

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC

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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of )  
 )  
Inquiry Concerning the Deployment of )  
Advanced Telecommunications )  
Capability to All Americans in a Reasonable ) CC Docket No. 98-146  
And Timely Fashion, and Possible Steps )  
To Accelerate Such Deployment )  
Pursuant to Section 706 of the )  
Telecommunications Act of 1996 )

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To: The Commission

**COMMENTS OF THE ASSOCIATION OF AMERICA'S PUBLIC TELEVISION STATIONS**

The Association of America's Public Television Stations ("APTS")<sup>1</sup> submits these comments in response to the Commission's Third Notice of Inquiry ("Notice") in the above-captioned proceeding. In its Notice, the Commission requests information on the telecommunications marketplace in order to determine whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely manner, consistent with the goals of section 706 of the Telecommunications Act of 1996. APTS files these comments to highlight for the Commission public television stations' contribution and commitment to deployment of high-speed educational services to schools and other end users in rural and other underserved areas in America. APTS also wishes to illustrate to the Commission that in many cases these high-speed services

<sup>1</sup> APTS is a nonprofit organization whose members comprise nearly all of the nation's 354 noncommercial educational television stations. APTS represents public television stations in legislative and policy matters before the Commission, Congress, and the Executive Branch, as well as engaging in planning and research activities on behalf of its members.

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are a satisfactory solution to the public's "last mile" needs, and the Commission should not focus solely on advanced telecommunications services as the solution to "last mile" delivery.

In its Notice, the Commission addresses the question of whether deployment of advanced telecommunications services is occurring in a reasonable and timely manner. Despite its preliminary conclusion that the pace and scope of deployment is on track, the Commission recognizes that certain groups of consumers may be particularly vulnerable to not receiving such services if the Commission relies upon the market place alone. As the Notice indicates, "These particularly vulnerable consumers, included low-income consumers, consumers living in sparsely populated areas, consumers living in inner cities, minority consumers, consumers living on tribal lands, consumers living in U.S. territories, persons with disabilities, elementary and secondary schools (especially instructional classrooms), and rural health care facilities."<sup>2</sup>

The Commission proposed to retain the definitions used in its First and Second Reports, including the definition of "advanced services" as having the capability of supporting, in both the provider-to-customer (downstream) and the customer-to-provider (upstream) directions, a bandwidth in excess of 200 kilobits per second in the last mile of service, as well as the definition of "high-speed" services as those services with over 200 kbps capability in at least one direction. The Commission's Notice states its intent to examine the breadth and timing of the deployment of both advanced services and high-speed services, in particular in relation to these potentially vulnerable consumers noted above. As stated by the Commission, "(W)e propose to continue to examine both the

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<sup>2</sup> Notice, at n. 4, citing *Second Report*, 15 FCC Rcd at 20996-03.

relatively narrow class of ‘advanced services’ . . . and the broader class of ‘high-speed’ services, which include advanced services.”<sup>3</sup>

APTS supports the Commission’s continued inquiry into the scope and timing of deployment of advanced telecommunications services. Further, APTS is gratified that the Commission recognizes the importance of ensuring the continued growth of not only advanced services but also high-speed services, as defined by the Commission. As part of its statutory mission, public television is committed to serving unserved and underserved audiences, indeed the very groups of vulnerable consumers addressed by the Commission in its Second Report. Through the advent of digital conversion, public television’s goal is not only to increase the number and variety of its educational offerings, but also to maximize its ability to offer high-speed services to these consumers. As the Commission develops its policies related to advanced telecommunications services, APTS requests that the Commission recognize these important educational high-speed services and the value of each public television transmitter and translator in ensuring that all Americans have access to such services.

Public television stations currently are at the forefront in providing unique and valuable educational services to homes, schools, libraries, and other essential public service organizations in America. Public stations provide multimedia educational offerings through their television signals, interactive web sites, print materials, and community outreach programs, as shown by the following examples:

- WETA, Washington, D.C. offers the multimedia effort *Reading Rockets*, which disseminates research-based information on how to help young readers. This program provides expert advice, practical tips and other resources for parents, teachers, students and policy-makers through television specials, an interactive Web site, live teleconferences and bilingual print materials.

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<sup>3</sup> Notice at paragraph 5.

- Through the Utah Education Network, a partnership with the Utah Department of Education, public television station KUED, Salt Lake City, helps to distribute curriculum materials to teachers in the state more effectively. Its web site, [www.uen.org](http://www.uen.org), is a comprehensive educational resource for grade school through adult learners featuring an online library service, access to lesson plans and teaching materials, ability for teachers to create their own Web page portal, a catalog of distance learning opportunities and other resources.
- Public television station KNME, Albuquerque, New Mexico, is partnering with regional colleges and universities to create high-end interactive teaching packets to help high school teachers in the Four Corners region (Utah, Colorado, New Mexico and Arizona) meet curriculum standards. The project supports more than 48,000 students, 86 percent of whom are Navajo, in 100 schools in 11 school districts.

