market does not support.⁹⁰ As several reports have recently noted, there are increasing and worrisome market failures in the production of investigative journalism.⁹¹ Thus, public service media must be part of the solution, not only by increasing journalistic resources, but also by linking established media entities with new entrants to maximize the impact of journalistic efforts. The challenges of sustaining local journalism are formidable. As William Kling, President and CEO of Minnesota Public Radio, has put it, public broadcasting stations can serve as "base camps" for collaborative journalistic efforts.⁹² One does not climb Mount Everest without the aid of base camps to assist in the ascent, and one usually cannot create sustainable journalistic organizations without a base level of infrastructure.⁹³

Public broadcasting stations and some public access cable facilities can offer basic support for local journalism by providing space, administrative support, and business experience. This use of legacy public broadcasting is happening in a few places, such as St. Louis. The city's public radio station, KETC, has adopted several online initiatives with local online news and radio services, sharing content and expertise.⁹⁴

87. EMBRACING DIGITAL, *supra* note 10, at 27.

88. *Id.* at 25.

89. *Podcast Page*, Native American Public Telecommunications, http://www.airos.org/podcasts_page#producer (last visited Nov. 28, 2010).

90. *See supra* text accompanying notes 37 & 38 (describing the market failure of certain types of content covered by public service media, and the role of public service media in offering alternative programming that would otherwise not be commercially viable or available).

91. *See supra* note 7 (citing several reports describing the current failure of a sustainable model for investigative journalism, and the growing public need for new business models and funders in that area).

92. Interview by Ellen P. Goodman with William Kling, President and CEO, Minn. Pub. Radio (Sept. 30, 2009).

93. WILLIAM H. KLING, *IN SERVICE OF DEMOCRACY: ACHIEVING PUBLIC RADIO AND PUBLIC MEDIA'S POTENTIAL* 3 (2010) (emphasizing the need for greater capacity in order to sustain high-quality journalism, especially in a local market); Jill Drew, *NPR Amps Up: Can Vivian Schiller Build a Journalism Juggernaut*, COLUM. JOURNALISM REV., Mar.-Apr. 2010, http://www.cjr.org/feature/npr_amps_up.php?page=6 (describing the lack of funding local public radio stations need in order to fill gaps created by failing local newspapers).

94. Ellen P. Goodman & Anne H. Chen, *A PBS 21ST CENTURY PLANNING INITIATIVE: TRANSFORMING NEWS & PUBLIC AFFAIRS ON PUBLIC MEDIA 15*

When out-of-work local reporters received a grant to launch an online news service, the *St. Louis Beacon*, KETC provided rent-free office space and other resources.⁹⁵ In the San Francisco Bay Area, KQED and the University of California, Berkeley concluded that because “market mechanisms alone can no longer be relied upon to produce the quality journalism the Bay Area needs . . . public support must and will become a critical part of the solution.”⁹⁶ As a result, the two institutions have formed The Bay Citizen, a nonprofit, nonpartisan initiative to support high-quality, original, and local journalism about civic and community news in the Bay Area.⁹⁷ The Bay Citizen has since partnered with *The New York Times* to provide news for the *Times’s* local San Francisco editions on Fridays and Saturdays, and recently launched its own website.⁹⁸ It plans to distribute news through podcasts, radio, and potentially television as well.⁹⁹

The Public Broadcasting Act envisioned something beyond broadcasting as a platform even in 1967. The term it used was “public telecommunications.”¹⁰⁰ Public service media ought to be everywhere that the public is seeking media content. A popular iPhone application, Public Radio Player, takes an important step in this direction by offering a program guide, content streams from hundreds of public radio stations, a user support blog, and a locating feature that tunes in to public radio stations based on the phone location.¹⁰¹ The Public Radio Player now has over 1.5 million user downloads.

2. Modular

There are many problems for which broadband-enabled public service media could be part of the solution. Among them are: the need for more local accountability journalism; better educational materials and engagement models; public service mobile communications; the development of youth and minority voices; and the circulation of knowledge in the areas of science, technology, health, and the economy.

(forthcoming) (on file with authors).

95. *Id.*

96. *About Us FAQ*, THE BAY CITIZEN, <http://www.bayareanewsproject.org/faq> (last visited Nov. 28, 2010).

97. *Id.*

98. THE BAY CITIZEN, <http://www.baycitizen.org> (last visited Nov. 28, 2010); Leena Rao, *Bay Area News Project Strikes Content Deal With The New York Times*, TECH CRUNCH (Jan. 21, 2010), <http://techcrunch.com/2010/01/21/bay-area-news-project-strikes-content-deal-with-the-new-york-times>.

99. *Our History*, THE BAY CITIZEN, <http://www.baycitizen.org/about/history> (last visited Nov. 28, 2010).

100. Public Broadcasting Act of 1967, 47 U.S.C. § 396(a) (2000).

101. EMBRACING DIGITAL, *supra* note 10, at 29.

Indeed, effective responses to these problems *require* public service media participation in the sense that they depend on the intentional facilitation of communications about causes and solutions among those who suffer and those who can solve.

Not all public service media entities should try to tackle every problem. The public broadcasting system, as originally conceived, embodied a system that was modular only with respect to national and local functions. The system consisted of local stations and national organizations, networked together to realize economies of scale on national programming while encouraging local service.¹⁰² All local entities in this system were supposed to operate largely autonomously with the same functional obligations. In other words, each station managed infrastructure, each produced (or was supposed to produce) general interest programming for its community, and each was charged with becoming expert in the vertical areas of public broadcast focus (education, news, and culture). The realities of a mid-20th century mass audience and the technologies to serve them required this approach. Today's technical capabilities and economic realities argue for increased modularity and specialization not only in the national/local dimension, but also in at least three other ways.

First, there can be specialization by *content*. Some noncommercial broadcast stations and other public service media entities are developing specialties in content verticals, such as health and the environment.

To take health care issues as an example, a number of public broadcasting stations are deepening coverage of these issues and engaging publics with the information, usually in partnership with health care providers and advocates. Some of these efforts were documented in comments to the FCC's National Broadband Plan.¹⁰³ They include: *Be Well Kentucky* (television series, online outreach, and collaborative health literacy workshops for children, families, and minorities in partnership with community groups);¹⁰⁴ *LiveFIT NH* (similar combination of programs around childhood obesity);¹⁰⁵ the *Emergency and Community Health Outreach* program in St. Paul, Minnesota (similar combination of programs on public health topics such as flu prevention, translated into Spanish, Hmong, Khmer, Lao, Vietnamese, Somali).¹⁰⁶ Six years ago,

102. § 396(a)(3), (5), (8) (describing public telecommunications on distinctively “local and national levels” designed to address both “national concerns and local problems,” yet focusing on the interests of those in “particular localities”); *see also* CARNEGIE I, *supra* note 14 (discussing the institutional landscape of public broadcasting in terms of a modular local and national approach).

