

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

In the Matter of)	
)	
Second Periodic Review of the)	
Commission's Rules and Policies)	MB Docket No. 03-15
Affecting the Conversion)	
To Digital Television)	RM 9832

**COMMENTS OF THE ASSOCIATION OF PUBLIC TELEVISION
STATIONS, THE CORPORATION FOR PUBLIC BROADCASTING
AND THE PUBLIC BROADCASTING SERVICE**

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EXECUTIVE SUMMARY

In these Comments, Public Television presents the Commission with data on the progress public television stations have been making with the conversion to digital television. Public television stations are fully embracing the power of digital broadcast technology to further enhance their educational mission by rolling out new and exciting high-definition, multicast standard-definition and datacast digital broadcast services. However, while there are presently 122 public television stations on-air with digital operations, a number of stations are facing significant challenges in building digital facilities. These include a critical lack of federal, state and local funding, technical problems, equipment delays, weather problems, and legal issues that have made timely conversion difficult. Public Television urges the Commission to consider modifying its financial hardship standard when granting extensions to the construction deadline to reflect the unique and diverse ways in which public television stations are funded.

In addition Public Television comments on three issues that must be resolved to ensure a successful transition from analog to digital broadcasting in this nation. Public Television urges the Commission to (a) create reasonable and limited transitional digital cable carriage rules; (b) ensure that the entirety of a station's free, over-the-air digital broadcast signal is carried by cable systems both during and after the transition is complete; and (c) create rules to facilitate the operation of digital translators (and digital on-channel repeaters) so that the digital transition may proceed in rural as well as urban areas.

Public Television also comments on a number of specific issues affecting the digital television transition. Public Television supports the Commission's proposal that

stations with two in-core channels must elect their permanent channel by May 1, 2005, but requests that any proposed replication or maximization deadline come only at the end of the digital transition in each market. Public Television also opposes the proposal to establish a date earlier than December 31, 2005 by which a licensee must provide a city grade signal to its principal city of license. In addition, stations without a DTV construction permit should have the construction deadline delayed until a permit is issued and then have a reasonable amount of time to construct thereafter. Public Television also argues that the current simulcast requirement does not serve its purported purpose and should be deleted.

Regarding the proper interpretation of Section 309(j)(14)(B) of the Communications Act, which governs the return of analog television spectrum and extensions thereof, Public Television believes that the appropriate definition for market-by-market extensions should be based on Nielsen DMAs. In addition, all stations in a DMA should benefit from any extension that the Commission may create pursuant to this statutory section. Where a station's signal reaches multiple DMAs, the return of analog spectrum should only occur when the last DMA in which a station's signals are received has reached the 85 percent threshold. In addition, Public Television agrees with the Commission that only those "digital-to-analog converters" that are capable of converting all forms of digital broadcast signals to analog (including all HDTV formats) should be counted toward satisfying the test at Section 309(j)(14)(B)(ii). Public Television also believes that for purposes of satisfying Section 309(j)(14)(B)(iii), the Commission should count only those MVPD's that carry all local digital broadcast stations that are eligible for must-carry status. Moreover, Commission should count only those MVPD

subscribers that are actually able to view digital signals in their homes, whether in digital format or down-converted to analog in the home (but not including digital signals down-converted to analog at a cable headend). In addition, Public Television believes that Section 309(j)(14)(B) and its legislative history place the bulk of the responsibility for determining market conditions on the Commission, not on broadcasters.

Lastly, Public Television voices support for the authorization of distributed transmission technologies, including the creation of limited primary status where this technology is used to serve the predicted DTV contour of a full power DTV operation. In this regard, Public Television supports the Comments of the Merrill Weiss Group filed in this proceeding. Public Television also supports the Comments of the Advanced Television Systems Committee filed in this proceeding, insofar as ATSC supports adoption of the revised ATSC standard A/53B into Commission rules.

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The Association of Public Television Stations (“APTS”), the Corporation for Public Broadcasting (“CPB”) and the Public Broadcasting Service (“PBS”) (collectively, “Public Television”)¹ hereby submit comments in the above-captioned proceeding.

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. 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. *See* 47 U.S.C. § 390 *et. seq.* PBS is a nonprofit membership organization of the licensees of the nation’s public television stations. PBS distributes national public television programming and provides other program-related services to the nation’s public television stations.

I. Progress with the DTV Transition

The Commission has sought comment on the extent to which broadcasters continue to face difficulties in building their DTV stations.² While public television stations have embraced the digital transition with vigor – rolling out a number of high-definition, multicast standard definition and datacasting services – the stations have faced a number of challenges, including foremost a critical lack of funding but also including a range of technical problems, equipment delays, weather problems and legal issues that have made timely conversion difficult.

