

*The Public Airwaves as a Common Asset
and a Public Good: Implications for the
Future of Broadcasting and Community
Development in the U.S.*

*The third in a three-part series of funder briefings entitled
DEMOCRACY AT STAKE? CURRENT ISSUES IN
ELECTRONIC MEDIA POLICY AND THE FUTURE
OF THE PUBLIC SPHERE*

*Organized by **Grantmakers in Film and Electronic
Media's Working Group on Electronic Media Policy**
and co-sponsored with **Environmental Grantmakers
Association, Innovation Funders Network,
Grantmakers in the Arts and the New York Regional
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About This Report

How do public policies shape the form and content of our media? How does media consolidation influence what we see, hear, and read? How do copyright laws limit access to information? How should public resources like the radio frequency spectrum—better known as the airwaves—be allocated to ensure the constitutional right to free speech?

These were some of the issues at the heart of Democracy at Stake?—Current Issues in Electronic Media Policy and the Future of the Public Sphere, a three-part series of funder briefings organized by Grantmakers in Film and Electronic Media’s Working Group on Electronic Media Policy, in partnership with a diverse array of grantmaker affinity groups, to introduce colleagues in the foundation community to the dynamic and cutting-edge field of electronic media policy. The series, which took place in winter 2005 at the Ford Foundation, brought together media reform groups, activists, researchers, and leading policy thinkers, to spotlight media reform work around three pivotal policy issues:

- **“Securing Our Rights to Public Knowledge, Creativity and Freedom of Expression” (January 7, 2005)** examined how copyright and technology policy are impeding the free flow of information, artistic creativity and innovation, and highlighted interventions by media policy advocacy groups to protect the public domain.
- **“The Role of Grassroots Organizing in Challenging Media Consolidation” (February 25, 2005)** presented a compelling and cohesive picture of media policy activism and grassroots organizing. Panelists discussed the decisive role media activists and organizers have played in recent policy victories, and outlined the challenges they now face in their efforts to uphold the public interest in upcoming policy battles.
- **“The Future of the Public Airwaves as a Common Asset and a Public Good: Implications for the Future of Broadcasting and Community Development in the U.S.” (March 11, 2005)** focused on the transition to digital broadcasting and the role that advocacy groups are playing in securing the public interest in the digital age. It also showcased innovative uses of radio spectrum (“the airwaves”) such as wireless technologies, low-power FM radio, and other community-driven programming that are bringing connectivity to rural and disadvantaged communities.

These are hotly contested public policy issues, and the ways in which they are resolved in the coming years will have profound implications for

democracy. The following report summarizes the March 11th meeting on the future of the public airwaves. By documenting the debate around the vital issues raised at these funder briefings, this report aims to advance learning among grantmaker colleagues and spur further support for the important policy work that is occurring in this field.

Introduction

Over the past 70 years, broadcast and telecommunications policy have been shaped by an amalgam of constitutional principles, economics, and physics. Throughout much of the 20th century, radio, television, and other wireless communication depended on analogue broadcast signals—sending a modulating television or radio signal at a certain level of power, over a certain frequency, to a receiver (radio, TV set), which then converted the signal to sound or pictures. The trouble with analogue signals, however, is that they are prone to interference. If two radio stations in the same city were broadcasting on the same frequency, for instance, listeners hear gobbledygook when they tune in.

This is exactly what was happening in America in the early part of the 20th century. In 1934, the Federal Communications Act created the Federal Communications Commission (FCC) and charged it with allocating spectrum. Individuals or companies wanting to use a slice of the spectrum had to apply for an FCC license, which authorized the holder to use a certain frequency, for a specific purpose, in a particular location. Over the years, the FCC came to regulate a dizzying array of telecommunications devices: television and radio broadcasting, cable television, broadband Internet, wireless computing, wireless phones, satellites, emergency radios, airline communications, pacemakers, baby monitors, and pagers.

Flash forward to the digital age.

Public Airwaves Glossary

Broadband—Any telecommunications technology capable of carrying multiple channels of data over a single medium. Examples include DSL, cable, high-speed wireless, satellite, and fiber-optics.

FCC—An independent federal agency, the Federal Communications Commission manages all frequencies not reserved for military and other federal government purposes. The FCC both allocates frequencies for specific purposes (radio, TV, cell phones) and assigns licenses to companies and other users.

Incumbents—Companies that hold FCC licenses to deliver commercial telecommunications services. Incumbents include radio and television broadcasters, phone companies, and cable providers.

Low-Power FM—Small radio stations that are authorized for noncommercial educational broadcasting only. They operate with an effective radiated power of 100 watts or less, giving them a range of 3.5 miles. Also known as community radio.

Mesh Networks—A wireless network that adds capacity as more users join the network by repeating and re-routing signals among users.

Municipal/Community Wireless—Broadband wireless Internet networks developed and supported by municipal governments.

Spectrum—Shorthand for “radio frequency spectrum,” the part of the electromagnetic spectrum whose physical properties are most amenable to electronic communication. Better known as “the airwaves.”

Spectrum Licenses—FCC licenses granting companies and other users exclusive, renewable rights to use discrete parts of the airwaves. Until 1994, free licenses were granted by administrative fiat. More recently they have been auctioned.

Unlicensed Spectrum—slices of the airwaves set aside for anyone to use. This “public park” is home to over 300 different types of consumer devices: microwave ovens, cordless phones, and wireless networks.

Wi-Fi—Short for “wireless fidelity,” Wi-Fi is a set of technological protocols that allow digital devices to send and receive information over a high-speed data network using unlicensed spectrum—but at low power and with limited range.

Adapted from the following sources: Federal Communications Commission (www.fcc.gov), the New America Foundation (www.newamerica.net), Ford Foundation Report (http://www.fordfound.org/publications/ff_report/); and Public Knowledge (www.publicknowledge.org).

Advances in digital communications technology over the past decade allow the airwaves to be used much more efficiently. (A digital signal can carry up to ten times the amount of data as an analogue signal.) The upshot is that spectrum is an increasingly valuable resource—one estimate puts the current market value at \$750 billion. Spectrum reform is now the hot topic among corporate leaders, policy experts, and public-interest advocates who all agree that the current system of licensing the airwaves needs to be scrapped. The question is how—and who will benefit.

On March 11, 2005, Grantmakers in Film and Electronic Media's Working Group on Electronic Media Policy organized a funder briefing to discuss the future of the public airwaves. Co-sponsored with the Environmental Grantmakers Association, Innovation Funders Network, Grantmakers in the Arts, and the New York Regional Association of Grantmakers, the briefing sought to highlight the airwaves' role as a common asset and a public good—a vehicle for free speech, a potential engine of community development, and a resource more precious than its value as a commodity. The briefing was organized around two panel discussions featuring twelve speakers—community developers, organizers, public-interest advocates, and policy experts. This paper offers a synopsis of the panel discussions, highlighting the key themes and providing context for each participant's comments.

In opening remarks, Mark Cooper, director of research for the Consumer Federation of America, provided a brief history of spectrum policy over the past century. Current spectrum policy, he argued, is the product of a regulatory scheme predicated on the technical limitations of analogue broadcast technologies. Signal interference prohibited everyone from speaking freely over the airwaves. With a limited amount of usable spectrum available, the FCC made a compromise: Broadcasters would be able to speak (and would be obliged to serve the public interest), but the rest of us would not. However, new communications technologies have made spectrum scarcity a thing of the past, and the time has come for citizens to reclaim their First Amendment right to speak over the airwaves.