103. Comments of the Ass’n of Pub. Television Stations, *supra* note 41, at 6.

104. *Id.*

105. *Id.*

106. *Id.* at 7.

the Digital Futures Initiative report outlined how public broadcasting might advance national goals in health care and wellness; its vision remains true today, if still unimplemented.¹⁰⁷

In addition, some non-broadcast entities are active in the field, such as *Watch-In! For America's Health*, a new educational initiative that gets citizens and organizations to sponsor screenings of the film *Money-Driven Medicine: What's Wrong with America's Healthcare and How to Fix It*. The distributor of the film is California Newsreel, the country's oldest nonprofit media resource center.¹⁰⁸ PRX is demonstrating the utility of intentional aggregation of public service media and government content with Fluportal, which curates public service media and government-produced information, applications, widgets, and video content related to the H1N1 flu virus to inform individuals and support public service media coverage of the flu pandemic.¹⁰⁹

The CPB's new Local Journalism Center ("LJC") initiative is another example of public service media efforts to provide content verticals. Each LJC is designed to run jointly by television and radio stations that will hire reporters, editors, and community outreach managers to report on topics of regional interest in their area.¹¹⁰ The Southwest Center, for example, will focus on border and immigration issues, while the Midwest Center is focused on agribusiness. The Florida Center focuses on issues that are important to the state's large population of older residents, such as health care.¹¹¹

Second, there is specialization by *function*. While a need for local journalism exists in every community, local media entities can pool journalistic resources and exploit the journalistic depth of entities that specialize in journalism, wherever they are. Moreover, not every community needs to have a public service media entity specializing in education. There could be a specialist in every state or fewer, depending on various state interests in partnering with public service media for

107. THE DIGITAL FUTURE INITIATIVE PANEL, *supra* note 44, at 79-85.

108. *Watch-In! For America's Health*, MONEY-DRIVEN MEDICINE, <http://www.moneydrivenmedicine.org/watch-in> (last visited Nov. 28, 2010); *California Newsreel and Its Related Health Titles*, MONEY-DRIVEN MEDICINE <http://moneydrivenmedicine.org/about-cn> (last visited Nov. 28, 2010).

109. *About FluPortal*, FLUPORTAL.ORG, <http://www.fluportal.org/about> (last visited Nov. 28, 2010).

110. Comments of the Public Broadcasting Service, to the *Notice of Inquiry* in FCC Launches Examination of the Future of Media and Information Needs of Communities in a Digital Age, GN Dkt. No. 10-25, at 15 (May 7, 2010) [hereinafter PBS Comments]; see also Karen Everhart, *CPB to Aid 7 'Local Journalism Centers': About 50 New Employees Will Staff Stations' Specialized Regional Teams*, CURRENT (Apr. 5, 2010), <http://www.current.org/news/news1006localcenters.shtml>.

111. Comments of Native Public Media, to the *Notice of Inquiry* in FCC Launches Examination of the Future of Media and Information Needs of Communities in a Digital Age 21, GN Dkt. No. 10-25 (May 7, 2010); PBS Comments, *supra* note 110, at 15.

educational functions and the value of a state or regional approach.

We are seeing the beginnings of educational specialization with national educational materials coming out of the PBS Digital Learning Library¹¹² and PBS TeacherLine,¹¹³ while at the same time, a few local public service media entities are concentrating in the educational sector. WGBH Boston's Teachers Domain is discussed above,¹¹⁴ as is KQED's *Quest*, a multimedia series exploring science, environment, and nature in Northern California.¹¹⁵ *Quest* includes video and audio on demand, a blog, interactive maps with photos and text, easy-to-embed videos, and lesson plans and trainings for classroom use of the program. In Kentucky, the Kentucky Education Network has developed LiteracyLink to connect underserved adults with teachers for quality adult education and GED preparation, using virtual classrooms and other online learning tools.¹¹⁶

Third, there is specialization by *region*. The broadcast markets defined in the 1950s do not necessarily reflect today's demographic needs for media services. Not all communities can support the optimal amount of content production. Effective connections with the community can be overly resource-intensive. Given these constraints, and the natural distribution of interests, local communities can be aggregated by region with regional cooperation on content development, curation, and connection. For example, Minnesota radio station KAXE-FM led a collaboration with other regional organizations to create the Community Supported Journalism website, a hyperlocal journalism resource with content from both professional and volunteer journalists, covering approximately a dozen small towns across Northern Minnesota that would otherwise have no local newspapers.¹¹⁷

112. PBS DIGITAL LEARNING LIBRARY, *supra* note 42; *Introducing the PBS Digital Learning Library*, PBS TEACHERS, <http://www.pbs.org/teachers/dll> (last visited Oct. 24, 2010).

113. *About PBS, Corporate Facts*, PBS, http://www.pbs.org/aboutpbs/aboutpbs_corp_education.html (last visited Nov. 28, 2010); PBS TEACHERLINE, <http://www.pbs.org/teacherline> (last visited Nov. 28, 2010). PBS TeacherLine is one of several PBS programs distributed through the federal Ready to Teach grant; Dep't of Educ., Ready to Teach Grant Program, ED.GOV, <http://www.ed.gov/programs/readyteach/index.html> (last visited Nov. 28, 2010). These programs can help push educational standards and student-customized content into school curricula. Broadband can play a critical role in bridging the middle mile and delivery of high-definition quality, interactive content from these programs directly into the classroom.

114. *See supra* text accompanying notes 41-42.

115. *See supra* text accompanying notes 70-72.

116. Comments of the Ass'n of Pub. Television Stations, *supra* note 41, at 9-10. It is the product of the Kentucky Educational Television's partnership with the Kentucky Department of Education, the PBS Adult Learning Service, and the National Center on Adult Literacy. Workplace Essential Skills and GED Connection, two of the resulting instructional systems from this partnership, are now adopted by numerous other states.

117. NORTHERN COMMUNITY INTERNET, http://www.northerncommunityinternet.org/community_journalism (last visited Nov. 28,

In order to capitalize on the modular content and functional expertise in public service media networks, these networks must actually function as *networks*: the content must be easily shared, extended, and modified, and the models must be replicable, scalable, and sustainable nationwide. We will address these points in Subsection 4 below.

3. Engaging

Public outreach through both digital media and real space public gatherings implement the Public Broadcasting Act's concept of "outreach" or what is better known today as "engagement."¹¹⁸ Imagined in the Act even in the 1960s was a system in which media content became the basis of community participation in public discourse. To that end, public service media entities would be responsible for fostering two-way communications and public engagement around narratives and information that mattered in people's lives. Digital public service media entities must commit themselves to models of engagement that facilitate public use of, argument with, comment on, and re-creation of communications. This kind of engagement is not only commanded by the Act, but reflects how media works in a world characterized by information sharing, rather than mere consumption.¹¹⁹ To be effective, an engagement strategy is not something to be formulated after content is produced or information aggregated, but at the very beginning of the process.¹²⁰

There is an understandable concern about the line between objective media content and advocacy. The first thing to be said is that engagement need not entail advocacy, but discourse. Public service media ought to be dealing with controversial matters of public concern and ought to be reaching out to engage stakeholders and community

2010); *see also* Katie Donnelley, *Public Media Camp Round-Up*, CENTER FOR SOCIAL MEDIA, <http://www.centerforsocialmedia.org/future-public-media/public-media-showcase/public-media-camp-round> (last visited Nov. 28, 2010) (describing the Northern Community Internet Project, which includes the journalism website, in greater detail).

118. Public Broadcasting Act of 1967, 47 U.S.C. § 396(a)(8) (2000).

119. A number of legal and cultural scholars have described the reality of the "remix culture" in which individuals make transformative use of content available over digital networks. *See, e.g.*, LAWRENCE LESSIG, *REMIX: MAKING ART AND COMMERCE THRIVE IN THE HYBRID ECONOMY* (2008); CLAY SHIRKY, *HERE COMES EVERYBODY: THE POWER OF ORGANIZING WITHOUT ORGANIZATIONS* (2009); YOCHAI BENKLER, *THE WEALTH OF NETWORKS* (2007); Jack M. Balkin, *Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society*, 79 N.Y.U. L. REV. 1, 3 (2004) (emphasizing the cultural and participatory features of digital technology).