A. Public Television Digital Conversion Program Plans

Since the inception of the digital proceedings, Public Television has played a leadership role in, and has been an active participant in and enthusiastic proponent of, digital television.³ With its higher quality images and sound, and its inherent flexibility to broadcast multiple standard definition streams, along with additional streams of data,

² In this regard, the Commission has asked whether stations are continuing to face unresolved zoning or tower siting issues, whether stations are continuing to experience difficulties in obtaining financing for construction, and what other obstacles may pose impediments to the DTV build-out. Second Period Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television, Notice of Proposed Rulemaking, FCC 03-8, ¶¶ 18-19 (rel. Jan 27, 2003) ("NPRM"). In addition, the Commission has sought information on the nature of DTV programming, especially the extent to which licensees are planning to provide programming formatted for HDTV or multiple standard definition programming. NPRM, ¶ 21. The Commission has also sought comment on any other factors affecting the DTV transition in preparation for its report to Congress as mandated by the Auction Reform Act of 2002. NPRM, ¶ 23, citing Pub. L. No. 107-195, Sec.3 (2002).

³ Public television played an active role in developing the transmission standard for digital television and served on the Commission's Advisory Committee on Advanced Television Service, whose recommendations gave rise to the adoption of the "ATSC Standard." In addition, PBS was one of the founding members of the Advanced Television Test Center, which conducted laboratory tests of the Grand Alliance System. PBS also conducted field tests of the Grand Alliance system in Charlotte, North Carolina. WMVT, the public television station in Milwaukee, was the first broadcaster to provide an HDTV satellite test signal. And in 1998, KCTS in Seattle was the first public broadcaster to begin transmitting digital signals using the ATSC standard and was the first station in the United States to produce HDTV programming.

digital television gives public television stations new and exciting tools to expand their educational mission in ways that were not possible in the analog world.

High-Definition Programming. Public Television is regularly producing new and exciting high-definition digital programming for national, regional and local distribution. Currently there are 88 high definition titles (spanning over 160 hours) that are available to local public television stations for broadcast.⁴ As of the end of 2002, there were over 260 digital programs that were either in high definition or digital standard definition wide screen, and 26 local licensees are involved in the production of high definition programs for both national and local distribution. Much of PBS's national programming is now available in high-definition format, including programs in its award-winning NOVA series *Cracking the Code of Life*, *Life's Greatest Miracle*, *Runaway Universe* and *Japan's Secret Garden*.

Multicasting. Multicasting will bring new services to the public that could not be made available under the constraints of a single analog program stream, including an expanded distribution of formal educational services, children's programming, locally-oriented public affairs programming, and programming addressed to traditionally unserved or underserved communities.

More than 95 percent of public television stations have committed to broadcast at least one multicast channel dedicated to formal educational programming. PBS YOU "Your Own University" offers PBS member stations the opportunity to build a full-time educational channel for their communities. Operating 24/7, PBS YOU is currently licensed to 50 PBS stations to enhance their current distribution of distance learning

⁴ Seventy-four of those titles are available either through PBS or another national distributor, American Public Television.

content as well as a variety of other programming for formal and informal education. In addition, several stations are partnering with state departments of education to develop supplemental educational programming that promotes state standards of learning and accountability. Typically, Public Television's educational programming will emphasize a combination of adult continuing education, K-12 instructional programming, workforce development/ job training and college telecourses. For instance, South Carolina Educational Television offers an educational channel, featuring a combination of PBS You, college courses from University of South Carolina and Clemson University, and original educational programming. Similarly, WMEC (Macomb, IL) is working with the Illinois Board of Higher Education and five local colleges and universities to develop college credit and non-credit courses, as well as continuing education and job training courses.

Moreover, 77 percent of public television stations plan to provide a channel dedicated solely to children's programming. The PBS KIDS Channel is the 24/7 service to member stations featuring an array of PBS children's programs. Currently licensed to 55 PBS member licensees, PBS KIDS offers stations the opportunity to provide to their communities a full-time source of quality programming for analog, digital and second cable channels.

Other public television stations plan to multicast a digital channel dedicated to local issues and public affairs. These multicast channels will cover state legislatures, local town meetings and debates, and highlight local business, lifestyle, and political issues. For instance, the South Carolina Educational Television Network currently offers gavel-to-gavel coverage of the South Carolina General Assembly through its over-the-air

digital multicasting service. KNME in Albuquerque, New Mexico and KBDI in Broomfield, Colorado plan a similar service. In addition, a “South Carolina Channel” is in development, featuring regional arts festivals lecture series, book festivals, and university events. Moreover, a group of western public television stations (Idaho Public Broadcasting, KNPB in Reno, Nevada, KUED in Salt Lake City, Utah, and Wyoming Public Television) have created a multi-state partnership called FocusWest to deliver news and public affairs programming of interest to Americans in the west through an innovative new digital multicast channel.⁵

Still other multicast plans include targeting broadcasts at traditionally underserved communities. Several public stations will dedicate a multicast channel to foreign language programming. For instance, KBDI (Broomfield, CO) plans to broadcast a *Latino Initiative Channel* for the Spanish-speaking and bilingual community which will emphasize news, public affairs and social and cultural events in the region. WNYE (New York City) plans to broadcast a dedicated foreign languages channel, featuring programming in at least 12 different languages, including Japanese, Chinese, Italian, Greek, Polish, and Eastern European languages, and focusing primarily on public affairs – complete with local news, international news and cultural programming from various countries. Other public stations, such as Iowa Public Television are also considering channels dedicated to the needs of the senior community.