Panel One outlined the ways in which wireless networking is transforming the delivery of high-speed Internet services, opening up new opportunities to build civic participation, creating economic opportunities, and bridging the digital divide. Randal Pinkett, the president and CEO of BCT Partners, highlighted the ways in which wireless networking has transformed life for the residents of Camfield Estates, a low-income housing development in Roxbury, Massachusetts. Next, Matthew Rantanen, director of technology for the Southern California Digital Tribal Village, outlined how eighteen Native American communities in San Diego County designed, built, and manage their own high-speed community wireless network, connecting reservation communities across vast distances. Afterwards, Prometheus Radio Project's Hanna Sassaman discussed how the residents of North Lawndale, a low-income community in Chicago, are taking a similar

approach to community wireless in America's third-largest city. In June 2004, a "community barn-raising" created a community-wide high-speed Internet network. North Lawndale, she noted, is now a living example of what is possible as the City of Chicago considers building its own municipal wireless network. In closing, Adam Werbach, a member of San Francisco's Public Utilities Commission, discussed the policy battles that await citizens and forward-looking municipal officials when they undertake community wireless plans. Werbach recounted the opposition the city encountered from incumbent broadband providers and their allies in the business community in the debate over San Francisco's decision to invest in municipal wireless.

As the broadcast industry makes its way through the transition to digital television as mandated by the Telecommunications Act of 1996, public-interest advocates have been fighting a rear-guard battle to stop the privatization of the airwaves, a long-standing goal of broadcasters, free-market policy advocates, and their allies in Congress. Panel Two examined the policy alternatives to privatization, and discussed strategies for building the constituency needed to preserve the airwaves as a common asset. Harold Feld, associate director of Media Access Project, a D.C.-based public-interest law firm, kicked off the panel by urging advocates and funders to resist making the issues too complex. Feld insisted advocates keep things simple and outlined a simple three-point strategy for reform: figure out why spectrum policy matters, enumerate the policy goals, and develop a strategy for realizing them. Next, Michael Calabrese from the New America Foundation discussed the public interest goals advocates have been pursuing in the transition to digital television: to stop privatization, roll back exclusive licenses, and, in the cases where licenses are needed, to increase the public's return. Jeff Chester, executive director of the Center for Digital Democracy, outlined how new technology platforms can be used to create and distribute public-interest media. Josh Silver, executive director of the media advocacy organization Free Press, argued next that since battles over municipal wireless are being fought at the state level, that is where the constituency for reform needs to develop—from the bottom up. Marcia Warren Edelman, president of the Native Networking Policy Center, concluded the panel discussion with an overview of telecommunications policy among the 562 federally recognized Native American tribes. With plain-old telephone service on Indian reservations at a fraction of what it is nationwide, and basic services like 911 non-existent, access to digital technology is the overarching need.

Spectrum is Speech: Reframing First Amendment Rights in a Digital Age

In opening remarks, Dr. Mark Cooper, director of research for the Consumer Federation of America, outlined how digital technologies have outstripped the current regulatory framework governing the use of the broadcast and communications spectrum in the United States—and outlined a vision of how citizens can reclaim their constitutional right to speak using the airwaves. For most of the 20th century, Cooper said, policymakers focused on the economic value of the airwaves, but the real value he argued lies in the airwaves' ability to facilitate speech. Digital technologies like Wi-Fi, mesh networks, and smart radio render obsolete the concept of spectrum scarcity, thus opening the door to a regulatory structure rooted in the principles of the commons—a simpler, lighter framework more akin to maritime law than telecommunications policy. The window of change is open, Cooper said, but only for a short time. The FCC-mandated transition to digital broadcasting will free up new swaths of spectrum, and the astounding growth of Wi-Fi has demonstrated that a commons model can work. The challenge, Cooper said, is to remind citizens of what's at stake: "Spectrum is not about economics. It's about politics. It's about the right to speak. Now is the time to reclaim the First Amendment, to take it away from the broadcasters and return it to the people."

As the keynote speaker, Mark Cooper was given the challenging task of outlining the complex interplay of constitutional principles, physics, and electronics that has shaped spectrum policy since the advent of the radio at the turn of the 20th century. "I'm going to ask you to think about the public interest in the airwaves in a very different way than you might be used to," he said. "And to make this challenge worse," he continued, "the thing we are talking about, the airwaves, or spectrum, is something we mere mortals do not understand." On the other hand, understanding the lesson in physics, policy, and technology that Cooper was about to deliver was the necessary antecedent to realizing the full measure of the First Amendment. "We have the constitutional right, the strategic need, and the tactical opportunity to completely change freedom of speech in America," Cooper said. And it begins with reframing how we think about spectrum.

The public conversation about spectrum use in America has been cast in largely economic terms. As Cooper noted, even the announcement for this briefing highlighted the airwaves' value as a public asset—\$750 billion. But spectrum policy is first and foremost about the constitutional right to speech. "The airwaves are not an asset, and speech is not a commodity," he said. "You have to get that 20th century concept out of your heads, and adopt a 21st century concept, or maybe an 18th century concept, which is when our Constitution was born."

According to Cooper, the notion of spectrum-as-commodity is a direct result of government regulation of the airwaves. When radio was born a

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-Mark Cooper

century ago, anyone could broadcast. But as more radio stations started popping up, the airwaves got crowded. Signals overlapped and broadcasts were garbled. Within 25 years, this experiment in free-speech broadcasting became hopelessly muddled by the technological limitations of analogue radio transmitters and receivers. So Congress and the Supreme Court adopted a compromise, Cooper explained. The government would grant licenses to broadcasters for their exclusive use in part of the spectrum, under the rationale that if all citizens tried to speak, no citizen would be heard. On the other hand, those without licenses effectively lost their right to “electronic speech.” In exchange, Congress placed a set of public-interest obligations on license-holders. These included requirements governing children’s programming, political advertising, decency, and limits on broadcast ownership. “It was not a very good deal from my point of view,” Cooper said. “But at least I got something back as a listener for what I lost as a speaker.”

Yet the entire framework was designed to address the inherent limitations of analogue technologies. “The technology was the constraint on the use of the spectrum,” Cooper explained. “That’s very, very important. It was just too primitive to avoid interference except by everybody getting out of the way.” Fundamentally, Cooper said, spectrum is similar to the ocean: a vast commons that no one owns but which is governed by a simple set of rules structuring how it can be used. The government builds lighthouses and sets out buoys, outlining where and how fast boats can travel. “But it’s a light-handed set of rules,” he said. By contrast, current spectrum policy is a heavy-handed set of rules governing this commons. If a shipping company (i.e., a radio station) wanted to send a ship (i.e., a signal) from New York to London, it had to clear a huge lane in the sea to ensure that the wakes from other boats (i.e., other signals) wouldn’t interfere. In a nutshell, this was the regulatory framework for analogue broadcasting.

But digital technologies hold out the possibility of entirely new uses of the spectrum commons. Returning to his maritime analogy, Cooper argued that digital technologies allow boats (i.e., electronic signals) to move about quickly and more nimbly. “Over time, I invest in steering and radar, and the lanes shrink, and I can now have more traffic.” But the important point is that the investments needed to make the commons work reside in the boats themselves. In the real world, the spectrum commons work because the electronic devices—smart phones, digital radios, mesh networks—know how to navigate the commons. And it is here, Cooper concluded, that the ocean analogy breaks down—mainly because advanced wireless digital technologies are less like boats carrying information than a vast network of platforms constructed in the ocean that are capable of flinging information from deck to deck. “That’s what Wi-Fi is,” Cooper said. “That’s what a mesh network is.” They’re a series of little transmitters and receivers that fling information from platform to platform. More importantly, he noted, there is no limit to the number of platforms we can build. “The more platforms I put out there, the more traffic I can throw across the ocean.”