120. *See, e.g.*, CORPORATION FOR PUBLIC BROADCASTING, *REQUEST FOR PROPOSALS FOR PUBLIC BROADCASTING STATIONS TO TAKE PART IN THE COMMUNITY ENGAGEMENT INITIATIVE* (Feb. 12, 2007) (seeking to develop new ways to make public service media more significant local organizations in their communities).

members in debate over these matters. Indeed, public service media entities are needed more than ever as virtual and real spaces where respectful and nuanced discourse can occur without the commercial pressures of generating ever more outrageous flares.¹²¹ Broadband capabilities enable much more widespread participation in this discourse, and public service media entities should ensure that their content is easy to engage with.

In addition, there is no reason to fear advocates' use of public service media material in particular. There will be advocates on all sides of matters of public concern. It is to be expected—even desired—that public service media productions will be folded into all forms of public debate, including highly charged ones. Indeed, if such content is not part of the public discourse, public service media is failing in its mission.

Effective engagement will often be a matter of linking media content with community activities and interests. WYMS, Milwaukee, has connected its public radio broadcasts, blogs, and station events, while also linking to local artist websites, YouTube music videos, social networking tools, and discussions on videos about local and state-wide news.¹²² The multiplatform engagement strategy has led to a 31% increase in listenership.¹²³ Public Broadcasting Atlanta launched LENS, a Local Educational Networking System, whereby residents can use a suite of social networking tools to connect with each other, neighborhood organizations, arts and educational resources, emergency services, and even with regional leaders such as the Atlanta mayor, who uses LENS as a direct pipeline between city residents and his office.¹²⁴

Effective engagement components are also emerging from independent producers. Participant Media produces dramatic features and documentaries (including *An Inconvenient Truth*) that are designed in tandem with social action campaigns. The engagement portion of the work is integral to the production, not merely tacked on at the end of the process, and involves teams of nonprofits, social sector organizations, and corporations in establishing arenas for discussion and education.¹²⁵ ITVS' Community Cinema Project partnered with PBS to organize community screenings of films designed to reach diverse segments of the population, promote discussion of complex issues seldom explored in mass media, and enrich the cultural landscape with voices from underrepresented

121. THE FOUNDATION FOR PUBLIC MEDIA, A PLAN TO REVITALIZE PUBLIC MEDIA IN AMERICA 1 (2010) (discussing the polarized media, which “relies on opinion-based news programming that often enrages instead of educates,” that has emerged as the newspaper industry declined).

122. EMBRACING DIGITAL, *supra* note 10, at 21.

123. *Id.*

124. LENS ON ATLANTA, <http://www.lensonatlanta.org> (last visited Oct. 24, 2010).

125. PUBLIC MEDIA 2.0, *supra* note 6, at 27.

communities.¹²⁶ Last season, the project partnered with over 1,000 organizations to hold 650 events in over 65 cities, with more than 40,000 participating; in total, some 42% in seven markets were identified as persons of color.¹²⁷

Public service media entities also have a role to play in covering political elections by networking with other civic organizations, and with citizens themselves, in engaging local publics in the political system. One of the measures of political engagement is voting, and it is appropriate for public service media to encourage and equip citizens to vote. The public station in Rochester, New York, did this through its Overcoming Barriers to Civic Participation program, which provided deaf and hard-of-hearing individuals with full access to information over the Internet about political candidates and the election.¹²⁸ It incorporated captioned content and a Civic Sense laboratory that experimented with techniques to improve online accessibility on its election website.

In another example of meaningful engagement in the political process, Philadelphia's WHYY partnered with a good governance group, the William Penn Foundation, and other civic organizations to establish TheNextMayor.com.¹²⁹ The interactive election project was designed in anticipation of its next mayoral election to help ensure accountability, accuracy, and citizen feedback during the mayoral campaign. Project partners sought out and catalogued voter concerns, redefined issues, tracked each candidate's communications with different constituencies, posted every press release, and offered such detailed profiles that candidates were forced to become more accountable to their stated positions. The project had significant value for the community, with the site's visitor count skyrocketing as Election Day approached. The site has since been renamed "It's Our City," and centers on city budget and other decisions.

4. Networked

For modular production to work, and for public service media platforms to be maximally accessible and diverse, they need to be networked. This is perhaps the most important innovation to be wrought in public service media structure. There is no doubt that the public

126. *Community Cinema Screening Schedule*, INDEPENDENT LENS, <http://www.pbs.org/independentlens/getinvolved/cinema> (last visited Oct. 24, 2010).

127. The INDEP. TELEVISION SERV., *COMMUNITY CINEMA: ENGAGING COMMUNITIES THROUGH FILM*; Dru Sefton, *ITVS Brings Fresh Docs and Hot Popcorn*, CURRENT (Oct. 26, 2009).

128. *Overcoming Barriers to Civil Participation*, WXXI.ORG, <http://wxxi.org/citizen/pmi/index.html> (last visited Oct. 24, 2010).

129. JAN SCHAFFER, *NEW MEDIA MAKERS: A TOOLKIT FOR INNOVATORS IN COMMUNITY MEDIA AND GRANT MAKING* (2009).

broadcasting system has always valued connectivity. Indeed, the “interconnection system” that has facilitated distribution of the PBS national program schedule across the country is written into the law and supported by mandatory allocations from the CPB budget.¹³⁰

Nevertheless, what we mean by a digital public service media network, or set of interoperable networks, is quite different from the hub and spoke network structure of broadcasting in which a closed set of local entities download content from the national provider by virtue of their membership in a national organization. We are talking about lateral networks open to many kinds of entities, consisting not of membership or other contractual arrangements, but of technical platforms, customizable content modules, shared tools, and templates.

Shared platforms into which multiple nonprofit media producers and individuals can deposit content have the benefit of supporting, in turn, the creation of more, better, and innovative follow-on content. The Public Radio Exchange, discussed above, shows what can happen when public service media content is made available over an open application program interface (“API”)¹³¹—namely, that content becomes much more accessible and useful to the public, and that innovators can write applications to curate and magnify the expressive value of public service media content and follow-on creation.¹³²

It is promising that NPR, in partnership with others, is working to expand its API to include content from more public service media organizations (e.g., APM, PRI, NewsHour, and others).¹³³ This API will enable participants to share journalism and related content among themselves, which will require the development of concrete business rules to govern the exchange and use of content. The platform also has the potential to link public broadcasters with new partners, with the API becoming a permeable barrier by which content can flow among public service media entities and beyond.

The use of tools that improve search and content aggregation support the curatorial functions of public service media. If all public service media producers were to use interoperable systems of content

130. 47 U.S.C. § 396(g)(1)(B) (2000) (authorizing the CPB to establish and develop “one or more interconnection systems to be used for the distribution of public telecommunications services”).

131. *See supra* text accompanying notes 46–47.

132. For a description of this kind of “distributed distribution” efforts in public service media, *see NPR’s Digital Distribution Strategy*, TECHNOLOGY360 BLOG (Sept. 8, 2008, 13:24), <http://technology360.typepad.com/technology360/2008/09/nprs-digital-di.html>.