With the transition to digital operations, public television will play a pivotal and cost effective role in providing educational services and broadband access for rural and other underserved areas and audiences. Public stations are committed to developing new and essential educational content and services and have dedicated a portion of their digital bandwidth to providing universal access for all Americans to educational services. Through the APTS Board of Trustees, public television stations have officially adopted a policy of committing 4.5 megabits per second on a daily average of public stations' DTV bitstream (one-quarter of their digital channel capacity on average) to formal educational services. This is the equivalent of three T-1 lines downstream to every school in America, which is worth \$2.4 billion annually. 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. This commitment of DTV bandwidth will play a vital role in helping schools achieve their educational goals.

Through this commitment, a digitized public television system will make a significant contribution to the deployment of high-speed services to Americans in rural

areas and other underserved populations. If fully converted, public television stations' transmitters and translators can provide digital video, audio, and data services over-the-air to 99 percent of our nation's citizens at the rate of 19.4 megabits per second. In fact, a digitized public television system would have the ability to reach a far greater number of Americans than other current "last mile" services, such as cable modems and DSL connections. By illustration, attached are two maps that show, respectively, the potential coverage by public television versus the potential DSL reach in terms of the "last mile" delivery of services in Georgia and New Hampshire. 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.<sup>4</sup>

This bandwidth and reach will effectively leverage facilities that have been developed over the years to ensure the goals of universal services policies. For example, a teacher in a remote community may use dial up Internet access through a rural telephone company to access rich media web content delivered over-the-air by the teacher's local public television transmitter or translator. This material would be downloaded on-demand to a PC with a tuner card and a UHF antenna at data rates that may never be available through DSL or cable modems for many rural citizens.

APTS demonstrated this model at its September 5, 2001 "Ed-tech & Ice Cream" event on Capitol Hill. APTS used WETA, Washington, D.C. and Nebraska ETV content distributed over the DTV bitstream from the model DTV station in Washington, DC,

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<sup>4</sup> *Advanced Telecommunications in Rural America*, April, 2000, a report by the National Telecommunications and Information Administration (NTIA) and Rural Utilities Service (RUS) on the status of broadband deployment in rural versus non-rural areas in the United States, found that rural areas are currently lagging far behind urban areas in broadband availability. The report found that only two technologies, cable modem and digital subscriber line (DSL), are being deployed at a high rate, but the deployment is occurring primarily in urban markets for economic and technical reasons. The report urges support for alternative broadband technologies.

which was received on a PC connected to an antenna on the roof of the Rayburn Building. With the assistance of Triveni Digital, this “live” prototype of public television educational content distribution architecture demonstrated public television stations’ ability to send multimedia educational material over the air to teachers and schools through a digital television signal. This technology will revolutionize public television stations’ role in helping schools and teachers—especially those in rural areas—to access rich educational content quickly and efficiently.

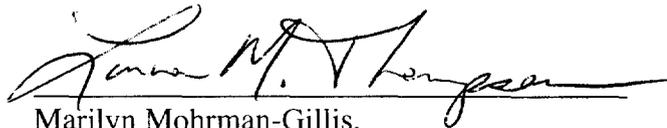
Some public television stations currently are deploying such “asymmetric” networks. For example, New Jersey Network has a program called *New Jersey Workplace Literacy Program*. This program helps address New Jersey’s adult literacy problem through a groundbreaking partnership with the New Jersey Department of Labor and other agencies in which NJN is using 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 sites in New Jersey. Public television station KCPT in Kansas City, Missouri has developed a multimedia children’s literacy initiative, using interactive features of digital television and Internet technologies to enhance the traditional read aloud experience targeted to ages four to seven years old. KCPT’s interactive television pilot allows children to direct their own learning experience by selecting options from hearing, reading and watching an illustrated story told in English, Spanish or American Sign Language.

### **Conclusion**

As the Commission develops its policies related to advanced telecommunications services, as well as digital television, APTS requests that the Commission keep in mind

the valuable educational high-speed services of public television stations. Through Commission policies that recognize the value of each public television transmitter and translator, public television has the ability to help the Commission “to ensure that all Americans have access to advanced telecommunications capability.”<sup>5</sup>

Respectfully Submitted,



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<sup>5</sup> Second Report, paragraph 7.

# Public Television in Georgia

## PTV vs DSL

- Potential DSL reach  
(3 miles from  
Telephone Central Office)
- PTV Coverage Contour
- Population Density



# Public Television for Broadband in New Hampshire

## PTV vs DSL