A spectrum commons is similar to the ocean: a vast commons that no one owns but which is governed by a simple set of rules structuring how it can be used. The government builds lighthouses and sets out buoys, outlining where and how fast boats can travel—but it’s a light-handed set of rules.

Put another way, digital technologies deployed in common spectrum do away with spectrum scarcity. And if there is no scarcity, there is no need for exclusive broadcast licenses, which are fundamentally limits on electronic speech. “Think about what it means for that crummy compromise we made 100 years ago,” Cooper said, trading speech rights for broadcasters’ public-interest obligations. “I want my free speech rights back; you should get yours back.”

But how should citizens begin reclaiming their right to speak using the airwaves? One option, Cooper noted, is to auction spectrum leases to the highest bidder while retaining public ownership and strengthening public-interest obligations. This option may maximize the economic value to the public, Cooper conceded, but with possession being nine-tenths of the law there is a danger in the lease option. “We may write a contract that says even though you’re paying for it, it’s not your property,” Cooper noted. “But man, once you buy it, once you pay for it, you start to act like it is your property.”

Another option is to do away with licenses altogether and pursue a pure commons model. But that, too, has complex implications. “If spectrum isn’t scarce, what happens to the public-interest obligations of the people who are using it?” Cooper asked. Will they all go away? The answer is yes and no. In the real world, there will be some applications that require dedicated spectrum. In these cases, Cooper argued, public-interest obligations will remain, though the law could mandate that secondary, non-interfering uses be allowed under spectrum licenses—an idea akin to building public roads on leased government land.

Then there is the question of what happens to the public-interest obligations of the incumbent license holders. Without spectrum licenses, the government has no basis to insist that broadcasters serve the public interest. Yet broadcasters have the infrastructure already in place to shape communications through habit and market share. “Over the past 75 years, the fact that broadcasters had these huge exclusive lanes enabled them to build aircraft carriers with immense amounts of fire power with which to assault public opinion,” Cooper said. Unless protections are established to level the playing field for spectrum use, the incumbent license holders will continue to dominate communications—but without the attendant obligations. “That’s something we have to face up to,” Cooper said.

Despite these hurdles, Cooper insisted that the time to push for change is now. “This is the moment to get going,” he urged. “Remember: constitutional, strategic, tactical.” From a constitutional perspective, Cooper continued, over the next 20 years exclusive licenses will come to be seen as an impermissible infringement of free speech. “Just as we got rid of [the legal doctrine of] separate but equal, we have to get rid of exclusive licenses in spectrum.” Strategically, media reformers should focus on limiting the

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size of the commercial media since it's not going to go away. "Public-interest obligations get us to put some stuff on the decks of those aircraft carriers. But in the end we need a different fleet to promote the public interest in the ocean of spectrum," he said. Tactically, the transition to digital television has placed all these issues on the table. "The digital transition has completely bungled," Cooper insisted. Broadcasters have been sitting on the spectrum for ten years, and other parties—commercial and non-commercial—are clamoring for the space. "This is the moment when folks really want to get that spectrum out of their hands and into somebody else's hands."

In the end, however, the most important factor driving change is not the failure of the digital transition but rather the success of Wi-Fi. "Here is an unlicensed space, a pure commons, that has proven exactly the fact that we don't need centralized investment or control to exploit the ocean," Cooper said. "We simply need to liberate people to actually use it by making the investment necessary for them to speak."

Seizing the Opportunities of Spectrum: How Unlicensed Spectrum is Transforming Community Development and Civic Participation

In less than a decade, wireless networking, better known as Wi-Fi, has transformed the delivery of broadband Internet services. By doing away with the need for cables and wires, Wi-Fi drastically lowers the cost of access. Perhaps more importantly, Wi-Fi is the leading example of how a commons model for using the airwaves can unleash economic innovation, increase communication, and promote the practice of democracy—all from the bottom up. Four panelists offered snapshots of the many ways that communities are using wireless technologies to increase civic participation and drive community development. Emy Tseng, senior policy advisor at the Community Technology Foundation of California, moderated the discussion.

Community Wireless and Community Building: Using Wireless Technologies to Drive Urban Redevelopment

Over the past few years, wireless technology has become an increasingly important part of urban redevelopment across the country. Randal Pinkett, president and CEO of BCT Partners, a New Jersey-based development consulting firm specializing in the use of technology in low-income and underserved communities, outlined how this trend has taken shape and what it means for low-income communities. On one hand, broadband technologies like cable modems and DSL have become much more affordable and accessible. On the other hand, access to cheaper technology has been supported by public policies aimed at broadening access in poor communities. Several states give tax credits for donations of technology equipment, giving community development nonprofits access to cutting-edge technology. Likewise, twenty-nine states and the District of Columbia either require broadband infrastructure as a part of low-income housing development, or provide public incentives for developers to include broadband infrastructure in publicly funded housing. The convergence of economics and policy, Pinkett said, “opens up an entirely new realm of opportunity when we think about affordable housing.”

Camfield Estates, a 102-unit low-income housing development in Roxbury, Massachusetts, is one example of how communities can realize the opportunities broadband technologies afford them. Working with Camfield residents, BCT Partners established a computer training program at the development’s community technology center. Families could also buy computers for their homes at a subsidized rate. Eventually, the original wired broadband connections were converted to wireless connections, a transition that now allows residents to get online for free. “When we went wireless, we opened up the possibility for more residents to get connected in their homes,” Pinkett said. Residents who previously couldn’t afford the fee for monthly Internet access took advantage of the opportunity for subsidized computers now that access was free.

Just as important, however, was what [Camfield Estate] residents did with the technology once they controlled it themselves. Residents mapped out the assets that existed in their community—churches, local nonprofits, schools, and individuals—identifying resources that could be leveraged and mobilized.

Just as important, however, was what residents did with the technology once they controlled it themselves. With BCT Partners' support, residents mapped out the assets that existed in their community—churches, local nonprofits, schools, and individuals—identifying resources that could be leveraged and mobilized. The asset map was then converted into a website that residents can use to connect to one another. “Anyone can log on and find someone in their community who might provide babysitting, or know how to do plumbing, or have a shared interest in something that they might enjoy—sewing, cooking, etc.,” Pinkett explained.

Once residents realized the possibilities, they developed a host of other projects. A group of high school seniors developed a contest during Black History Month that offered prizes for the best essay and PowerPoint presentation. A community forum developed around security and safety. Residents published an electronic newsletter. Together, this combination of high tech and high touch transformed the community and the lives of the individual residents. As one resident put it, “The project has changed my life in more ways than one. A good example of this is that I have found enough courage to teach myself HTML. Had I not had this opportunity I might still be looking to muster up the courage. I know that technology is key to the future, and I know that I personally could do anything with it that I put my mind to.”