133. Press Release, NPR, Am. Pub. Media, NPR, PBS, Public Radio International (PRI) and Public Radio Exchange (PRX) Partner to Create a Shared Digital Content Platform (June 14, 2010), *available at* <http://www.npr.org/about/press/2010/061410.PMPLaunch.html>; Eliot Van Buskirk, *Public Media Joins Forces for One Big Platform*, WIRED (June 14, 2010), <http://www.wired.com/epicenter/2010/06/public-media-joins-forces-for-one-big-platform>.

management that were recognized by each other, it would become possible for public service media to aggregate mission-serving media and make it most useful for the public. Such tools provide the means for citizens and communities to interact with public service media content and applications. An early experiment in a metadata and cataloging resource for public broadcasters was PBCore—the first online content publishing standard for public broadcasting. PBCore 2.0 would make the metadata hub a part of the public service media content workflow in enhancing the utility of content as it moves through production, post-production, and distribution.¹³⁴

Some of the most exciting developments in public service media involve partnerships among community groups, schools and educators, government, non-profit institutions, and media producers of all kinds.¹³⁵ The value of these projects would be magnified within and across communities if they were easily replicable and customizable. In other words, they should be capable of being scaled up and broken down. KCET's Departures program is producing a new media platform and curriculum for students to better understand the residents and cultural fabric of the local Los Angeles communities in which they live.¹³⁶ Partnering with local high schools and colleges, KCET allows students to communicate with teachers through a wiki-based environment, upload their own stories onto a map, and engage with the narratives of others.¹³⁷ KCET has designed this curriculum to be a template for other communities as well. The templates for the program, as well as the content, will be essential in replicating the Los Angeles experiment elsewhere.

Of course, the sharing of content and tools across networks implicates intellectual property rights management. This is a complex subject beyond our scope. It is clear that enabling content to flow demands reasonable upstream permissions from third-party rights holders with respect to media inputs. Public service media makers must have adequate, affordable, and efficiently clearable rights if they are to archive content and make it widely available for personal noncommercial

134. PBCORE, <http://pbcore.org/2.0> (last visited Oct. 24, 2010).

135. PBS Education, for example, will be hosting a Digital Content Summit in April 2010 to bring together several public service and education institutions to share their digital media and education initiatives with each other, and discuss how to work collaboratively on them. PBS Education, Public Media In Education Digital Content Summit, Conference Invitation, Apr. 14, 2010. Invited institutions include NPR, the National Science Foundation, Smithsonian Education, and National Geographic Education. *Id.*

136. Amanda Hirsch, *KCET's 'Departures' Exemplifies Community Collaboration*, MEDIA SHIFT (Aug. 24, 2010), <http://www.pbs.org/mediashift/2010/08/-kcets-departures-exemplifies-community-collaboration236.html>.

137. Interview with Juan Devis, Dir. of Prod. New Media, KCET (Oct. 9, 2009).

use, educational use, other mission-related uses, and follow-on creation. At the same time, public service media entities should be subject to reasonable downstream access rights so that the public and other media makers have access to the content that public service media creates. Those who fund public service media, including CPB and foundations, should insist that public service media products, from copyrighted narratives to code, should be as close to open-source as possible in terms of allowing users to stream, download, remix, and innovate.¹³⁸

We highlighted the intellectual property challenges facing public service media in our comments to the FCC¹³⁹ and are gratified that the Commission took up the issue. In the National Broadband Plan, it recommended that Congress consider amending the Copyright Act to provide copyright exemptions for online broadcast and distribution of public media, and to facilitate archiving public media content.¹⁴⁰

5. Diverse

Diversity is a value central to the Public Broadcasting Act. Public service media is supposed to serve underserved audiences.¹⁴¹ Ethnic minorities have always been among the underserved audiences, as are children and youth. This service disparity seems to be perpetuated in the broadband world.¹⁴² There are other dimensions of diversity that need focused attention and intentional development in all aspects of public service media functions. As a group of diverse public service media producers wrote in an “open letter” to the public service media community earlier this year: “The commitment to embrace diversity as a core principle of our work requires that we engage more deeply with its complexity. In addition to race and ethnicity, diversity includes perspectives and identities generally underrepresented in our mainstream media due to geography, income and education levels, physical disability and sexual preference.”¹⁴³

138. It is not possible to deal in absolutes because public service media entities themselves are bound by myriad and complicated licenses imposed by the owners of upstream components of their creations, including writers, actors, and owners of stock footage, still photographs, and music. For a description of some of these copyright complexities, see BERKMAN CTR. FOR INTERNET AND SOC'Y, DIGITAL LEARNING CASE STUDY: WGBH AND THE PUBLIC BROADCASTING STATUTORY EXCEPTIONS.

139. Goodman & Chen Comments, *supra* note 4, at 29-30.

140. THE NATIONAL BROADBAND PLAN, *supra* note 2, at 304.

141. 47 U.S.C. 396(a)(6) (2010) (citing as a policy goal to serve “unserved and underserved” audiences).

142. BROADBAND IMPERATIVES FOR AFRICAN AMERICANS: POLICY RECOMMENDATIONS TO INCREASE DIGITAL ADOPTION FOR MINORITIES AND THEIR COMMUNITIES 3-4 (2009) (noting a persistent disparity in broadband adoption between minority populations and other groups).

143. AN OPEN LETTER TO OUR PUBLIC MEDIA COLLEAGUES, *supra* note 7, at 4; *see*

Public service media to date has not done an adequate job of serving underserved audiences, notwithstanding many efforts in that direction. Public service media content, workforce, and audience are all insufficiently diverse.¹⁴⁴ More innovation and more risks are necessary to diversify the reach and representation of public service media; the broadband proliferation of communications channels can support these objectives.

One way to increase diversity of voice is by opening up and yielding some control over public service media platforms. Chicago's WBEZ created Vocalo by splitting off one of its repeaters to target an audience formerly unreached by the station.¹⁴⁵ With a tag line of "You Make It. We Broadcast It," Vocalo has no programming. Instead, it offers a partially user-created platform by which users can upload content, and participate in a continuous talk-based stream exclusively focused on the culture, issues, and music of the metropolitan area.

Another way to increase diversity is to integrate a concern for diverse voice and experience into the fabric of content development. For its latest news program, *The Takeaway*, public radio station WNYC in New York aggressively sought out diversity in assembling its production team. It advertised within the Asian American Journalist Association, Spellman College, Native American Journalist Association, National Association of Black Journalists, National Association of Hispanic Journalists, and the South Asian Journalist Association to recruit new staff based on journalistic expertise, work ethic, intellectual curiosity, and openness to new media. The program now has one of the most diverse production teams in public radio.¹⁴⁶

Technology choices are central to any diversity-enhancement effort. It turns out that users of online public service media tend to be far more diverse than the audience for linear broadcast programming,¹⁴⁷ and

also Public Broadcasting Stimulus Letter, *supra* note 45, at 1 (citing the need for "media 2.0 technology" to reach audiences from diverse ethnicities and economic and social backgrounds).

144. For example, African Americans are only about 80% as likely to be found in public radio's weekly audience, and Hispanics only 42% as likely, relative to the proportion of their respective ethnicities in the general population. GROW THE AUDIENCE, *supra* note 6, at 12, 13. The PBS audience profile is also skewed to those under age 7 and over age 46, largely missing the adolescent, young adult, and younger middle-aged populations. Silver, *supra* note 46, at 279. The media industry at large is also relatively un-diverse—minority journalists have never accounted for more than 14% of the total professional print journalism community. KNIGHT COMM'N, *supra* note 6, at 54. In television and radio, less than 4% of commercial TV stations and less than 8% of commercial radio stations are owned by people of color. Silver, *supra* note 46, at 280.

145. GROW THE AUDIENCE, *supra* note 6, at 19.

146. *Id.* at 16.

