

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act)	GN Docket No. 09-47
)	
A National Broadband Plan for Our Future)	GN Docket No. 09-51
)	
Fostering Innovation and Investment In the Wireless Communications Market)	GN Docket No. 09-157

**COMMENTS OF THE ASSOCIATION OF PUBLIC TELEVISION STATIONS,
THE CORPORATION FOR PUBLIC BROADCASTING,
AND THE PUBLIC BROADCASTING SERVICE
IN RESPONSE TO NBP PUBLIC NOTICE # 6**

The Association of Public Television Stations,¹ the Corporation for Public Broadcasting,² and the Public Broadcasting Service³ (collectively referred to herein as “Public Television”) submit these comments in response to the Commission’s September 23, 2009, *Public Notice* in the above-referenced proceedings.⁴ In the *Public Notice*, the Commission seeks comment on

¹ APTS is a non-profit organization whose membership comprises the licensees of nearly all of the nation’s 364 CPB-qualified noncommercial educational television stations. The APTS mission is to support the continued growth and development of a strong and financially sound noncommercial television service for the American public.

² CPB is a private, nonprofit corporation created and authorized by the Public Broadcasting Act of 1967 to facilitate and promote a national system of public telecommunications. Pursuant to its authority, CPB has provided millions of dollars in grant monies for support and development of public broadcasting stations and programming. *See 47 U.S.C. § 390 et seq.*

³ PBS is a media enterprise that serves 355 public noncommercial television stations and reaches nearly 73 million people each week through on-air and online content. A trusted community resource, PBS uses the power of noncommercial television, the Internet and other media to enrich the lives of all Americans through quality programs and education services.

⁴ *Comment Sought on Spectrum for Broadband – NBP Public Notice #6*, GN Docket Nos. 09-47, 09-51, 09-137, Public Notice, DA 09-2100 (rel. Sept. 23, 2009) (the “*Public Notice*”).

whether some spectrum bands are being used more efficiently and productively in the public interest than others.⁵ With the recent transition to digital-only broadcasting, the nation's 364 local public television stations are leveraging the new technologies to expand their educational and informational offerings and deliver a number of enhanced services to the public that could only be dreamed of in the analog world. In response to the needs of their individual communities, public television stations, with the support of the Corporation for Public Broadcasting (CPB) and the Public Broadcasting Service (PBS) are using their 6 megahertz of spectrum to offer a mixture of high-definition (HD) programming and multiple standard-definition (SD) streams. In addition, stations are maximizing their digital capabilities to serve the public interest both by enhancing their traditional educational offerings through datacasting and by offering new services in public safety and public health with an eye toward our nation's priorities in a post-9/11 world.

More than 99 percent of the nation's population is able to receive a local public television station over the air, and public television is a trusted source of information, education, and culture to millions of Americans, including, in disproportionately large numbers, underserved populations such as minorities, older Americans, lower-income families, and persons with disabilities. Even more importantly, public television serves as a vital entry point through which many underserved Americans gain access to essential on-the-ground resources and discover how on-line content and applications can be useful and relevant to them. We urge the Commission, in its examination of the current use of spectrum, to recognize the full use public television stations are making of their bandwidth in service of the public interest, and the essential role that public

⁵ *Id.* at 6.

television's widely accessible broadcast services play in driving adoption of broadband by underserved populations.

I. PUBLIC TELEVISION USES DIGITAL TRANSMISSION CAPABILITIES TO DELIVER A NUMBER OF ENHANCED SERVICES TO THE PUBLIC.

With just six megahertz of spectrum—the amount required for one analog television channel—each local public television station is now offering numerous streams of programming and data simultaneously, and constantly reevaluating how it can best utilize its limited spectrum to advance its missions of education, localism, and diversity.

A. High Definition Programming

Public television stations are increasingly devoting large portions of their spectrum toward delivering a crystal-clear HD programming stream to enhance the viewing experiences of an ever-growing number of Americans with HD televisions. According to a 2009 PBS survey of public television stations, 73 percent of stations are currently transmitting a 24-hour-per-day HD stream—14 percent more stations than in 2008. Another 12 percent of stations are delivering a partial-day HD service.