⁵ FocusWest is committed to covering significant public affairs issues in the intermountain west, and to bringing together local and regional perspectives on those issues. The project aims to deepen and enhance understanding of the issues it covers by melding the talents and resources of Idaho Public Television, KNPB Channel 5 - Reno, and Wyoming Public Television. Each featured production combines the unique strengths of television, print, and new digital media to encourage greater understanding of, and involvement in, regional civic affairs. See www.focuswest.org.

Detailed descriptions of selected station multicast plans are set forth at Appendix A for the Commission's information.

Datacast Services. Lastly, a number of public television stations have plans to provide various educational and/or homeland security services over their digital allotment. Recognizing the power of digital to educate, 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 entire 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. Included among the licensees that have already demonstrated the power of this kind of data service for education are Wisconsin Public Television, the New Jersey Network and KCPT (Kansas City, MO).

- 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.
- In addition, public television station KCPT (Kansas City, Missouri) is currently running a pilot project for datacasting to schools and colleges. The project will take datacasting from content preparation through delivery to two K-12 schools and two colleges and evaluate technical and instructional support needed by the end users. KCPT is using locally produced video and web content for the project, including *Water and Fire, the Story of the Ozarks* and *Uniquely Kansas City*.

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 recently demonstrated 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, in keeping with public broadcasting's statutory mandate to serve all Americans.⁶

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.
- In Missouri, public television station KMOS has engaged in a partnership with Central Missouri State University and the Missouri National Guard to develop a Continuity of Operation plan for the Guard's state operations center in the event of a crisis or disaster and to serve as a backup system for the Guard as well.
- In addition, 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."
- Similarly, station KLVX in Las Vegas is using its digital system to enhance the security of Las Vegas' water lines. KLVX is also working with the Clarke County Emergency Preparedness office to take advantage of its current links to over 300 schools in the region that are designated as safe evacuation sites in order to communicate with these centers in case of emergency.

B. Public Television Digital Conversion: Status of the Digital Build-Out

There are presently 122 public television stations on air with digital signals, comprising nearly 35 percent of the nation's 357 public television stations and serving

⁶ 47 U.S.C. § 396(a)(5).

markets that include over 60 percent of households in the nation.⁷ One-hundred and eighty-eight stations applied to the Commission for extensions of time to construct their digital facilities due to a number of factors that were beyond their control, including a critical lack of funding, technical problems, equipment delays, weather problems and legal issues that have made conversion difficult. Public Television therefore anticipates that the remaining stations that did not file extension requests will be on-air with a digital signal by May 1, 2003.

1. Public Television: Critically Underfunded

Of the public television stations seeking an extension of the May 1, 2003 digital build-out deadline, 24 percent cited funding difficulties as a motivating reason for the extension request. Public Television has estimated that the cost of digital conversion will total \$1.8 billion. Public television stations have raised a substantial amount of digital conversion funds, totaling \$771 million, from state, local and private sources.⁸ To date, the Federal government has appropriated \$221 million, or only 13 percent of the total cost to convert. Forty percent of the federal contribution-- \$90 million—was contained in the FY 2003 appropriation. This was not enacted until February of 2003: three months before the May 1, 2003 construction deadline and too late for disbursement in time to help stations meet that deadline.

While Public Television will continue to work to obtain federal, state and local funding for the digital conversion, a number of stations are facing severe financial

⁷ www.pts.org/html/digital/dtv/digital_services.htm.

⁸ Approximately \$476 million in state funds have gone to aid in the digital conversion and well over \$260 million in private funds have been raised for the digital transition.

challenges due to current economic conditions and state budget crises. Thus, circumstances beyond their control are affecting the ability of stations to construct digital facilities, to operate dual analog-digital facilities and to provide the kind of quality digital programming the public has grown to expect. For instance, the Rhode Island House of Representatives voted to rescind the digital funding for WSBE Providence, RI. Originally appropriated in 1997, the \$4.7 million cut was part of a last minute budget negotiation with the new senate leadership who forced the lower house to choose between the WSBE money and the automobile tax abatement, which has been a priority of the lower house for several years. Some additional representative examples of the kinds of financial pressures stations are facing as a result of state fiscal crises are contained at Appendix B to this document.

Meanwhile stations throughout the nation are simultaneously facing the increased cost associated with operating two stations – one analog and one digital—until the DTV transition has run its course. For example, Nebraska Educational Television reports that it will be incurring the following additional operating costs from its digital transmitters.

- FY 2003: \$470,000 (July 2002 to June 2003)
- FY 2004: \$649,000 (Transmitters on 50% of analog schedule)
- FY 2005: \$778,000 (Transmitters on 75% of analog schedule)
- FY 2006: \$908,000 (Transmitters on 100% of analog schedule)⁹

⁹ See Deborah D. McAdams, “The Squeezing of Public Television,” Digital TV Television Broadcast, p. 17 (March 2003).

Compared to other regions of the country, electricity costs are fairly inexpensive in Nebraska;¹⁰ other stations in more financially challenging markets will face much greater electricity costs and a greater impact on their budgets.

2. Other Challenges in the Digital Transition

While public television stations are well on their way to successfully constructing digital facilities, a number of stations have faced unforeseen challenges that are beyond their control. Nearly 80 percent of the 188 stations filing extension requests cited technical reasons (including lack of tower crews, delays in obtaining necessary equipment, and interference disputes) for filing their requests. Legal reasons (such as zoning disputes or delays in obtaining necessary permissions from authorities) were also referred to in 43 percent of extension requests. Below, in response to the Commission's inquiry, is a summary of the types of problems cited by public television stations in their requests for extension of the digital construction deadline.