147. For example, two-thirds of Web visitors to PBS's general audience site are under 45 years old, constituting a whole new audience for public stations, according to PBS Vice President Jason Seiken. Steve Behrens, *Fields Proposes Trust Fund, But Caps Its Size at \$1*

online public service media resources prove to be particularly important to minority Internet users. For example, African Americans use PBSkids.org 16% more than they use other U.S. websites; for Latinos, the figure is 98% more, and for Asian-Americans, 142% more.¹⁴⁸ Public service media must reach more diverse populations, and particularly younger ones, by pushing the envelope on new media formats. According to the Open Letter on Diversity,

America's younger and more ethnically diverse audiences are public media's great, untapped resource. Young viewers and listeners are multilingual and multicultural, passionate bloggers and voracious content seekers. The increasingly commercial Internet positions them primarily as consumers, but they are hungry to exercise their power of choice as global citizens and generators of media content in the new digital landscape.¹⁴⁹

Network platforms and tools are essential in diversifying public service media users. GenerationPRX, for example, is a project of PRX that focuses specifically on youth-produced radio.¹⁵⁰ PRX networks with an advisory board of experienced broadcasters and youth radio producers to create a space for youth to share ideas, strategies, and materials, and to offer peer feedback and review from a Youth Editorial Board. The site helps to distribute youth radio by building an online catalogue that is accessible to stations, producers, and listeners through PRX.

Finally, of course, the selection of subject matter and associated engagement tools in public service media content will affect the diversity of the public served. One successful recent undertaking is *The Masculinity Project*, based on a partnership between the National Black Programming Consortium ("NBPC") and ITVS. The multiyear initiative enlists community partners to help produce dozens of short films—both original and re-versioned—and audio pieces that integrate participatory tools and multiple platforms to showcase myriad perspectives on race and gender.¹⁵¹ The project's robust website also incorporates content-relevant blogs and discussion forums, creating a virtual community record of the real, rather than stereotypical, issues affecting African-Americans in the United States. The *Project* draws heavily on participatory tools and platforms to showcase different perspectives on race and gender.

billion, CURRENT (Mar. 11, 1996), <http://www.current.org/mo/mo605.html>.

148. Silver, *supra* note 46, at 281.

149. AN OPEN LETTER TO OUR PUBLIC MEDIA COLLEAGUES, *supra* note 7, at 4.

150. EMBRACING DIGITAL, *supra* note 10, at 26-27.

151. BEST PRACTICES, *supra* note 10, at 22.

6. Innovative

“Experimental” is a word from the Public Broadcasting Act that is often forgotten but important to remember. Public service media should be, and sometimes is, an incubator of experiments that market and non-market forms of amateur production will not support. It is also a proving ground for experiments—in content, engagement practices, technological innovations, narrative forms, or business models—that can then go on to influence commercial practice. For better and for worse (as experimentation often is), public broadcasting incubated reality television as a narrative form. It also incubated the Children’s Television Workshop (now Sesame Workshop) as a private nonprofit engaged in the production of children’s television for public service media.¹⁵² Its early experiments in fostering community dialogue on race pioneered a model of sustainable, diversified community engagement practices now common in public broadcasting, and in documentary filmmaking more generally.¹⁵³ As the journalism sector seeks models for supporting newsgathering functions, public service media entities are in a good position to innovate.¹⁵⁴ They have long relied on voluntary financial contributions to support their work, and now should illustrate new ways of “crowdfunding” media services.¹⁵⁵

Innovation in content, delivery, and engagement strategies will depend on better broadband. The innovative use of games, for example, to engage students in connecting historical narratives to their own moral choices,¹⁵⁶ requires robust broadband to the school and to the home. Public service media could perform almost all of its functions better if the

152. See Alison Alexander, *Children’s Television Workshop*, THE MUSEUM OF BROADCAST COMMUNICATIONS, <http://www.museum.tv/eotvsection.php?entrycode=childrenste> (last visited Oct. 24, 2010).

153. See BARBARA ABRASH, CTR. FOR SOC. MEDIA, *THE VIEW FROM THE TOP: P.O.V. LEADERS ON THE STRUGGLE TO CREATE TRULY PUBLIC MEDIA* 10-11 (2007).

154. DOWNIE & SCHUDSON, *supra* note 12, at 12 (“[D]igital technology—joined by innovation and entrepreneurial energy—is opening up new possibilities for reporting”); CUNY GRADUATE SCH. OF JOURNALISM, *NEW BUSINESS MODELS FOR NEWS: PROJECT UPDATE* 4-5 (2009); WESTPHAL, *supra* note 7, at 5 (quoting Thirteen/WNET New York President Neal Shapiro that “. . . public broadcasting is one area where you can produce quality journalism that has a tremendous reach” and discussing hybrid models based on public broadcasting models).

155. Public service media programs that are already raising funds online include public radio shows *Living on Earth* and *This American Life*, as well as public television’s *In the Life*. Karen Everhart, *ReelChanges Tests ‘Crowdfunding’ of pubTV Production*, CURRENT (Mar. 30, 2009), <http://www.current.org/funding/funding0906crowdfunding.shtml> (listed on side banner of website).

156. See, e.g., *Helping Classrooms and Communities Worldwide Link the Past to Moral Choices Today*, FACING HISTORY AND OURSELVES, <http://www.facinghistory.org/> (last visited Nov. 5, 2009) (an international educational and professional development nonprofit organization aiming to engage students of diverse backgrounds in issues such as racism, prejudice, and anti-Semitism through multimedia).

nation had faster and universal broadband. A few examples show that much of what public service media does, and should in the future do, depends on better broadband.

Hosted by Nashville Public Television, *Next Door Neighbors* is a multi-faceted community project that raises awareness of Nashville's relatively large immigrant and refugee communities. Its documentary series, panel discussions, community forums, and literacy workshops offer ways to learn of these new communities and the changing social, economic, and cultural life of the city. *Next Door Neighbors* relies heavily on broadband to reach the public, most of which accesses the content online. The lack of access to broadband in rural areas of Middle Tennessee—areas that now include an increasing number of Somali, Hispanic, and other immigrant contingencies—has made it difficult to be able to serve these audiences. *Next Door Neighbors* has also had to find alternatives to uploading and streaming their videos because of prohibitive streaming costs.¹⁵⁷

Skylight Pictures is a public service media group that produces documentary films on issues of human rights and social justice. Skylight Pictures would like to develop more robust video delivery systems for its films and ancillary modules it produces for high schools and universities, but the limited broadband speeds of the participating classrooms and communities (usually T1 or T2 connection speeds) have prohibited seamless viewing and high resolution. Thus, streaming costs and limited broadband speeds for uploading as well as downloading have also limited Skylight Pictures's effectiveness and reach.¹⁵⁸

It is not only the build-out of broadband infrastructure that is critical. In the 20th century, the distribution costs for public service media consisted mostly of broadcast transmission costs. These costs remain as long as there is broadcasting. But, public service media entities now have to bear another distribution cost at the same time—the cost of streaming broadband video, and unlike in broadcasting, where cost of distribution does not vary with audience size, these costs continue to rise with each additional broadband user. In other words, the better public service media entities are at reaching users and engaging them over broadband and mobile technologies, the more these services cost to provide.

With increasing numbers turning to online public service media

157. *Next Door Neighbors*, NASHVILLE PUBLIC TELEVISION, <http://www.wnpt.org/productions/nextdoorneighbors/> (last visited Nov. 5, 2009); Interview with Kevin Crane, Vice President of Content & Tech., Nashville Pub. Television (Oct. 6, 2009).