KCTS in Seattle pioneered local HD production of public television programming more than 20 years ago, and gradually it has become fairly commonplace for local stations to produce their own groundbreaking programming in HD for broadcast locally and regionally. For example, in 2008 Blue Ridge PBS in southwestern Virginia used HD equipment to film and produce an award-winning episode of “Blue Ridge Adventures” about the Upper Gauley River in West Virginia, one of the top-rated whitewater rivers in the world. The station used a camera in a specially designed, waterproof container tied to the front of a raft, and other cameras in strategic points along the river, to capture the experience of rafting on Class III, IV, and V rapids. It was believed to be the first time the entire length of the Upper Gauley had been filmed

in HD. Louisiana Public Broadcasting uses its HDTV mobile production truck to film events such as the New Orleans Jazz and Heritage Festival.

Public television stations also broadcast HD programming from other distribution sources, including PBS. Earlier this year, PBS completed the conversion of its National Programming Service (NPS) to all HD. PBS distributes hundreds of hours of high-definition content each year, much of which is produced by local public television stations around the country for national distribution. For example, PBS recently distributed a breathtaking, 12-hour documentary on the country's national parks directed by Ken Burns and co-produced by WETA, the local public television station in Washington, D.C.

B. Multicasting

Public television stations have led the broadcast industry in taking advantage, to the benefit of their local communities, of the ability offered by digital broadcasting to transmit numerous, simultaneous streams of programming. Highlighting their stewardship of the public airwaves entrusted to them, many local public television stations are using their multicasting capabilities to provide dedicated channels for public affairs programming or programming designed to reach underserved audiences. For example:

- A number of local public television stations are using a multicast stream to offer “V-me,” a 24-hour Spanish-language educational and informational service developed by **Thirteen/WNET**, a public television station serving the New York City area. V-me offers drama, music, sports, current affairs, food, lifestyle, and nature programming, along with more than 40 hours per week of children’s educational programming.
- **WFSU** (Florida State University) operates, and several Florida public television stations air, the Florida Channel, which features live, gavel-to-gavel coverage of the Florida Senate and House of Representatives, as well as live coverage of the Florida Supreme Court, Public Service Commission, and meetings of the Governor and his cabinet, and other local electoral and public affairs programming.

- **South Carolina Educational Television (SCETV)**, which operates 11 stations throughout the state, broadcasts the South Carolina Channel, which includes coverage of Statehouse proceedings, local college sports, and other local programming.
- **Twin Cities Public Television** in St. Paul, Minnesota, airs the Minnesota Channel, which features a variety of programming from or about Minnesota and its close neighbors. Many of the programs are produced by TPT in partnership with the state’s finest nonprofit and public service organizations.

More than 90 percent of public television licensees are utilizing their spectrum to transmit more than one channel of programming to viewers. More than 30 percent of licensees are transmitting four or more streams of programming. A handful of licensees are offering as many as six separate streams of programming in the amount of spectrum that a single analog stream used to require.

C. Educational Datacasting

The inherent flexibility of digital broadcast technology can allow for the delivery of data at extraordinary speeds. In conjunction with broadband and other technologies designed to provide a return path capability, this mechanism can facilitate the delivery of high-quality noncommercial educational services through a broadband-like pipe. Many public television stations have dedicated portions of their digital bandwidth to providing access for all Americans to educational data services. For example:

- **WHYY**, which serves Philadelphia and Delaware, is datacasting adult basic education materials. Using a combination of national and local programming, WHYY has digitized 58 half-hour video segments and more than 700 pages of text for delivery to desktop computers. These computers can receive and store datacast transmissions and have been placed—in partnership with the Workforce Investment Boards of Chester, Philadelphia, Delaware and Montgomery Counties—in libraries, hospitals, community centers and colleges, locations easily accessible to the targeted population. WHYY is also testing datacasting as a method to distribute early-childhood educational materials directly to day-care providers.
- Through the datacasting system of **Mississippi Public Broadcasting**, child-care centers in the Mississippi Delta region are receiving “Between the Lions” episode segments and a professional development course showing how to use the “Between the Lions”

preschool literacy curriculum. “Between the Lions,” a national Emmy® Award-winning PBS KIDS series, is co-produced by MPB at its studios in Jackson, Mississippi.