Tribal Digital Village: Reconnecting the Tribes of Southern California Through Wireless Internet

For over a century under the reservation system, the three original Native American tribes of San Diego County were splintered among eighteen reservations, dividing family lines, friendships, and cultures. Since 2001, however, the members of the county's tribal communities have been reconnecting to each other through the Southern California Digital Tribal Village, a high-speed wireless Internet network that links the reservations together. It is an ambitious project, noted Matthew Rantanen, the Tribal Digital Village's director of technology and web services, but the digital village is already transforming life on the reservations—and it is only four years old. Said Rantanen: “We're trying to reconnect the tribes, reconnect their culture, and give them online tools, access to resource centers.”

Designed, owned, and operated by the sovereign nations, the Digital Tribal Village in Southern California is equal parts community organizing and technology infrastructure.

Built under the aegis of the Southern California Tribal Chairmen's Association, a nonprofit consortium of reservation leaders, the Digital Tribal Village was launched with a \$5 million grant from Hewlett-Packard, with technology support from the University of California, San Diego. Designed, owned, and operated by the sovereign nations, the digital village is equal parts community organizing and technology infrastructure. Relay towers and backbone nodes shoot wireless signals from point to point within and among the reservations, bringing high-speed Internet to sixty-five community buildings, with 1,100 computers, on eighteen reservations. Because the network was built on tribal land, Rantanen explained, the cost

is low. There are no city or county building codes to contend with, and no one has to pay rent for placing a node on a relay tower.

When the project was starting up, the tribes' young people conducted the site surveys, heading out into the mountains with global positioning units and topographical maps to find the best places to site relay towers. Later, they learned to program and manage web sites. Getting young people involved in technology, Rantanen noted, was an important step towards helping to overcome the technology gap Indian children often face. "When the Indian kid goes home to do his school report and it comes back handwritten with a picture taped to it, it's usually up there next to reports done by kids with access to Internet," he said. "They have digital photos, and the reports are printed out on nice color printers. We had to fix that." Thanks in part to the digital village, high school graduation rates are up, and young people feel more confident.

Beyond the educational benefits, the digital village has created a new set of connections in the community. Residents have used the Internet to apply for federal grants. They have petitioned the Environmental Protection Agency regarding the reservations' long history of pollution from the outside. And fading tribal languages have found new life as the language-preservation movement within the reservations has gone online. "We're trying to bring that back to the people through the technology," Rantanen said. We're trying to reconnect the tribes, reconnect their culture, and give them online tools they need to access other resources."

Reclaiming the Media: Communities Take Back the Airwaves Using Wireless Technologies

Prometheus Radio Project has made a name for itself over the past decade as an FCC gadfly and a leading advocate of low-power FM community radio. In the late 1990s, Prometheus Radio emerged from the "pirate radio" movement—spectrum activists setting up low-power FM stations without a broadcast license. These acts of civil disobedience, combined with vigorous grassroots activism, persuaded the FCC to extend broadcast licenses to over 400 low-power FM stations around the country—though not in urban areas. Since the FCC policy victory in 2000, Prometheus Radio has focused on "radio barn-raising"—organizing communities, training volunteers, and setting up stations in just three days. Its most famous barn-raising was that of Radio Consciencia, a station in southwest Florida run by the Coalition of Immokalee Workers (CIW), the renown human-rights organization working to end indentured servitude and slavery in Florida's agricultural fields.

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Prometheus is now applying its barn-raising model to community broadband projects. "We've learned over the years that barn-raising work," explained Hannah Sassaman, Prometheus Radio's program director. "They are able to develop long-term successful support locally for a station, and they create a hotbed of policy organizers." The idea is to unleash this grassroots energy on community wireless networks, a much more flexible

and powerful communications platform than FM radio. For all its merits, community radio is still a broadcast model: Whoever had the microphone and the transmitter is the only one who speaks. But community wireless is a commons model: If you have a computer with a wireless card, along with minimal technical know-how, you can talk to anyone.

Prometheus Radio recently began working with residents in North Lawndale, a poor, largely African-American community in Chicago. The Center for Neighborhood Technology (CNT), a local nonprofit, had established a pilot network that provided twenty families with high-speed Internet. This past June, however, a barn-raising put up fifty repeater nodes, creating a mesh network and bringing access to the entire community. “The more families, the more homes, the more businesses that come online, the stronger that network will be, the more pathways communities will have to distribute content that they make themselves,” Sassaman said.

Though the network is still in its infancy, Sassaman points to the remarkable promise it holds to solve community problems, create opportunity, and bring residents together. For instance, the City of Chicago recently shut down several bus lines that had served that neighborhood, leaving college and high-school students without public transportation. Before the network was built, students faced a long, arduous commute if they had to do work on the Internet, Sassaman noted. Now, they have instant access. Through the Crib Collective and Street Level Youth Media—both local nonprofits— young people in the community are creating music and local news, which can now be distributed over the Internet. “They’re producing content, but before the network they didn’t really have dedicated ways to distribute it,” Sassaman said.

The network is also emerging as an important source of jobs and education. Fifty-five percent of the community’s residents have been in the criminal justice system, and forty-five percent of households are below the poverty line. Though a partnership with the North Lawndale Employment Network, a nonprofit that provides job training and placement for ex-offenders, local residents are being trained to be the first responders when there are technical glitches. “This is incredible job training for these folks,” Sassaman said. Another nonprofit, she continued, will use the Internet to support childcare and GED classes.

In closing, Sassaman underscored the policy implications of North Lawndale’s grassroots community wireless network. Chicago, like other cities around the country, is considering building a citywide municipal wireless network. “CNT and the folks in North Lawndale have already been incredibly successful in using their community model to influence the City of Chicago as it chooses and plans to pursue wireless,” Sassaman noted. Residents met several times with Chicago’s chief technology officer, and the city agreed this Spring to open a task force to explore the issue more fully. It is this bottom-up approach to wireless policy and community

The residents of North Lawndale have already been incredibly successful in using their community model to influence the city of Chicago’s plans to pursue its own wireless network.

development that Sassaman believes could have a real impact on national policy. “If you have a big outpouring of energy with a lot of community members coming in, and a big press push, and a lot of policy folks coming down, it can really raise the momentum level.”

Building Municipal Broadband: San Francisco’s Experiment With Community Wireless

The idea of cities offering broadband wireless Internet as a public amenity, like road maintenance, sanitation, and public parks, makes commercial interests very unhappy. This spring, when the San Francisco Public Utilities Commission held public hearings on a proposal for municipal broadband, commissioner Adam Werbach received an email that had been forwarded by one of the downtown business interest groups. Its title: “Socialists Seize San Francisco.” But rather than worrying about defeat, Werbach, the former executive director of the Common Assets Defense Fund and a national champion of municipal broadband, saw imminent victory. “As soon as people start over-dramatizing what we’re doing here—which is talking about building a municipal broadband network, getting the public sector to expand rather than contract—they’ll begin to lose.”

The idea of cities offering broadband wireless Internet as a public amenity, like road maintenance, sanitation, and public parks, makes commercial interests very unhappy.

Werbach put up a PowerPoint presentation featuring television screenshots of a recent hearing and recounted the drama that unfolded. One slide showed a consumer rights advocate arguing in favor of community wireless. The next showed a representative from the Pacific Research Institute, a regional libertarian think tank, condemning community wireless. “They now have a major new program on spectrum, mainly because it’s their most lucrative new area of research, and completely funded by SBC and Comcast”—San Francisco’s two main broadband providers. Next up was a spokesperson for the Committee on Jobs, who argued that community wireless would cost thousands of jobs—an argument soon rebutted by an envoy from the Communications Workers of America, who argued that it was a lack of competition between Comcast and SBC that put the 6,000 combined union jobs at risk.