158. SKYLIGHT PICTURES, <http://skylightpictures.com> (last visited Nov. 28, 2010); Interview with Paco de Onis, Producer, Skylight Pictures (Sept. 18, 2009).

sources—in the past year, PBS.org data demands have tripled,¹⁵⁹ putting it in the third highest tier of bandwidth usage¹⁶⁰—this has become a sizable challenge. Public radio station XPN in Philadelphia, for example, reports that it costs about 100 times more per listener to stream than to broadcast. With a weekly cumulative broadcast audience of about 300,000 and an annual electricity bill for broadcast transmission of about \$7,000, XPN spends at least 2 cents per unique listener each year.¹⁶¹ But to stream to its online audience of approximately 45,000, XPN must spend about \$9,000 in bandwidth costs—amounting to \$2 per user.¹⁶² As American Public Media CEO and President Bill Kling described, “[W]e can reach 14 million people in Los Angeles with a transmitter that runs on 600 watts of power. If we tried to reach 14 million people with broadband . . . we’d be bankrupt.”¹⁶³

The future cost structure for public service media is uncertain, in part because it is in the control of commercial entities. This is new. Public broadcasting has in the past controlled its own infrastructure. This is what the FCC enabled by reserving channels for the exclusive use of noncommercial media.¹⁶⁴ In the digital world, there is no such reservation and no dedicated public infrastructure, so public service media entities are reliant on the public internet to transmit content. As the FCC has recognized, it is very possible that broadband service providers will create, alongside the public internet, a special tier of service that is faster and more costly.¹⁶⁵ If public media entities have to pay more to reach users with the most innovative (and bandwidth intensive) services, they probably will not be able to do it, or to participate fully in the broadband future. As we discuss below, some sort of “broadband reservation” will be necessary to effectuate the principle that public service media infrastructure be as robust as commercial media

159. PBS Comments, *supra* note 110, at 19.

160. Memorandum from Eric Wolf titled Summary of Trends in Online Delivery Costs to Jason Seiken & John McCoskey 4 (July 26, 2010) (on file with author). The highest tier users (e.g., Google, Comcast, Amazon) build their own content delivery networks; second-tier users (e.g., Netflix, Apple) are large enough to command uniquely low rates. *Id.*

161. E-mail from Roger LaMay, General Manager, WXPB Public Radio, to David Cohen (June 23, 2010, 18:10:24 ET) (on file with author).

162. *Id.* Broadcast transmission costs include more than simply electricity costs, so the comparison probably understates the current costs and overstates the increase by some amount.

163. Transcript of FCC Workshop at 384, *The Future of Media & Information Needs of Communities: Public and Other Noncommercial Media in the Digital Era* (Apr. 30, 2010).

164. *See, e.g.,* THE HISTORY OF PUBLIC BROADCASTING, *supra* note 19, at 7-9 (describing the impetus behind reserving spectrum dedicated for noncommercial educational use); RALPH ENGELMAN, PUBLIC RADIO AND TELEVISION IN AMERICA: A POLITICAL HISTORY 36-38 (Astrid Viriding ed., 1996).

165. Further Inquiry into Two Under-Developed Issues in the Open Internet Proceeding, *Notice of Inquiry*, GN Dkt. 09-191, WT Dkt. 07-52 (Sept. 2, 2010), *available at* http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db0901/DA-10-1667A1.pdf.

infrastructure.

7. Transparent

If the purpose of public service media is to increase public knowledge and democratic engagement around important issues in the lives of individuals and communities, it seems obvious that there should be public knowledge and engagement around public service media operations themselves. To this end, the Public Broadcasting Act requires that CPB meetings are open to the public and imposes a range of reporting requirements on public broadcasting stations.¹⁶⁶ However, much more can be done by public service media entities in terms of transparent operation. Two areas in particular deserve special mention:

Journalistic transparency. Perhaps the greatest value of the legacy public broadcasting system resides in the trust the public reposes in the national public broadcasting brands.¹⁶⁷ These brands are trusted to signify thoughtful, high quality, and thoroughly reported information, as well as narratives that speak a truth.¹⁶⁸ It is the mission-orientation of public service media—its intentional advancement of public engagement around important topics—that undergirds the trust it enjoys. The preservation of this trust requires transparency in the news gathering process. Public service media participants ought to set the standard for transparency in both sourcing and personal affiliations.¹⁶⁹ It is not always

166. Public Broadcasting Act of 1967, 47 U.S.C. § 396(g)(4) (2000) (mandating that “[a]ll meetings of the Board of Directors of the Corporation, including any committee of the Board[,]” be open to the public).

167. In 2009, Americans ranked PBS as their most valued institution, second only to the military, and put NPR third, tied with law enforcement—the sixth consecutive year that Americans ranked PBS as No. 1 in public trust, above newspapers, commercial broadcasters, the judicial system, and the federal government. Silver, *supra* note 46, at 263; *see also* BEST PRACTICES, *supra* note 10, at 25 (“surveys show that public broadcasting is among the most trusted sources of information about science”).

168. GROW THE AUDIENCE, *supra* note 6, at 1 (citing the “quality, depth . . . authenticity, close connections to local communities, and leverage and scale of multiple national networks” as reasons for public radio’s strong trust factor among its audiences).

169. The value of transparency in new media has not been lost on journalism commentators. *See, e.g.*, David Weinberger, *Transparency is the New Objectivity*, JOHO THE BLOG! (July 19, 2009), <http://www.hyperorg.com/blogger/2009/07/19/transparency-is-the-new-objectivity> (suggesting that transparency in fact “subsumes” objectivity in capturing a reliability in new media that objectivity once did in old media); Dan Gillmor, *Washington Post, Social Networks and Transparency*, MEDIACTIVE BLOG (Sept. 30, 2009, 1:38 PM), <http://mediactive.com/2009/09/30/washington-post-social-networks-and-transparency> (arguing that transparency will become “one of journalism’s core principles in this new era”); Matthew Ingram, *Is Transparency the New Objectivity? 2 Visions of Journos on Social Media*, NIEMAN JOURNALISM LAB (Sept. 28, 2009, 09:58 AM), <http://www.niemanlab.org/2009/09/is-transparency-the-new-objectivity-2-visions-of-journos-on-social-media> (reviewing past debates about whether transparency should become a laudable virtue in the media industry).

possible to suppress bias, but transparency helps to reveal it and allows the public to interrogate content for slant and accuracy—the very kind of engagement that supports democratic practices.

Funding transparency. The second kind of transparency that should be increased throughout public service media networks concerns funding. While there is plenty of public reporting about government and private grants, the reporting does not support easy public access and analysis. In addition, much of the reporting from CPB grantees back to CPB never sees the light of day. If it did, in ways that were user-friendly and machine readable, the data could help the public to assess the efficacy and direction of public service media funding. The reporting required of CPB grantees is already onerous and CPB reporting to Congress is also heavy. We believe it unlikely that increasing these requirements would serve the public. However, changing the reporting criteria and improving ease of access to what is reported would make the requirements that are supposed to serve transparency goals much more meaningful.¹⁷⁰

II. LEGAL REFORMS TO SUPPORT NEW SYSTEMS OF DIGITAL PUBLIC SERVICE MEDIA

Significant changes will be necessary before public service media can be the engine it should be for broadband adoption and full public participation in the information age. The FCC took the first step in its National Broadband Plan in recognizing the role that public service media might play in advancing broadband adoption and the public purposes of broadband deployment.¹⁷¹ Most of the reforms that are needed to maximize this role are beyond the FCC's authority and must be implemented by Congress and in the field. The following outlines a number of specific legislative proposals that would support the

170. President Obama's statements promoting transparent policies in his Administration are consistent with this position. Transparency and Open Government: Memorandum for the Heads of Executive Departments and Agencies, 74 Fed. Reg. 4685 (Jan. 21, 2009) ("Transparency promotes accountability and provides information for citizens about what their Government is doing. Information maintained by the Federal Government is a national asset. . . . Executive departments and agencies should harness new technologies to put information about their operations and decisions online and readily available to the public."); Freedom of Information Act: Memorandum for the Heads of Executive Departments and Agencies, 74 Fed. Reg. 4683 (Jan. 21, 2009) ("A democracy requires accountability, and accountability requires transparency. . . . [A]gencies should adopt a presumption in favor of disclosure . . . [and] take affirmative steps to make information public"); see also Timothy Hay, *America's CTO Aneesh Chopra Challenges Tech Sector*, WSJ BLOG (Sept. 19, 2009, 7:02 PM ET), <http://blogs.wsj.com/venturecapital/2009/09/19/americas-cto-aneesh-chopra-challenges-tech-sector> (describing Obama Administration CTO's exhortations for improved government transparency and digitized, wider access to government data as key for improving government activities).

