

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

In the Matter of)	
)	
Inquiry Concerning the Deployment of)	
Advanced Telecommunications Capability to)	GN Docket No. 04-54
All Americans in a Reasonable and Timely)	
Fashion, and Possible Steps to Accelerate)	
Such Deployment Pursuant to Section 706 of)	
the Telecommunications Act of 1996)	

COMMENTS OF THE ASSOCIATION OF PUBLIC TELEVISION STATIONS

The Association of Public Television Stations (“APTS”)¹ hereby submits comments in the above-captioned proceeding. In the above captioned docket, the Commission seeks comment on any new technologies that could deliver new advanced broadband services to consumers.²

With the transition to digital operations, public television can play a pivotal, spectrum-efficient and cost-effective role in providing educational broadband access to all Americans. Public television transmitters, including noncommercial educational translators and developing on-channel repeaters, have the potential to provide localized noncommercial educational and public safety services over a broadband-like digital

¹ APTS is a nonprofit organization whose members comprise the licensees of nearly all of the nation’s 357 CPB-qualified noncommercial educational television stations. APTS represents public television stations in legislative and policy matters before the Commission, Congress, and the Executive Branch and engages in planning and research activities on behalf of its members.

² Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Notice of Inquiry, GN Docket No. 04-54, ¶ 26 (rel. March 17, 2004).

infrastructure to all Americans. The inherent flexibility of digital broadcast technology can allow for the delivery of data at extraordinary speeds in conjunction with a multicast television experience. This extraordinary data delivery mechanism, in conjunction with other technologies designed to provide a return path capability, can facilitate the delivery of high-quality noncommercial educational and public safety services through a broadband-like pipe.

Broadband for Education. In this regard, public television stations have dedicated a portion of their digital bandwidth to providing access for all Americans to educational services. Public television stations have committed 4.5 megabits per second of their DTV bitstream (one-quarter of their digital channel capacity on average) to the delivery of formal educational services. This level of digital capacity will deliver data at rates 80 times faster than 56K dial-up modems and 15 times faster than digital subscriber line (DSL) connections. If fully converted, public television stations' transmitters and translators can provide digital video, audio, and data services over-the-air to 99 percent of American households at the rate of 19.4 megabits per second. Thus, using a fully converted digital system, public television will be able to provide powerful and cost-effective nearly universal "last mile" services to meet the public's needs.

For example, Wisconsin Public Television and the New Jersey Network are already demonstrating the power of this kind of data service for education.

- The Wisconsin Educational Communications Board has used DTV technology to deliver educational data overnight to local schools with computers equipped with DTV tuner cards. In two Madison elementary schools, fourth-graders are now able to view video segments of downloaded material as many times as they wish and can explore additional resources such as graphics, written materials, and audio recordings. The enhanced resources include video segments, maps, photographs, historical documents, tours

designed to help guide student learning, and audio segments of actual diaries. For teachers, there is an integrated teacher guide, teaching tips, and a list of related Wisconsin Model Academic Standards.

- New Jersey Network has produced original video content, which it datacasts to a media server located in Columbus Elementary School in Trenton, the pilot site. Teachers may then download from the server "on-demand" course supplements and NJN's customized, modular video segments to enhance the content in the lesson plan.
- Through its *New Jersey Workplace Literacy Program*, New Jersey Network has also been helping to address adult literacy through a groundbreaking partnership with the New Jersey Department of Labor in which it uses a variety of technologies, including its digital television signal, to deliver work force training materials to welfare recipients, dislocated workers and other job seekers to designated sites in New Jersey. NJN's first digital series, called JOBCAST, is broadcast on NJN's digital channel. NJN is now expanding this initiative to adopt in-school programs for teenagers, with private sector support.

Broadband for Public Safety. In addition, a fully digitized public television system could offer significant new public safety advantages. For example, on November 15, 2001, Kentucky Educational Television (KET), in partnership with the local branch of the National Oceanic and Atmospheric Administration (NOAA), debuted a new service to representatives from the state police, emergency management agency and weather service. KET commissioned the development of software that allows it to use its digital broadcast capacity to immediately send emergency storm alerts, weather information, criminal profiles and updates, and other time-sensitive materials instantaneously to computers around the state. Transmission of this data over the digital broadcast signal decreases alert time and information lags from minutes to seconds. Use of the digital broadcast infrastructure can also bypass the congestion of wireline and cellular networks that can plague communications in emergency situations, as was the

case on September 11, 2001. And because public television transmitters and translators together reach nearly all American television households, such public safety services could be distributed on a universal basis to all Americans.

Other examples of public television stations using their digital facilities to enhance homeland security include the following.

- In partnership with the University of Texas Medical Branch-Galveston, public television station KERA is using digital broadcast facilities to deliver crisis communications to discrete recipients or the public at large.
- The New Jersey Network has become the first in the nation to use public digital television to enhance emergency preparedness for nuclear power plants through the power and flexibility of datacasting. As New Jersey Governor James E. McGreevey observed, “Communications via NJN’s digital television system is yet another tool with great potential to add to New Jersey’s homeland security preparedness efforts and protect citizens in times of an emergency.”
- Thirteen/WNET in New York, with funding from the National Imagery and Mapping Agency, has developed a prototype emergency alert system that will make use of its ITFS spectrum to distribute emergency alerts, emergency response information and command and control information to the public, first responders and homeland security personnel. The ultimate goal will be to create a hybrid system in which both the ITFS and the DTV spectrum bands are used to provide two-way communications with first-responders. For example, the DTV channel could be used to broadcast traditional emergency alerts to the public, as well as supplemental public data concerning evacuation routes or emergency treatment center locations. At the same time, the ITFS channel could be used to disseminate encrypted data (such as building blueprints, procedures for handling dangerous materials and other sensitive information) to targeted emergency responders.

Conclusion

As the Commission considers the technologies—both current and developing – that could deliver broadband services to end-users, it should be aware of the exciting capability that the DTV data transmission holds for the delivery of educational and public safety services over a broadband-like infrastructure.

Respectfully Submitted,

/s/Lonna M. Thompson
Lonna M. Thompson
Vice President and General Counsel
Andrew D. Cotlar
Assistant General Counsel
Association of Public Television Stations
666 Eleventh Street, NW, Suite 1100
Washington, D.C. 20001
www.pts.org
Telephone: 202-654-4200
Fax: 202-654-4236

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