First, a significant number of stations have encountered technical problems, including lack of tower installation crews and delays associated with the strengthening, rebuilding, relocation and/or construction of towers to accommodate digital facilities. Public television stations have also encountered significant delays in obtaining necessary equipment from manufacturers, either due to backlogs in the manufacturing process or due to delays in obtaining federal funding for ordering equipment. In some instances, stations discovered that certain key manufacturers had ceased production of necessary

¹⁰ Id.

equipment, requiring a search for replacement sources.¹¹ In other instances, stations have been hampered by a critical shortage of qualified tower installation crews. In still other instances, the construction of towers has been hindered by adverse weather as well as limitations in the seasons during which tower construction may proceed in some areas.

In addition to the myriad technical problems, stations have encountered problems in negotiating tower leases and clearances from relevant authorities. Frequently, where a station must move from its old tower (due to lack of space on the tower or due to issues related to the existing tower's weight tolerance), public television stations have sought to coordinate with other stations in the market for co-located tower facilities, requiring sometimes protracted and complex negotiations among multiple parties that are still ongoing in some instances. In this regard, public television stations have had to contend with tower owners who have demanded cost-prohibitive lease terms, interference issues among co-located broadcasters, and hold-over tenants who refuse to vacate towers early. In addition, a number of public television stations have encountered problems with state and local authorities over zoning issues and the issuance of building permits. In a number of instances, citizen groups have intervened to oppose the construction of new or refurbished towers, contributing to further delay in tower construction. Moreover, many public television stations have encountered delays in obtaining clearances from the Federal Aviation Administration, the U.S. Forest Service, the Bureau of Land Management, and various local historic preservation commissions. Indeed, one noted

¹¹ Dielectric, for instance, has purchased TCI, which manufactured dual-mode analog/digital antennas that a number of public television stations had planned on using to reduce the windload on towers associated with the presence of two antennas (one analog and one digital). Dielectric, however, has recently discontinued the manufacture of this antenna, an action that has required a number of public television stations to reassess the strength of existing towers where two antennas will have to be installed instead of one. In a number of instances, this has required additional strengthening of existing towers, relocation to other towers or the construction of new towers.

obstacle concerns international coordination and clearances from the government of Canada, which through delays in processing (and in some cases objections) has prevented the build-out of some digital stations near the border.¹²

A number of state licensees have also encountered problems with state-mandated bidding and contract approval processes that have delayed construction of their digital facilities. The Arkansas Educational Television Commission, reports, for instance, that its antenna installation contract took a full 18 months to move through the appropriate channels of state government before it was approved. In addition, it was discovered that the low bidder for the project had no experience installing broadcast television equipment; to reject this bid, the state was required under state law to reject all bids and re-bid the project in its entirety, causing further delays in the construction of digital facilities in Arkansas. Other state licensees, such as the Wisconsin Educational Communications Board and the Georgia Public Telecommunications Commission have also encountered unique delays in state-mandated bidding and contract approval processes.

II. Special Relief Measures for Public Television

Since the inception of the digital rules, the Commission has acknowledged the financial difficulties that public television stations face in constructing digital facilities.¹³

¹² Vermont Educational Television and WGTE (Toledo, OH) have had their digital construction delayed precisely due to this problem. WCMU (Mt. Pleasant, MI) and WFUM (Flint, MI) have also encountered delays from Canada, although they now possess construction permits. It is said that the government of Canada has only one person assigned to evaluating and ruling on cross-border digital operations, a fact that has caused considerable delay of over a year for Vermont Educational Television. Public television stations that lack a construction permit due to international coordination problems have been unable to successfully apply for federal funding through the Department of Commerce.

¹³ Advanced Television Systems and Their Impact on the Existing Television Broadcast Service, Fifth Report & Order, FCC 97-116, 12 FCC Rcd 12809, ¶ 104 (1997) (“Fifth R&O”).

The Commission has consistently stated that public television stations will be accorded special relief to assist them during the transition.¹⁴ However, the Commission has repeatedly stated that it would defer considering what additional special treatment, if any, should be accorded to noncommercial broadcasters and would consider the issue in periodic biennial reviews.¹⁵ Acknowledging that the time is now ripe, the Commission has asked in this periodic review what special relief measures should be accorded to public television stations that have not converted to digital or that do not anticipate converting to digital by May 1, 2003.

Public Television believes that the financial hardship standard for grant of an extension of time to construct a digital television station should be applied more liberally to public television stations to reflect their unique means of funding.¹⁶ Approximately 45 percent of public broadcasting revenues come from taxed-based sources including federal

¹⁴ “[W]e note our commitment to noncommercial educational television service and our recognition of the high quality programming service noncommercial stations have provided to American viewers over the years. We also acknowledge the financial difficulties faced by noncommercial stations and reiterate our view that noncommercial stations will need and warrant special relief measures to assist them in the transition to DTV. Accordingly, we intend to grant such special treatment to noncommercial broadcasters to afford them every opportunity to participate in the transition to digital television, and we will deal with them in a lenient manner.” Fifth R&O, ¶ 104. See also Fifth R&O, ¶ 93 and Advanced Television Systems and Their Impact on the Existing Television Broadcast Service, Memorandum Opinion and Order on Reconsideration of the Fifth Report and Order, FCC 98-23, 13 FCC Rcd 6860, ¶¶ 42, 64 (1998) (“Reconsideration, Fifth R&O”).