And so the hearing went, point followed by counterpoint, until it reached a dramatic climax. A woman from the Chamber of Commerce held up seven pages torn from the San Francisco yellow pages. “She ripped them out and said, ‘Passing a municipal wireless network in San Francisco would be like ripping seven pages of business out of the fabric of the family of San Francisco,’” Werbach recalled. A member of the commission asked how many of those businesses actually provide high-speed Internet services. There was a pause. “Well, two,” came the answer. “And how many of them would benefit from free or low-cost wireless?” the commissioner asked. “Well, we have 18,000 members,” she replied. The commissioner continued, “Then maybe its time to ask them what they think.”

“Walking into this, we didn’t actually have all the votes,” Werbach admitted. But with the hyperbole and drama, he continued, “They got us all the

votes.” This spring, the city approved plans to provide municipal broadband services. The city is currently soliciting proposals for a community wireless plan. The pieces are in place, Werbach contended, though he expects the incumbent providers to launch a vigorous campaign to undercut the plan.

Still, a victory is a victory, and Werbach was quick to underscore the lessons. First, he noted, the fact that incumbent broadband service providers are overreaching with their rhetoric and prognostications of economic ruin reveals the fundamental weakness of their position. “If it’s true that they are overreaching, it is time now to think big and start small, think globally, act locally. It’s these individual projects all over the place that are actually just going to take the market.” Second, municipal wireless won’t go anywhere if the quality and service aren’t equal to or better than those provided by the private sector. “We’re getting the access we need, but can we actually deliver? Can the public sector do as well or better as the private sector? We cannot be an inferior choice.” Third, the race is on. Incumbent providers have already convinced fourteen states to pass laws limiting municipal broadband, and they will be pushing similar laws elsewhere. “If we win, and if we continue moving forward, it will be extraordinary,” Werbach said. “If we slow or falter right now, the opportunities that present themselves today will be forever foreclosed.”

Alternatives to Privatizing Spectrum: Strategies to Protect the Airwaves as a Common Asset

What public policies need to be in place to protect the airwaves as a common asset—and what strategies are policy advocates using to achieve those goals? On one hand, broadcasters and telecommunications companies have been pushing the Federal Communications Commission to privatize the airwaves. On the other hand, public-interest groups have advocated spectrum reform strategies that run the gamut from open spectrum (doing away with most or all restrictions on spectrum use in favor of a commons model) to spectrum leasing (retaining public ownership while leasing spectrum to the highest bidder and using the proceeds for public-interest media). This panel examined the complex interplay of technology, policy, and economics shaping this debate. The panel was moderated by Alyce Myatt from the MediaWorks Initiative.

The Moment is Now: Creating Spectrum Policy in the Public Interest

As associate director of the public-interest law firm Media Access Project, Harold Feld has been a leading advocate of public-minded spectrum policy. His mantra for this seemingly complex issue is simple: Don't get bogged down in the details. "This is how the incumbents win, because they make this look like it's so complicated and it's such a tough problem, and we get divided and we start looking at different solutions." Instead, Feld urged people to pursue three goals: one, figure out why spectrum policy matters; second, determine what the policy goals are based on what matters; and third, develop a strategy for realizing those goals. "This is not something that can be micro-managed," he cautioned. "This is something that is going to be very dynamic and live."

Why do we care? Feld asked. There is an economic case to be made, Feld noted, that freeing up spectrum would unleash a new wave of technology innovation in consumer electronics and software. "The Intel guys go in and make this case. Microsoft makes this case," Feld said. "For me, it comes down to good jobs at good wages. That's what I always say when people [in corporate circles] ask me what this is about." Social justice and empowerment are important cases to be made as well, but they don't carry the same weight with legislators and potential corporate allies.

Just as important is the constitutional argument. "This is not charity. This is [about] free people in a free society," Feld said. The United States has not always lived up to the promises contained in its Constitution, but those principles still animate the debate. "For me, that is the most compelling thing about these technologies," Feld said. "Free people, free communities, not depending on the charity of big companies or the charity of government."

What policies do we need? Foremost, Feld noted, spectrum use is a basic

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"This is how the incumbents win, because they make this look like it's so complicated and it's such a tough problem, and we get divided and we start looking at different solutions."

issue of free speech. “Where people can directly speak through the airwaves, they should be allowed to do so. The fact that it has spin-offs for economic development, the fact that it has spin-offs for civic engagement and other things are also part and parcel of the promise of free speech.” To the extent that spectrum licensing is needed, licenses should be distributed as widely as possible, with an emphasis on serving the underserved. “The big problem that we have now is that these big electronic voices have been bought up, gobbled up in the marketplace, corralled.” Simply put, Feld argued, there needs to be a stronger set of public-interest obligations imposed on licensees.

Feld is an empathic opponent of spectrum auctions. “Spectrum auctions are the crack cocaine of public policy,” Feld said. “Do not take a hit on that pipe. You get one hit of those revenues and you sell your future for a bunch of magic beans.” Putting five percent of auction revenues into a public-interest media trust fund is poor compensation for the loss of access. “This is not a fairytale and the bean pod doesn’t grow up to a golden goose in the sky,” he continued. “You’re left with a bunch of pea plants and the rest of these guys are living off the rest of the farm.”

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-Harold Feld

And how should these goals be achieved? The short answer, Feld noted, is that it is going to be a long, hard slog. “If you want a good model, think of the civil-rights movement, because it has a lot of very important lessons there,” he said. Reconstruction was a top-down effort to impose change from the outside—and it was a catastrophe. The second civil-rights movement arose from the tragic legacy of failed Reconstruction, when communities of color developed a movement from the bottom up, which eventually attracted allies from outside the South. But even that movement was a long struggle strategically fought. “Everyone likes to talk about *Brown v. Board of Education*. There were ten years of litigation leading up to *Brown*. And even after *Brown*, we needed the Civil Rights Act. And even after the Civil Rights Act, we needed the national guard to desegregate schools. It’s a long fight on many fronts.”

On a strategic level, several things need to happen. First, Feld argued, advocates need facts on the ground. “Policy is made by human beings, another one of my big aphorisms. People respond to these stories. They respond to the facts on the ground. Congress responds to their constituents. And no matter how big your war chest is, every Congressman knows at the end of the day he needs votes.” Beyond facts and stories, advocates need strategic intellectual support—engineers to address technical issues, lawyers to file policy briefs, sociologists to track the impact of community wireless. “I’m not saying bad science or corrupt the process of study, but when we’re right, we should say it, and we should say it in the most effective way possible,” Feld said.

Most importantly, however, the time to implement is now. “It was 100 years after Reconstruction that we started to see a glimmer of hope for true civil

rights in this country,” Feld said. “We do not want to go 100 years before we see a glimmer of hope again of winning our rights in spectrum, and in communication and democracy. The major battles are going to be fought in the next five years. Everything after that is quibbling about the details. If we lose, our descendants will not forgive us and they will be right.”

Shaping the Wireless Future: Using the Digital TV Transition to Curtail Incumbent Licenses and Increase Returns to the Public

Among the many changes in media and telecommunications policy wrought by the Telecommunications Act of 1996, the provision calling for television broadcasters to switch from analogue to digital signals promised to transform the airwaves. Digital signals are many times more efficient than traditional analogue signals, so once the transition was complete the public could reclaim from incumbent license holders the spectrum once used for analogue broadcasting. To facilitate this transition, Congress gave TV broadcasters a second channel of spectrum they could use at no cost, for ten years, to broadcast both digital and analogue signals. By 2006, broadcasters were to return eighteen channels of prime spectrum, which could then be reallocated, either through spectrum auctions, open access, leasing, or privatization. The transition has dragged on, with broadcasters clinging to analogue channels. In the next year or two, Congress is likely to establish a hard deadline for turning off analogue TV and reallocating spectrum for public safety and broadband. As the debate winds down, the question of what to do with the returned spectrum has become one the central debates in telecommunications policy today.