171. THE NATIONAL BROADBAND PLAN, *supra* note 2, at 303-04.

flourishing of a new kind of public service media for digital networks.

A. Congress Should Amend the Public Broadcasting Act

We need a new Public Service Media Act that preserves the central aspirations of the Public Broadcasting Act, but implements them in a technology-neutral way and emphasizes the structural principles outlined above.

The most significant failing of the existing Act is that it creates an entitlement to scarce federal public service media funding for radio and television broadcast licensees, but does not create a corresponding pool of funding for entities operating on other platforms. As a result, it locks in many public service media entities to technologies that some should abandon and locks out many public service media entities who should be qualified to compete for federal funds. In addition, the Act fails to set meaningful expectations for public service media entities that receive federal funding—expectations that would generate better public service in creating, curating, and connecting. More specific and measurable expectations derived from the kind of structural principles laid out above need not be written into the Act itself. However, CPB—renamed the Corporation for Public Service Media and restructured to reflect today’s digital realities—should be charged with implementing clear performance guidelines.

By the same token, copyright laws that were written to support public broadcast distribution of content need to be updated to accomplish the same goals on digital networks.¹⁷² The special copyright provisions that apply to public broadcasting are designed to reduce transaction costs entailed in clearing the upstream rights to music and other material included in content transmitted over public broadcasting airwaves.¹⁷³ As the airwaves become only one of many distribution mechanisms, and as it becomes possible for public service media entities

172. 17 U.S.C. § 114(b) (2006) (granting public broadcasters the right to use sound recordings without permission or in educational television and radio programs that are not commercially distributed); § 118(c) (granting a compulsory license to use “published nondramatic musical works and published pictorial, graphic, and sculptural works”); Ellen P. Goodman, *Public Service Media 2.0*, in ...AND COMMUNICATIONS FOR ALL: A POLICY AGENDA FOR A NEW ADMINISTRATION 270 (Amit M. Schejter ed., 2009) (discussing how technological and business changes have rendered special copyright benefits to public broadcasters increasingly useless); WILLIAM W. FISHER & WILLIAM MCGEVERAN, *THE DIGITAL LEARNING CHALLENGE: OBSTACLES TO EDUCATIONAL USES OF COPYRIGHTED MATERIAL IN THE DIGITAL AGE* 7 (2006) (finding that copyright laws and practices such as unclear or inadequate copyright provisions, extensive digital rights management, onerous rights obtainment processes, and unduly cautious rights gatekeepers are “among the most important obstacles to realizing the potential of digital technology in education”).

173. Goodman, *supra* note 172, at 270.

to expand access to archival content and distribute content to individuals in a variety of ways, these provisions do less and less. They hardly reduce transaction costs in the rights clearance process, which now needs to be conducted for all media, not just broadcast. Moreover, they do very little to unlock access to thousands of hours of important public service media content now. Copyright provisions should therefore be updated to reflect the reality of digital media and today's larger media-making ecosystem. The *quid pro quo* for any expansion in copyright benefits for public service media entities is that the works they create should be as open as possible to downstream uses.

B. Congress Should Conduct a Pan-Governmental Audit of Public Service Communications Spending

In addition to the annual federal appropriation to CPB, and other appropriations to public broadcasting stations and producers, many federal dollars are spent on public service communications. The CDC produces media on the flu virus.¹⁷⁴ The Department of Agriculture produces media on nutrition.¹⁷⁵ The Federal Trade Commission offers resources and media on identity theft.¹⁷⁶ The Office of Citizen Services hosts a kids.gov website with interactive activities and links to government pages on topics such as animals in national zoos, political systems and governance, careers in government, and profiles of other states.¹⁷⁷ These are all examples of federal spending on what are essentially public service media projects designed to inform and engage the public.

At a minimum, these expenditures ought to be more transparent. Like the federal government's IT expenditures, they ought to be made subject to public inquiry and scrutiny.¹⁷⁸ Moreover, an audit might well

174. See, e.g., *Seasonal Influenza (Flu)*, CTR. FOR DISEASE CONTROL AND PREVENTION, <http://www.cdc.gov/flu> (last visited Nov. 28, 2010); *Know What to Do About the Flu*, FLU.GOV, <http://flu.gov> (last visited Nov. 28, 2010) (an interagency government website providing comprehensive, government-wide information on pandemic influenza and avian influenza).

175. See, e.g., *Smart Nutrition Starts Here*, NUTRITION.GOV, <http://www.nutrition.gov> (last visited Nov. 28, 2010); United States Dep't of Agric., *Steps to a Healthier You*, MYPYRAMID.GOV, <http://www.mypyramid.gov/index.html> (last visited Nov. 28, 2010).

176. *Fighting Back Against Identity Theft*, FED. TRADE COMM'N, <http://www.ftc.gov/bcp/edu/microsites/idtheft> (last visited Nov. 28, 2010).

177. *The Official Kids' Portal for the U.S. Government*, KIDS.GOV, <http://www.kids.gov> (last visited Nov. 28, 2010).

178. See, e.g., FEDERAL IT DASHBOARD, <http://it.usaspending.gov> (last visited Nov. 28, 2010); *FAQ - For Public*, FEDERAL IT DASHBOARD, <http://it.usaspending.gov/?q=content/faq-public> (last visited Nov. 28, 2010) (describing the Dashboard as a resource to provide the public with details of federal information technology investments and the ability to track investment progress over time).

reveal that funds spent on public service communications could be more effectively leveraged if that content were networked over public service media platforms. Some of this material should be archived and extended through public service media applications and tools. Some of it should be part of locally based public engagement campaigns that exploit the connectivity of public service media entities. Some should be developed in coordination with, or build upon, innovative public service media strategies. If given systems that are modular and networked, there is every reason to believe that the public would get more value from government-supported communications extended over these networks.

The largest federal expenditure for public service media—larger even than its appropriation for public broadcasting—comes in the form of the more than \$700 million appropriation to the Board of Broadcast Governors (“BBG”), a stand-alone agency, for “public diplomacy” or international broadcasting.¹⁷⁹ This funding is allocated for all U.S. civilian international broadcasting, such as Voice of America, Radio Free Europe/Radio Liberty, Radio Free Asia, the Middle East Broadcasting Networks, and the Office of Cuba Broadcasting.¹⁸⁰ The stated mission of the BBG is “to promote freedom and democracy and to enhance understanding through multimedia communication of accurate, objective, and balanced news, information, and other programming about America and the world to audiences overseas.”¹⁸¹

While public diplomacy and public service media have different missions, to the extent that they are both engaged in producing credible and high quality news across the globe, there are synergies to be had between them. A recent flurry of criticism of the BBG argues that the entire structure of that media organization should be rethought.¹⁸² We agree that the system for producing public diplomacy through media is antiquated and full of redundancies. The restructuring of media systems for strategic diplomatic purposes should include an examination of how

179. As of 2008, the government had allocated some \$671 million to BBG programs. LEE C. BOLLINGER, UNINHIBITED, ROBUST, AND WIDE-OPEN: A FREE PRESS FOR A NEW CENTURY 102 (2010). The estimated budget for 2010 is \$757.7 million. *FAQ's*, BROAD. BD. OF GOVERNORS, <http://www.bbg.gov/about/faq> (last visited Nov. 28, 2010).