- **Ozarks Public Television** (KOZK in Springfield, MO and KOZJ in Joplin, MO) is helping to improve student performance at rural Missouri Schools. OPT is creating and broadcasting interactive materials received via digital receivers for schools and rural teachers, as well as professional development curriculum and two-way live panel meetings.

D. Enhancing Public Safety and Public Health

Even before September 11, 2001, public television stations began to realize the potential of its digital broadcast capacity to support public alert systems, as well as closed networks to enable public safety and emergency managements to securely transmit critical information. In emergencies, when other communications systems are hopelessly over-taxed, the ability of a congestion-free digital television signal to provide information to the public and, at the same time, send large volumes of critical, time-sensitive data to first responders and government decision-makers, is invaluable. The public television system and local stations continue to explore how their spectrum can best be used to enhance public health and public safety efforts.

On a national level, public television has teamed with the Department of Homeland Security (DHS) to use its digital network to enhance the Emergency Alert System (EAS). After a successful pilot project, APTS, PBS and DHS agreed to deploy nationally the Digital Emergency Alert System (DEAS), and by the end of 2007, APTS and PBS had added technological upgrades to every public television station across the country, creating the backbone infrastructure of a digital presidential emergency alert and warning system. Through funding from NTIA, public television is now in the process of obtaining geotargeting and dynamic allocation equipment that would help them to transmit alerts to mobile service providers as part of the Commercial Mobile Alert System (CMAS). Once fully completed, the DEAS will supplement the current EAS, which uses 34 Primary Entry Point (PEP) radio stations to provide

the President and other designated officials the capability to speak to the American public during periods of national emergency. It will also serve as foundational infrastructure that can be built upon to facilitate governors' and local authorities' use of the DEAS for state and local emergencies.

In addition, several local public television stations have pioneered local public safety datacasting networks and have experimented with using datacasting to enhance public health services. For example:

- **Wisconsin Public Television** (five stations statewide) recently provided leadership in a pair of simulations that allowed first responders to test the efficacy of a unique combination of communication technologies. WPT piloted the use of datacasting, wireless transmission and satellite to send and receive live audio, video and data during emergency simulations. These tests allowed local firefighters, police and paramedics to send and receive media to and from moving public safety vehicles equipped with antennas and laptop computers.
- **Kentucky Educational Television** (14 stations statewide) has partnered with the state Department of Family and Health Services to enhance the state's alternative communications capabilities between local public health agencies and hospitals with the addition of datacasting and compressed video teleconferencing systems. Datacasting enables local health departments across the state to hold meetings and training sessions without traveling to specific locations, and also allows local hospitals to receive up-to-date information from the Department of Health Services and the Centers for Disease Control. In addition, the Louisville Fire Department uses KET's digital network to provide simultaneous data and video, as well as weather radar images, forecasts, and warnings from NOAA, to Louisville fire stations.
- **KLVX-Vegas PBS**, licensed to the Clark County School district, has gathered data files on local buildings and training methods and can send specialized, secured information to laptops (with antennas and ATSC decoders) in 120 emergency vehicles. As the system develops, responders will be able to produce live content for communication with the general public or specified users. KLVX has fiber links and is developing wireless links to various police and fire operations centers. Those facilities can function as remote studios in times of emergency without making emergency personnel leave their command posts. The station also has open and closed circuit connections with county high schools.

II. PUBLIC TELEVISION'S BROADCAST SERVICES DRIVE ADOPTION OF BROADBAND, PARTICULARLY BY UNDERSERVED COMMUNITIES.

As the Commission examines how to fulfill the ever-growing spectrum needs of broadband, it must also keep in mind the overall goals of the National Broadband Plan, including the adoption of broadband by all Americans. To that end, we urge the Commission to recognize the important role public television's broadcast services, which can reach 99 percent of the population—and are relied upon by underserved groups in disproportionate numbers—play in spurring demand for broadband. Local public television stations are increasingly developing content and services with both on-air and on-line dimensions. Stations use the Internet to enhance the impact of their over-the-air programming, and they use their over-the-air programming as a gateway, leading viewers to the Internet resources.