Michael Calabrese, vice president of the New America Foundation and director of the think tank’s Spectrum Policy Program, outlined the key legislative proposals public-interest groups have been advocating in the transition. The overarching goal, he said, is to stop the march towards privatization. “The essential, and still ongoing, struggle has been to stop the effort by the current FCC to effectively strip the word ‘public’ from airwaves, to convert temporary licenses into permanent private property, ownership of spectrum.” Spectrum privatization has long been a prized goal among free-market ideologues. “The propertization of the airwaves is, in fact, an iconic conservative cause that dates back to the writings of Ronald Coase and Ayn Rand,” Calabrese noted. Not coincidentally, privatization is also worth hundreds of billions of dollars to incumbent license holders. And yet, Calabrese continued, echoing the points made by other speakers, spectrum use is a First Amendment issue as well. “The idea that is important to keep in mind—which the FCC wants to ignore—is that spectrum is speech.”

With respect to positive reforms, Calabrese pointed to two overarching goals. To the extent that exclusive licensing continues, the first goal is to increase the public’s return for commercial use of the airwaves. The digital transition is an opportunity to re-visit, and hopefully strengthen, the public-interest obligations that accompany exclusive spectrum licenses, Calabrese

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observed. For instance, a coalition of public-interest groups has advocated that commercial broadcasters be required to air a minimum of three hours of local, civic, and electoral programming each week. In a similar vein, the New America Foundation has been a leading force in the Digital Future Initiative, an effort to capture some of the revenues from spectrum auctions—a step many advocates abhor but which Calabrese sees as inevitable—and use them to support non-commercial media. Congress is currently considering a bill that would earmark at least \$1 billion in spectrum revenue for a consumer assistance fund to pay for digital-to-analog converter boxes for the 15 million households that still rely on analogue broadcasts. “We want to expand this consumer converter fund to create a trust to help finance the multi-cast future of public broadcasting and non-commercial content more generally,” Calabrese said.

The second goal is to roll back exclusive licensing so spectrum can be reallocated to community wireless and affordable broadband. The New America Foundation would like to see a dedicated band for unlicensed access once channels fifty-two to sixty-nine are returned. (Former FCC Chairman Michael Powell already agreed to a proposal that would open empty channels below 52 to unlicensed access.) “Expanding open citizen access on the TV bands could have a huge impact on the affordability, cost, and freedom of our broadband future, particularly in underserved areas,” Calabrese said. But he also cautioned against ignoring the public-interest stake in spectrum auctions. “Capturing the spectrum auction windfall to finance a trust fund for the future of public-service media would also be an appropriate return on this priceless public resource.”

Realizing the Potential of Independent Media: Fostering Public-interest Content for New Technology Platforms

When Jeff Chester, executive director of the Center for Digital Democracy, surveys the brave new world of digital media that draws ever nearer, he sees an unprecedented opportunity to reinvent public-service media. Digital technologies have created “huge, powerful, multimedia platforms that will deliver television and interactive content” across numerous systems—cable, fiber optic networks, and wireless broadband. As the systems mature, he continued, “We have an opportunity to reinvent public service media, to revitalize independent media, and to take advantage of the changes taking place in the commercial sector.” If citizens play their cards right, emerging digital platforms have the potential to bring new revenues to public-interest content providers and their allies. “Not only can they make a living, which is a good thing, but more importantly we’ll be able to create more content.”

*“We have an opportunity to reinvent public-service media, to revitalize independent media, and to take advantage of the changes taking place in the commercial sector.”
-Jeff Chester*

How might this play out? Corporations have invested billions of dollars to deliver individually tailored interactive content to consumers. For instance, the software that analyzes consumer purchases on Amazon.com, and uses the data to recommend other products, could also analyze television viewing, tastes in movies, and music preferences—allowing companies to engage in one-to-one marketing. “Now what’s going to fill up most of this

capacity, from a [commercial] basis is what I call digital *drek*” Chester said. By combining the branding power of television with the personalization of the Internet, digital television is “designed to facilitate the needs of advertisers and marketers to more effectively target individuals and discreet demographic groups, not only for the sell, but for what they call life-long branding.” Chester pointed to Rupert Murdoch’s NDS, a company that helps content providers integrate video, advertising, and interactive media, allowing them to engage in what Murdoch calls “monetizing interactivity.”

But non-commercial providers can use the same systems to provide what Chester calls the “one-to-one marketing of democracy” if they are able to “counter-program” the system. “I want people looking back ten years from now to see public-interest content, broadly defined, was part of these systems, whether it was cable or telephone company or Internet or wireless from the very beginning,” he said. It won’t happen automatically, Chester conceded, but there are good models out there for realizing an alternative digital future. He pointed to the British Broadcasting Company’s charter review, underway since 2003, as a model for reinventing public service media across digital media platforms. “What the British have done well is to articulate a broad public service media vision for civil society, for education, for inclusion, that takes advantage of the expanded landscape.”

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For a more market-oriented solution, Chester pointed to On Demand, a pay-as-you-go system for delivering content over cable and satellite networks. “On Demand enables program makers and activists, for the first time, to create and coalesce content, and provide it in a marketplace to generate significant revenues that then could be used to underwrite additional production.” Profits could then underwrite free distribution over public broadcasting systems and other venues for those who can’t afford to pay for content.

Either way, Chester argued, activists have to make a business case as well as a public-interest argument. “We have to bring the content providers together. We have to work with the technologists who are working with innovative approaches to video distribution to program this new network,” he said. “We need to be there, and indeed I intend to be part of an initiative that’s going to do that, because unless we create this public-interest infrastructure...we won’t be making the kind of contribution our country needs.”

Making Municipal Wireless Matter: Building Constituencies for Community Broadband

Josh Silver has spent a great deal of time thinking of ways to make media policy issues attractive to everyday Americans. As executive director of Free Press, the media policy organization he founded three years ago along with media scholar Robert McChesney and journalist John Nichols, he has focused on building an army of ground troops for the struggle over media democracy. “That’s what I want to talk about more than anything here,”

Silver began. “How do you get, not thousands, but millions of people to care? How do you get them to care enough to hold a house party at their house, or call their legislator, or send an e-mail, or write an op-ed piece? How do you get them to do the very same things that other successful movements, like the environmental movement, have managed to get tens of millions of people to do?”

The answer is to find the right hooks, Silver said. For example: commentator Armstrong Williams getting paid nearly \$250,000 by the Department of Education to shill for the Bush Administration’s education policies; the Republican owners of Sinclair Broadcasting’s decision to run “Stolen Honor,” the anti-Kerry propaganda film, as news; a faux news correspondent from Talon News lobbying softball questions to President Bush at White House press conferences. “These are critique hooks that really [set] people off and get them to say there’s something wrong, and we need to fix it,” Silver noted. These hooks are the entry point for many citizens, but organizations need to get their constituents to focus on the underlying policies. “These are the kinds of things that need to be capitalized on to bolster our numbers,” Silver continued, noting that Free Press has managed to persuade roughly 150,000 people to take action on media policy issues. “But those numbers, from our group and from others, need to expand into the millions, and it needs to happen soon.”