¹⁵ Fifth R&O, ¶ 104, and Reconsideration, Fifth R&O, ¶¶ 42, 64. However, in its first biennial review of the DTV transition, the FCC stated that it was premature to consider “issues relating to public television.” Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television, Notice of Proposed Rulemaking, FCC 00-83, ¶ 14 (March 6, 2000). See also Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television, Report and Order and Further Notice of Proposed Rule Making, 2001 FCC LEXIS 408, FCC 01-24, MM Docket No. 00-39, ¶ 33 (rel. January 19, 2001) (“DTV Review Order”) (“As we get closer to the construction and election deadlines for noncommercial educational broadcast stations we will be in a better position to determine what relief might be required by such stations and whether the scope of that relief needs to be on an industry-wide basis or only on a station-by-station or market-by-market basis.”).

¹⁶ See NPRM, ¶ 64.

and state governments as well as public universities and local authorities.¹⁷ Federal funding for the DTV conversion comes from two sources: through a specially earmarked fund within Corporation for Public Broadcasting (CPB) and through the Department of Commerce Public Telecommunications Facilities Program (PTFP).

Despite Public Television's diligent efforts to secure federal funding for the DTV conversion (our first comprehensive federal funding proposal was made in 1997), federal funds have been insufficient and not timely enough to meet the May 1, 2003 construction deadline.¹⁸ Forty percent of the current federal contribution— \$90 million—was contained in the FY 2003 appropriation. This was not enacted until February of 2003: three months before the May 1, 2003 deadline and too late for disbursement in time to help stations meet that deadline. Moreover, a number of public television stations did not receive PTFP grants for FY 2002 because of the sheer number of applicants and PTFP policy that gives highest priority in funding to those stations that provide either a sole digital public television service to their market or a statewide digital service.¹⁹

¹⁷ The other 55 percent comes from a mixture of membership donations (24%), business underwriting (14%), foundation (6%) and private sources like private colleges and station auctions (11%).

¹⁸ As noted above, Public Television has estimated that the cost of digital conversion will total \$1.8 billion. Public television stations have raised a substantial amount of digital conversion funds from state, local and private sources, a total of \$771 million. Approximately \$476 million in state funds have gone to aid in the digital conversion and well over \$260 million in private funds have been raised for the digital transition. To date, the Federal government has appropriated \$221 million, or only 13 percent of the total cost to convert.

¹⁹ For instance, PTFP will give its highest priority in awarding funds to stations that will provide the sole service in an areas unserved by a digital public television signal in a market, to cooperative applications by two or more stations for the first digital public television signal in a market and to a statewide plan for the conversion of multiple stations. Of secondary and tertiary priority are stations or groups of stations that will provide a second or additional digital public television service to a market. See <http://www.ntia.doc.gov/otiahome/ptfp/attachments/Notice2003.html#DTVD>. Thus, for instance, a number of stations that provide differentiated public television services to a market where there is more than one public television station did not receive the highest priority for PTFP funding.

In addition, because of the budget crises many states are experiencing, state funding has also been inordinately delayed or reduced in a number of instances. In addition, in some instances, state legislatures convene for only a limited period of time. For instance, Georgia's legislature convenes for only the first three months of every year, and some other states have similar restrictions. In those situations, if state appropriations are not made during that brief window of opportunity, the public television station must wait for the next year's legislative session to pursue state funding, causing unavoidable delays in funding that is necessary to meet the Commission's construction deadline.

In addition, after federal or state funds are released to public television stations, a number of state and university licensees must then undergo a bidding process to award construction contracts prior to undergoing actual construction. This process may take a very long time – in some cases more than a year— and may further delay construction of facilities in order to comply with state laws. As discussed above, this was the case with state licensees in Arkansas, Georgia and Wisconsin.

Unlike the technical obstacles to constructing digital facilities that face public and commercial stations alike, these funding issues are unique to public television stations. Public Television therefore believes that it would be reasonable and appropriate for the Commission to consider modifying its financial hardship standard when granting extensions to the construction deadline to take into consideration the unique and diverse ways that public television is funded.

III. Additional Factors Affecting the Digital Transition

In addition to the challenges posed by inadequate or declining funding, and the technical or other obstacles that stations have faced when attempting to meet the Commission's May 1, 2003 construction deadline, public television stations face a number of regulatory challenges that pose obstacles to their success during the digital transition. In this regard, Public Television provides further comment on additional factors affecting the DTV transition that the Commission may find useful for its report to Congress.²⁰

Public Television has repeatedly stated that three such factors must be resolved immediately before the transition can be successfully completed: (a) the Commission must implement the law by promulgating reasonable and limited transitional digital cable carriage rules; (b) the Commission must ensure that the entirety of a station's free, over-the-air digital broadcast signal is carried by cable systems both during and after the transition; and (c) the Commission must quickly create rules to facilitate the operation of digital translators (and digital on-channel repeaters) so that the digital transition may proceed in rural as well as urban areas.