For example, in the educational arena, KQED in San Francisco has created QUEST, a multimedia series about the people behind Bay Area science and environmental issues and how their work is changing the way Bay Area citizens live. On air, QUEST features a weekly half-hour HD program, which directs viewers to the nucleus of the series: its website. In addition to hosting recordings of all of the television and radio broadcasts, the site features web-only segments; an interactive map created with Global Positioning Satellite technology to “geotag” locations and images where QUEST segments were recorded; on-line “Explorations”—nature hikes and walks; a new community science blog with daily contributions from scientists, experts, teachers and students; and discussion groups and photo sharing. The online Quest Education Network (EdNet) offers guides, workshops and activities, all available for free download.

In addition, as the health needs of communities across the country have grown, local public television stations have developed a variety of multi-platform resources to advance health care and wellness education and disease prevention:

- **KCET** in Los Angeles has created *The Time to Care*, a multi-platform project devoted to the unique needs of aging adults and the people who care for them. Expected to launch this year, *The Time to Care* will include a weekly broadcast program that will address concerns for the elderly and for the caregiver, and provide healthy lifestyle information, tips and habits for everyone—regardless of their age now. Additionally, the online component to this initiative will provide a platform for caregivers to connect to each other and to experts featured on the series, as well as access to additional resources.
- Nationwide, Kentucky ranks number one in deaths per capita from lung cancer, fifth in cardiovascular deaths, and sixth in obesity in the nation. Inactivity and poor diet are contributing to costly and destructive chronic illnesses such as diabetes, cancer and depression. In response to these challenges, **Kentucky Educational Television** (KET) launched *Be Well Kentucky* aimed at inspiring a culture shift in health attitudes and practices among Kentuckians. On-air, *Be Well Kentucky* has produced and aired the “CommonHealth of Kentucky”, a 13 part series on successful health care models throughout the state. On-line, the initiative created a website that offers health information, programming schedules and opportunities, and toolkits for community involvement. And on-the-ground, KET has offered health literacy workshops for children, families and minority populations—all created with a high-level of cooperation among a wide variety of stake-holders.
- **Wisconsin Public Television**’s *Creating Health* initiative was launched in response to viewer interest and the national health debate. *Creating Health* is an ongoing educational initiative that addresses health issues important to Wisconsin residents. By integrating broadcasts, Web tools, and in-person events, *Creating Health* seeks to provide information to help guide individuals in making wise health decisions. Some of the health issues addressed by *Creating Health* focuses on include Alzheimer’s disease, Parkinson’s disease, depression, and the problems faced by those that are without health insurance.
- **Iowa Public Television** has reached a great number of children across all of Iowa’s 99 counties to encourage exercise and healthy eating. On-air, IPTV airs daily “Healthy Minutes” between children’s programming that encourages children to be more active and read more. On-the-ground, students logged the minutes they spent exercising and reading throughout the month of April. Dan Wardell, the host of “IPTV KIDS Clubhouse”, worked with teachers and librarians to promote the program and create customized materials. Online, teachers and librarians could track their students’ progress as well as access resources on the program.
- In Chicago, **WTTW** is developing *Health Secrets: What Every Woman Should Know*, a multi-platform initiative dedicated to bring current, reliable, and medically accurate health information and disease prevention strategies to women in the greater Chicago community. On-air, *Health Secrets* will air four one-hour specials. Information and resources will be available online through an extensive and highly interactive web micro-site. Additionally, community wellness events will be conducted in conjunction with the program.

Because public television's broadcast services are available to 99 percent of the population, because public television serves as America's most trusted source of news and information,⁶ and because public television is disproportionately watched by underserved groups, including minorities and the elderly, local public television stations are playing an essential role in leading their viewers to broadband and showing them how it can enhance their lives.

CONCLUSION

Public Television appreciates the opportunity to provide information and data on how local public television stations are fully utilizing their digital spectrum to bring a variety of enhanced services to the public. In addition, we encourage the Commission to recognize how public television's broadcast services, essential to the public in their own right, have the added benefit of serving as an entry point through which underserved populations can begin to explore the many possibilities of broadband.

Respectfully submitted,

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⁶ See 2009 poll by GfK Roper Public Affairs & Media, available at <http://www.pbs.org/roperpoll2009>.

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