Once people are engaged with policy, the next step is to mobilize them consistently. “We need to initiate standard, tried and true grassroots campaigns,” Silver said. Activists need to be engaged in op-ed campaigns. Armed with information, they need to fan out in their communities to meet with editorial boards and local journalists. “The only way we’re going to win is if we get the public highly engaged locally throughout the country, in addition to doing good policy work in Washington,” Silver said. “People have to take up their own initiatives in their own communities.” Silver pointed to a Verizon lobbyist who recently circulated to trade journalists a memorandum knocking the success of community wireless around the country. “It was patently untrue, yet these guys are doing this stuff all the time,” Silver said. “We need to respond quickly.”

Furthermore, corporations themselves come down on different sides of spectrum reform. Players like Intel, Microsoft, and Motorola have a vested interest in promoting the diffuse consumer technologies that constitute mesh networks, while many telecom providers want to maintain control over the airwaves. There are differences of opinion even within industry trade associations, Silver noted. “We need to exploit that by educating small- and medium-sized businesses, and even large businesses, about the benefits of these systems.”

In the end, Silver noted, it comes down to framing the issues and making them accessible to a broad constituency. “How do we frame things as pocketbook issues, about how cable and Internet access is going to actually

“How do you get, not thousands, but millions of people to care? How do you get them to care enough to hold a house party at their house, or call their legislator, or send an e-mail, or write an op-ed piece? How do you get them to do the very same things that other successful movements, like the environmental movement, have managed to get tens of millions of people to do?”

-Josh Silver

increase their standard of living because they're actually going to be paying less for it? How do we create ways of framing the debate so that we can not just respond to the opposition's rhetoric, but actually preempt it, and frame the debate in our terms rather than their terms? If we do that, we can win."

Building Broadband in Indian Country: Native American Perspectives on Spectrum Policy

For the four-million Native Americans living on reservations today, telecommunications reform is a matter of life and death. Just sixty-seven percent of homes have telephone access, compared with a national average upwards of ninety-five percent. Just fifteen percent of households have Internet access, and basic services like 911 are simply not available to many members of the 562 federally recognized tribes. "What that means is that people are literally dying waiting for an ambulance to get to them," said Marcia Warren Edelman, president of the Native Networking Policy Center, and an enrolled member of the Santa Clara Pueblo of New Mexico.

For tribal communities, telecommunications policy is about one thing—access. "We haven't been at the table," Edelman noted. "We weren't at the table for the re-write of the 1996 Telecommunications Act, but now we have an opportunity to really be involved as policy is being formed, and we are taking that opportunity and running with it."

The stakes are high. There are eight tribal telecommunications companies serving Indian country, along with thirty-two radio stations, thirty-six tribal colleges, and five television stations. Bureau of Indian Affairs schools and Indian Health Service clinics have Internet access, but they are only open during business hours. "We need to be part of this digital economy," Edelman said. "We need to be part of our digital democracy."

Sovereign Indian nations enjoy unique access to government regulators and policymakers. "We have a government-to-government relationship with the United States, which tribes, as sovereign nations, are guaranteed through the Constitution of the United States," Edelman said. "So we've always dealt with the federal government on a peer-to-peer basis." Working with the National Congress of American Indians, the oldest and largest tribal representative group in the United States, Edelman's group formed the Native Networking Coalition to ensure Native American concerns are addressed in the upcoming re-write of the 1996 Telecommunications Act. "Forming this coalition means that we can now unify our voices into a set of provisions that we can then take with us onto the Hill, to the FCC, and really bring the power of all 562 tribes to bear on policy."

Despite overcoming the obstacle of tribal legitimacy, it has been difficult to mobilize Native American constituents to demand better telecommunications policies for Indian country. Edelman wants tribal councils to pass resolutions supporting the Native Networking Coalition's policy platform so local residents understand the issues at stake. "We're

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dealing on an educational level all the way from local to national,” she said. “We don’t propose to tell them how to use the technology, or even suggest what technology to use. It’s up to them as sovereign nations to do that. What we want to do is provide information. We want to be a hub of information.”

Yet there is a dearth of information about telecommunications, information technology, and media in Indian country. In 1998, the Benton Foundation commissioned Edelman to write a report about the use of technology in Indian country. “When I started that research I was sure that I would find information out there on the state of telecommunications access in Indian country. I did not. I found one report from the Office of Technology Assessment, which no longer exists, and maybe two or three other examples of at least some telephone penetration rates, but not much. There was nothing out there.” Seven years later, however, little has changed. Census figures regarding technology need to be updated so policy has a sound empirical foundation. “But we’re at a loss for information,” Edelman said. “We need to build the public record.”

Conclusion: Expanding Access and Preserving the Public Airwaves

Will the promise of digital communications technologies be allowed realize their full potential? Will citizens reclaim their First Amendment right to speak over the airwaves? Or will the public airwaves be auctioned off to the highest bidder—foreclosing the window of opportunity now open to preserve the airwaves as a public asset?

These are the questions—economic, constitutional, technical—that will be answered, one way or another, in the next five years. As the proliferation of uses on unlicensed Wi-Fi spectrum have demonstrated, the energy and vitality of everyday users is waiting to be unleashed. Randal Pinkett and Matthew Rantanen illustrated, for example, how unlicensed spectrum is already transforming community development and civic participation in poor urban communities and in Indian country. And that has been on so-called “junk bands”—slices of spectrum with limited capacity. Imagine the innovation that would be unleashed if prime spectrum—the frequencies now used for radio and television broadcasting, which can travel long distances and penetrate walls—were freed up.

With the right strategies and a mobilized public constituency, another vision of the public airwaves is possible. As Harold Feld and Michael Calabrese noted, the time is ripe to forge new policies that protect the public interest. The transition to digital television is winding down, and as new spectrum opens up, exclusive licenses should be rolled back and stronger public-interest obligations imposed on remaining license-holders. Likewise, public-interest advocates should use new multimedia platforms to create and distribute their own content.

Yet none of this will happen without a constituency capable of pushing for reform at the federal, state, and local levels. The good news is that the Constitution, the economics, and public sentiment are on the side of the reformers. The bad news is those facts may not be enough to fight off the powerful interests aligned against reform. But one thing is certain: The future awaits. The time to engage is now.

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DEMOCRACY AT STAKE? CURRENT ISSUES IN ELECTRONIC MEDIA POLICY AND THE FUTURE OF THE PUBLIC SPHERE

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Speakers Biographies

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Jeff Chester (Washington, DC) is Executive Director of the Center for Digital Democracy, or CDD, (www.democraticmedia.org), a Washington, DC-based nonprofit ensuring that digital media serve the public interest. In the 1980s, Jeff led the national campaign that prompted the creation by Congress of the Independent Television Service (ITVS) for PBS. In 1990, he co-founded the National Campaign for Freedom of Expression, which focused on protecting artists' rights. The following year he created Ralph Nader's Teledemocracy Project on cable TV reform. In 1992, Jeff co-founded and served as executive director (until 2000) of the Center for Media Education, a leading force on such issues as Internet privacy, media ownership, and children's TV. At CDD Jeff has co-led the two- year campaign against proposals by the media industries and FCC Chairman Powell to eliminate critical ownership safeguards. His work helped generate unprecedented public support opposing the Big Media lobby. Jeff has also campaigned to maintain the Internet's open and non-discriminatory architecture, through work in the press, Congress, and in the courts.