While Public Television recognizes that these issues are part of separate proceedings,²¹ they are of critical and direct importance to the success of the digital

²⁰ NPRM, ¶23.

²¹ See In the Matter of Carriage of Television Broadcast Signals; Amendments to Part 76 of the Commission's Rules, CS Docket No. 98-120; and Media Bureau Seeks Comment on National Translator Association's Petition for Rulemaking to Establish a rural Translator Service, Public Notice, DA 03-622, RM 10666 (March 6, 2003).

transition.²² Without transitional digital carriage rules, public television stations face an indefinite period of transition in which licensees must operate two stations at once with all the attendant electricity and operating costs. Without full carriage of their entire digital signal on cable, public television stations will be unable to adequately address the need to provide educational programming to multiple audiences and to serve underserved audiences, in accordance with its statutory mandate, and will inevitably face declining underwriting, membership and government support, resulting in a deterioration or failure of service to their communities. And without rules to facilitate the conversion of translators to digital operation, millions of rural Americans will likely not receive critical educational and public safety services over digital broadcast technology.

A. The Commission Should Implement a Reasonable and Limited Cable Carriage Rule for the DTV Transition

On February 27, 2003, Public Television renewed its call for reasonable and limited digital cable carriage rules during the DTV transition and proposed a newly streamlined comprehensive plan to speed the DTV transition.²³ Under this plan, certain cable systems would be required to carry both the digital and analog signals of local broadcasters, subject to a number of important limiting conditions. *First*, the requirement would initially apply only to systems with at least 750 MHz of capacity, but by a date certain it would apply to all systems, regardless of capacity. *Second*, small systems -- those with fewer than a specified number of subscribers -- would be exempt from the transitional carriage requirement. *Third*, a 28 percent cap would be imposed on the

²² Accordingly, Public Television hereby incorporates by reference its comments and other filings in those proceedings into this docket.

²³ Ex Parte Letter to Chairman Powell from APTS, CPB and PBS (Feb. 27, 2003), Docket 98-120.

amount of capacity that a cable system would be required to devote to carriage of all broadcast stations' signals – both analog and digital, commercial and public – eligible for carriage under this proposal. *Fourth*, a sunset provision would apply: a cable system would no longer be obligated to carry a local station's analog signal when all of the cable system's subscribers can view the station's digital signal, either in digital format or downconverted for viewing on analog equipment.

The same public policy reasons in favor of analog carriage requirements found to be sufficient by the Court in *Turner II* apply with equal or greater force to the proposal here:

- Preserving the benefits of free, over-the-air local broadcast television;
- Promoting the widespread dissemination of information from a multiplicity of sources; and
- Promoting fair competition in the market for television programming.²⁴

Moreover, Public Television's proposed carriage requirement is supported by additional compelling policy objectives. It would, without question, propel the digital broadcast transition, which would in turn:

- Allow the government to reclaim and auction or otherwise reallocate the analog spectrum;
- Avoid the waste of indefinite dual analog/digital broadcast operations; and
- Achieve more efficient use of the spectrum.

Indeed, as the Congressional Budget Office concluded, digital carriage during the transition is essential to a successful transition. With close to 70 percent of American

²⁴ Turner Broadcasting System v. FCC, 520 U.S. 180, 189 (1997) (quoting Turner Broadcasting System, Inc. v. FCC, 512 U.S. 622 (1994)).

homes equipped with cable, it is a mathematical impossibility that the country will achieve the 85 percent digital penetration required for the digital transition to be complete without cable carrying broadcasters' digital signals in the interim.

Moreover, because of the limiting conditions contained in Public Television's transitional carriage plan, advances in digital technology, and advances in digital cable build-out, the burden imposed on cable systems by our proposal would be substantially less than that of analog must-carry upheld by the Supreme Court. The 28 percent cap is well below the one-third cap on the carriage of analog signals that applies to commercial television stations only.

The Commission needs to act now to put reasonable and limited rules in place to ensure a timely and successful transition.

B. The Commission Should Ensure that the Entirety of a Station's Free, Over-the-Air Digital Broadcast Signal Is Carried on Cable

In numerous pleadings filed with the Commission, Public Television has demonstrated that the Commission's prior decision to limit digital carriage to a single multicast stream was an ill-advised and unnecessarily narrow reading of federal statute.²⁵ Public Television has also repeatedly demonstrated that full multicast carriage rules raise no serious constitutional questions, because any alleged burden on cable capacity would be the same, regardless of whether a broadcast station is disseminating high definition

²⁵ See, e.g., Association of America's Public Television Stations ("APTS"), *ex parte* notice, CS Docket No. 98-120, Sept. 6, 2002; APTS, *ex parte* notice, CS Docket No. 98-120, Sept. 6, 2002; APTS, *ex parte* notice, CS Docket No. 98-120, Sept. 6, 2002; APTS, Corporation for Public Broadcasting ("CPB"), and Public Broadcasting Service ("PBS"), *ex parte* submission, CS Docket No. 98-120, August 12, 2002; APTS and CPB, *ex parte* notice, CS Docket No. 98-120, March 7, 2002; APTS, PBS, and CPB, Reply Comments, CS Docket Nos. 98-120, 00-96, 00-2, Aug. 16, 2001; APTS, PBS, and CPB, Comments, CS Docket Nos. 98-120, 00-96, 00-2, June 11, 2001; APTS, CPB, and PBS, *ex parte* submission, CS Docket Nos. 98-120, 00-96, 00-2, June 11, 2001.