180. *About the Agency*, BROAD. BD. OF GOVERNORS, <http://www.bbg.gov/about/index.html> (last visited Nov. 28, 2010).

181. *About the Agency*, *supra* note 180 (look to right side banner of website); *see also Broadcasting Standards and Principles*, BROAD. BD. OF GOVERNORS, <http://www.bbg.gov/about/standards> (last visited Nov. 28, 2010) (listing the BBG's broadcasting standards and principles).

182. *See, e.g.*, Kim Andrew Elliott, *Radio Free of Bureaucracy*, N.Y. TIMES, July 12, 2010, at A25; Lee C. Bollinger, *Journalism Needs Government Help*, WALL ST. J., July 14, 2010, at A19; BOLLINGER, *supra* note 179, at 104-05; Shawn Powers, *U.S. International Broadcasting: An Untapped Resource for Ethnic and Domestic News Organizations*, in WILL THE LAST REPORTER PLEASE TURN OUT THE LIGHTS (forthcoming 2011).

federal funding to produce high quality media for foreign consumption could directly benefit the American media consumer as well.

C. *Spectrum Auctions and Public Service Media*

Over the years, there have been repeated proposals to use revenue from the auction of any repurposed television broadcast spectrum to fund public service media.¹⁸³ In our comments to the National Broadband Plan, we urged that the FCC seek statutory authority to use future broadcast spectrum auction revenue to help support (and incent) a reformed system of public service media. Specifically, we supported the “reallocation of some of the reserved [noncommercial TV broadcast] band, under conditions which ensured that public media resources would remain in the local communities of license.”¹⁸⁴ This, we thought, would benefit both public service media and larger spectrum policy goals.

We thought that an exchange of some noncommercial media spectrum assets for cash to support public service media should be made in accordance with a few basic principles. These were the principles of spectrum flexibility (moving spectrum to its highest valued use, which in the case of noncommercial media might be its cash value), spectrum efficiency (doing more with less spectrum), public service (retaining and growing noncommercial media assets in the digital era), and technological neutrality (allowing noncommercial media entities to invest assets in the most appropriate distribution technologies).¹⁸⁵

In its National Broadband Plan, the FCC importantly accepted the basic principle that it is in the national interest to establish a trust fund for the future of public service media using revenue generated by broadcast television spectrum auctions.¹⁸⁶ Unfortunately, the accounts of the fund’s purposes, its operations, and the incentives that would be

183. See, e.g., Silver, *supra* note 46, at 270 (suggesting reserving a percentage of all future spectrum auction revenue as a possible means of ensuring funding for public service media); THE DIGITAL FUTURE INITIATIVE PANEL, *supra* note 44, at 115-16 (suggesting allocating federal revenue source such as spectrum auction to fund public service media); Steve Behrens, *Fields Proposes Trust Fund, But Caps Its Size at \$1 billion*, CURRENT (Mar. 9, 1996), <http://www.current.org/mo/mo605.html> (describing a legislative proposal to fund the CPB through revenue generated from spectrum auctions); ADVISORY COMM. ON PUB. INTEREST OBLIGATIONS OF DIGITAL TELEVISION BROADCASTERS CHARTING THE DIGITAL BROADCASTING FUTURE: FINAL REPORT 82 (Dec.1998) (mentioning Henry Geller’s proposal to implement a mandatory “pay” system where all broadcasters would be relieved of public interest obligations in exchange for a percentage of gross revenues and revenues from license transfers). Indeed, even in 1979, *Carnegie II* proposed that spectrum fees be imposed to support public broadcasting. *CARNEGIE II*, *supra* note 1 (recommending the establishment of a fee on licensed uses of spectrum, so that income from the fee can be used for public broadcasting).

184. Goodman & Chen Comments, *supra* note 4, at 31.

185. *Id.* at 31-33.

186. THE NATIONAL BROADBAND PLAN, *supra* note 2, at 91-92.

necessary to get public broadcasters to relinquish spectrum, were all rather vague. Whereas the FCC recognized that commercial broadcasters would require financial incentives (a portion of the auction proceeds) to get them to surrender their licenses and vacate spectrum,¹⁸⁷ it did not acknowledge that noncommercial broadcasters would have the same needs.¹⁸⁸ Public TV stations will almost certainly need compensation to vacate channels.

Another item that was not made clear in the National Broadband Plan, and that should be made explicit, is that all revenue raised from noncommercial broadcast spectrum should be plowed back into noncommercial public service media in the form of incentive payments and the funding of public service media projects. The FCC reserved noncommercial broadcast spectrum for public service media beginning in the 1930s.¹⁸⁹ In essence, this amounted to the creation of national parkland—a space reserved from commercial development for particular public purposes. In the absence of a publicly deliberated decision that the parkland is no longer needed, it should not be forfeited. Even if a piece of the park is developed for other purposes (e.g., mobile broadband), the park asset (spectrum value) should be deployed to support the public mission underlying the spectrum reservation.

The FCC has recently initiated a Notice of Proposed Rulemaking¹⁹⁰ to begin to put in place the rules that would allow television stations to reduce their spectrum use. Bills have been introduced in Congress that would authorize the FCC to conduct incentive auctions to free up broadcast spectrum for broadband uses.¹⁹¹ Any such legislation should include provisions creating a fund for public service media and directing the FCC to preserve the public service media asset in one form or another.

187. *Id.* at 90 (describing incentives for stations that participate in auctions); *id.* at 304 (proposing a system in which commercial television broadcasters may contribute some or all of their spectrum allocation, while adding specific provisions that would ensure stations would not go off the air and would “continue receiving all the benefits of being a direct FCC licensee, such as must-carry rights”).

188. *Id.* at 304 (recommending that Congress consider dedicating spectrum proceeds to a trust fund “for the production, distribution, and archiving of digital public media,” but making no similar provision for commercial broadcasters).

189. THE HISTORY OF PUBLIC BROADCASTING, *supra* note 19, at 7-9; ENGELMAN, *supra* note 164, at 36.

190. Innovation in the Broadcast Television Bands: Allocations, Channel Sharing and Improvements to VHF, *Notice of Proposed Rulemaking*, FCC 10-196, ET Dkt. No. 10-235 (Nov. 30, 2010), available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-196A1.pdf.

191. See, e.g., Public Safety Spectrum and Wireless Innovation Act, S. 3756, 111th Cong. (2010); Voluntary Incentive Auctions Act of 2010, H.R. 5947, 111th Cong. (2010); Spectrum Measurement and Policy Reform Act, S. 3610, 111th Cong. (2010).

CONCLUSION

Not all of the changes in structure, governance, policy, and practice that are necessary to support public service media networks of maximal service to connected communities are within the government's power to effect. Indeed, most of these changes are not. However, the government can play a critical role by leveraging the incentives it creates through funding and the spectrum resource. Policymakers can also provide leadership and vision for a decentralized and often fractious public service media community.

The first steps of recognizing the promise and elements of change have already been taken in the National Broadband Plan. It was important, for example, that the FCC for the first time referred to something called "public media," as opposed to public broadcasting. This change in terminology signified an understanding that what is needed, and what is developing to some extent, are interconnected networks of public service media entities and publics. These networks, making use of broadband capabilities, will be able at long last to meet the expectations of the Public Broadcasting Act of 1967. But they cannot do so without significant structural reform—changes in public service media structure, governance, policy, and practice that are necessary to enable public service media networks to be of maximal service to connected communities. This reform will require Congressional action, as well as innovation in the field of public service media.