Mark Cooper (Washington, DC) is Director of Research at the Consumer Federation of America and a Fellow at the Stanford Law School Center for Internet and Society, the Columbia Institute on Tele-information and the Donald McGannon Communications Research Center at Fordham University. Cooper has written extensively on digital society and telecommunications issues, as well as provided expert testimony in over 250 cases for public-interest clients including Attorneys General, People's Counsels, and citizen interveners before state and federal agencies, courts and legislators in almost four dozen jurisdictions in the U.S. and Canada on telecommunications and energy policy.

Marcia Warren Edelman (Reston, VA) is an enrolled member of Santa Clara Pueblo of New Mexico and serves as President for Native Networking Policy Center. She is a co-founder of the organization. Most recently, she served as the President of her own consulting firm, Sweet Moose Enterprises LLC, providing consulting services in the areas of Native American policy, economic development, and telecommunications and information technology to Native organizations and the federal government.

Harold Feld (Washington, D.C.) is the Associate Director of the Media Access Project, a nonprofit public-interest law firm working to ensure a public voice in telecommunications policy. He is the primary author of many of the current public-interest filings on spectrum proceedings at the FCC. He joined MAP in August 1999 after practicing communications, Internet, and energy law at Covington & Burling. In 2002-2003, he served on the ICANN Names Council as representative of the Noncommercial Constituency, and currently serves as the Noncommercial Constituency representative to the Advisory Committee of the Public Interest Registry.

David Haas (Philadelphia, PA) is chair of the steering committee of Grantmakers in Film and Electronic Media (www.gfem.org), an association of grantmakers committed to advancing the field of media arts and public-interest funding, which serves as home of the Working Group on Electronic Media Policy. In addition, Haas serves on the board of the William Penn Foundation, a regional grantmaker focusing on greater Philadelphia area, and as a Trustee of the Phoebe Haas Charitable Trust "B", which supports a range of 501(c)3 charitable organizations, including media projects. From 1989 to 1997, Haas worked as coordinator of the Philadelphia Independent Film/Video Association (PIFVA), a service organization for independent film, video and audio makers based in the greater Philadelphia area.

Becky Lentz (New York, NY) is Program Officer for Electronic Media Policy at the Ford Foundation. In that capacity, Lentz directs a 3-year initiative called "Reclaiming the Public Interest in Electronic Media Policy in the U.S." that focuses on seeding the development of a 'field' of sustainable institutions, organizations, coalitions, and networks that can advance the public interest over the long term. As a practitioner, advocate, and academic, Lentz brings to Ford more than 20 years of combined experience in the information services industry, state and local government, the nonprofit sector, and most recently in academia.

Alyce Myatt (New York, NY) is a multimedia consultant providing analysis and strategic planning services for independent media organizations and the philanthropic community. Chief among her clients are the Center for Digital Democracy, a media policy organization, MediaWorks, a media funder network, and Free Speech TV, a 24-hour progressive television network; other recent clients include OneWorld TV, Emerson College, TVE Brazil, the Heinz Endowments, Roundtable Media, and the Annie E. Casey and Skillman Foundations. Prior to her return to consulting, Alyce served as Vice President of Programming for PBS. She also was program officer for media at the John D. and Catherine T. MacArthur Foundation, where she administered grant-making for documentary film and television, community outreach related to media, community-based media arts centers, and public radio. Preceding her work at the Foundation, Alyce was president of her own consulting firm, providing program development services, strategic planning and brand management to a variety of clients in television, radio, and multimedia.

Matthew Rantanen (San Diego, CA) is Director of Technology and Web Services for the Southern California Tribal Chairmen's Association and Tribal Digital Village. He also is launching Southern California Tribal Technologies, a for-profit venture to support broadband wireless internet connectivity to the individual home on the Indian Reservations of Southern California. Previously, Matt was a web designer and artist for Blue Mountain Arts, Bluemountain.com and Excite@Home. Matt is a descendant of the Cree Indian Nation, Finland & Scandinavia.

Hannah Sassaman (Philadelphia, PA) is Program Director at Prometheus Radio Project, where she builds partnerships, coordinates outreach, and manages volunteers. Most recently, Ms. Sassaman has been coordinating public participation in the FCC Localism Task Force hearings. In San Antonio, TX, she helped to get almost 500 individuals from all over Texas to testify on how to make the media more local. Hannah works to build coalitions between existing media justice and media democracy groups and a wide diversity of allies for a more diverse global media system, and has built partnerships on media issues with groups as diverse as Latino environmental arts groups and Christian community ministries and broadcasters. Hannah has published articles in *Clamor Magazine*, and is interviewed regularly for local, national, and international publications.

Josh Silver (Northampton, MA) is Executive Director of Free Press, which he co-founded with Robert McChesney and John Nichols in 2002 to engage broad public participation in media policy debates. Prior to that, he was the campaign manager of the successful ballot initiative for Clean Elections in Arizona, director of development for the cultural arm of the Smithsonian Institution in Washington, D.C., and director of an international youth exchange program. He has published extensively on media policy, campaign finance and other public policy issues.

Emy Tseng (San Francisco, CA) is Senior Policy Advisor at the Community Technology Foundation of California (CTFC) and Managing Director of the Innovation Funders Network (IFN), a group of funders who support technology for social change. She previously worked at the Ford Foundation on issues of information and communications policy. She has consulted on technology policy and strategy for a number of public-interest and community networking groups including Consumers Union, NYCwireless, and LINCOS (Little Intelligent Communities). Her previous employment included twelve years in the software industry as an engineer, project manager and software architect

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About GFEM

Grantmakers in Film and Electronic Media (GFEM) is an association of grantmakers committed to advancing the field of media arts and public-interest media funding. As an affinity group of the Council on Foundations, GFEM serves as a resource for grantmakers who fund media programming, infrastructure and policy, as well as those who employ media to further their program goals. GFEM members have a broad range of interests and approaches, but share the view that moving image media is a vital form of human expression, communication and creativity, and plays a key role in building public will and shaping civil society. GFEM seeks to increase the amount and effectiveness of media funding by foundations and other funders; to increase the use of media in grantmakers' and grantees' work; and to raise the broader foundation community's understanding of current media policy and trends, as they affect funders' work and the larger grantmaking community. (www.gfem.org)

GFEM's **Working Group on Electronic Media Policy** brings together funders with a commitment to building and sharing knowledge about issues in media policy, as well as to work collectively toward advancing the media policy community as a whole.

About the Author

Neil F. Carlson is a writer and consultant working at the nexus of strategic communications and knowledge management. Neil specializes in producing thoughtful, engaging, well-crafted products—articles, reports, white papers, case studies, and conference and symposium reportage—that help clients shape opinions, tell their stories, and leave their mark. In his knowledge management practice, Neil draws on his background in journalism and organizational development to deliver evaluations that are rigorous, timely, and useful, helping clients to inform practice and improve performance.

A contributing editor to the urban affairs magazine *City Limits*, Neil's freelance work has appeared in *Tompaine.com*, *Strategic Finance*, *The San Jose Mercury News*, *Ford Foundation Report*, *Business Ethics*, *Washington Flyer*, *eWork.com* and *Worth.com*. His consulting clients include the Ford, Rockefeller, Edna McConnell Clark, and Wallace foundations; Local Initiatives Support Corporation; and the Association for Neighborhood Housing Development.