programming or multiple standard definition programs on its allotted frequency. In either case, carriage of the full broadcast DTV signal would occupy only one-half of the capacity of a digital cable system channel.²⁶

In its *ex parte* filing of March 20, 2003, Public Television conclusively demonstrated that without full multicast carriage, public television stations “will either deteriorate to a substantial degree or fail altogether.”²⁷ It is the solid and documented conviction of public broadcasting’s leaders that multicasting is necessary to solidify existing audiences and reach new viewers. Multicasting is also necessary for public television to achieve greater financial support from local and national underwriters, foundations, state and local governments, and members. Because cable controls access to about 70 percent of American households, cable carriage of multicast services is essential in order for public television stations to achieve economic health in a challenging media environment. For example, national underwriters look for a minimum of 70 percent coverage before they will provide financial support for public television programming. Without cable carriage, the ability of public television’s multicast services to reach this underwriting threshold is a mathematical impossibility. The absence of cable carriage will similarly thwart public broadcasters’ efforts to seek financial support from other sources. Moreover, over three years of intensive and largely unsuccessful efforts by public broadcasters to negotiate for full and fair voluntary cable carriage of their digital services have confirmed the obvious: a must carry requirement is necessary to rectify a market failure for services that Congress has repeatedly stated are in the public interest and should be widely disseminated to the American public.

²⁶ *Ex Parte* Letter to Marlene Dortch, Aug. 12, 2002.

²⁷ *Ex Parte* Comments of Public Television, Docket 98-120 (March 20, 2003).

C. The Commission Should Immediately Consider Rules for the Operation of Digital Translators

On May 29, 2002, Public Television petitioned the Commission to protect the existing system of translators and facilitate the development of digital translators and digital on-channel repeaters so that rural Americans will receive critical educational and public safety services over digital broadcast technology.²⁸ Through its system of full-power transmitters and through approximately 700 translators, public television provides services to nearly all television households. 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 educational and public safety needs. Public television translator stations comprise key portions of the public television system. However, translators are threatened because they are currently considered a secondary service and because the Commission has yet to implement federal law, which allows licensees to operate digital translators on their present analog channels.²⁹ Because millions of rural

²⁸ See Association of Public Television Stations, Public Broadcasting Service and Corporation for Public Broadcasting, Petition for Rulemaking, Enhancement of Broadband Access Through the Preservation of Public Television Translator Service and the Development of Digital Translators and Digital On-Channel Repeaters (May 29, 2002).

²⁹ “Issuance of licenses for advanced television services to television translator stations and qualifying low-power television stations. The Commission is not required to issue any additional license for advanced television services to ... any licensee of any television translator station, but shall accept a license application for such services proposing facilities that will not cause interference to the service area of any other broadcast facility applied for, protected, permitted, or authorized on the date of filing of the advanced television application. ... A licensee of a ... television translator station may, at the option of licensee, elect to convert to the provision of advanced television services on its analog channel, but shall not be required to convert to digital operation until the end of such transition period.” 47 U.S.C. § 336(f)(4). The Commission does not yet have rules governing digital translator operation. See NPRM, n. 107.

residents rely on this technology to receive television signals, the potential loss of current analog translator service would be devastating to these communities.³⁰

The Commission has recognized the importance of translators, stating that they often provide “the only source of free, over-the-air broadcasting in rural areas.”³¹ Accordingly, the Commission has announced its intention to initiate a new proceeding examining the status of television translators and whether such stations could qualify for “some kind of primary status.”³² The Commission has also signaled that it intends to initiate a proceeding concerning on-channel DTV boosters for service to areas that otherwise cannot be reached.³³ Even in this proceeding, the Commission has sought comment on digital on-channel repeaters only in the context of “distributed transmission

³⁰ A study conducted by the Corporation for Public Broadcasting in 1998 concluded that over 12 million Americans are served by public television translators. See Reply Comments of the Association of America’s Public Television Stations, and the Public Broadcasting Service, Rural and Small Market Access to Local Television Broadcast Signals, Department of Commerce, National Telecommunications and Information Administration, Docket No. 000208032-0031-01 (May 15, 2000), citing Jerry Ostertag, *Analysis of Impact of Elimination of Translators*, Corporation for Public Broadcasting, September 18, 1998. Of these, over 2 million Americans receive no other public television service. Therefore, if these public television translators were lost, over 2 million Americans living in rural and small markets would lose access to all free, over-the-air public television services. This study establishes that the potential loss would affect not just a few scattered individuals in the aggregate, but entire communities, with smaller, more rural communities suffering the most. For instance, two communities of more than 100,000 each, nine communities of 50,000 – 999,999, and 49 communities of 10,000 – 49,999 people, would lose complete access to all local public television services. Moreover, because a number of translators other translators in “daisy chains,” a break in the chain may be likely to affect more communities than the community of license for a single translator. The loss of a single translator could therefore multiply the loss of free, non-commercial services several-fold. Moreover, the loss of service will affect not only those viewers who access television signals over-the-air but numerous subscribers to rural cable systems nationwide. Although national figures are unavailable, numerous small cable systems in rural areas rely on the reception of television translator signals at their headends to provide service to their customers. If translator service were to be shut down, not only would rural Americans who rely on over-the-air reception be denied service, a significant number of rural cable subscribers would also lose service as well.

³¹ Establishment of a Class A Television Service, Report & Order, FCC 00-115, MM Docket No. 00-10 (April 4, 2000), ¶35.

³² Id.

³³ See Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television, Report and Order and Further Notice of Proposed Rule Making, 2001 FCC LEXIS 408, FCC 01-24, MM Docket No. 00-39, ¶ 63 (rel. January 19, 2001). See also Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television, Memorandum Opinion and Order on Reconsideration, FCC 01-330, MM Docket No 00-39, ¶ 68 (rel. November 15, 2001).

technologies” (a concept that Public Television supports) while at the same time deferring consideration of translators as a whole to another proceeding.³⁴ On March 6, 2003, the Commission placed a petition by the National Translator Association on public notice, seeking comment on the establishment of a rural translator service capable of distributing analog and digital signals.³⁵ Public Television supports the NTA proposal (with limited reservations) and looks forward to working with the Commission to address and resolve the issues associated with this pressing need.

IV. Comments on Specific Issues Affecting the DTV Transition

The Commission has sought comment on a number of additional issues affecting the roll-out of digital services, including its various deadlines for channel election, replication, maximization and enhanced city-grade coverage, the relief it may afford stations without digital construction permits, the possible repeal or modification of the simulcast requirements, the proper interpretation of Section 309(j)(14), the policy benefits of licensing distributed transmission technologies and a variety of other technical issues related to the build-out of digital facilities.

³⁴ NPRM, n. 107, ¶123.

³⁵ Media Bureau Seeks Comment on National Translator Association’s Petition for Rulemaking to Establish a rural Translator Service, Public Notice, DA 03-622, RM 10666 (March 6, 2003).

A. Channel Election, Replication, Maximization and Enhanced City-Grade Requirements

The Commission has sought comment on the appropriate timing of its channel election,³⁶ replication³⁷ and maximization³⁸ requirements. Public Television agrees that all television broadcasters – public and commercial—with two in-core channels should elect which channel they wish to retain by May 1, 2005 with appropriate extensions of this deadline where the station has obtained an extension of time to construct digital

³⁶ The Commission has sought comment on its proposal for a new channel election date of May 1, 2005—the same for commercial stations as for public television stations. NPRM, ¶ 25. Previously, the Commission had required that public television stations with both DTV and analog channels in the core to elect which one to retain by December 31, 2004 (commercial stations had until December 31, 2003). Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television, Report and Order and Further Notice of Proposed Rule Making, 2001 FCC LEXIS 408, FCC 01-24, MM Docket No. 00-39, ¶ 15 (rel. January 19, 2001) (“DTV Review Order”). Late in 2001, this date was temporarily deleted pending further reconsideration. Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television, Memorandum Opinion and Order on Reconsideration, FCC 01-330, MM Docket No 00-39, ¶ 16 (rel. November 15, 2001) (“DTV Review Reconsideration”).

³⁷ The Commission has proposed that the replication date be July 1, 2006 – the same for commercial and public television stations (commercial stations affiliated with the top-four networks in markets 1-100, however, would have a deadline of July 1, 2005). NPRM, ¶ 33. Prior to the issuance of this Notice, the Commission had required public television stations to replicate their NTSC service area by December 31, 2005 or lose interference protection to the unreplicated portion of the service area (by way of comparison, commercial stations had until December 31, 2004 to replicate). See DTV Review Order, ¶ 24. Late last year, this deadline was temporarily rescinded pending further consideration in this proceeding. DTV Review Reconsideration, ¶ 24.

³⁸ The Commission has allowed stations to “maximize” their digital coverage area to match those of the major VHF stations in the market, provided that this “maximization” would comply with certain interference criteria. Sixth R&O, ¶ 31, and 47 C.F.R. § 73.622(f)(5). See also 47 C.F.R. § 73.622(f)(4) (allowing UHF DTV stations to increase power up to a maximum of 1000 kW ERP). This important policy was designed to ensure parity between VHF and UHF stations, the latter of which was required to operate at lower power and thus initially have a smaller DTV service area than their VHF counterparts. NPRM, ¶ 31. For public television stations, this was an especially important policy, as 338 public television stations, or nearly 95 percent have UHF digital allotments (as of April, 2002). The Commission has proposed that there be a maximization deadline of July 1, 2006: the same date for commercial and public television stations and a date concurrent with its proposed replication deadline (commercial stations affiliated with the top-four networks in markets 1-100, however, would have a deadline of July 1, 2005). NPRM, ¶ 33. Prior to the Commission’s Notice, no deadline for maximization had been established, although on June 18, 2002, Media Bureau froze all maximization requests for channels 52-59 and on January 23, 2003, the Bureau froze all maximization requests for channels 60-69. NPRM, ¶¶55-56.

facilities due to circumstances beyond the licensee's control. Thereafter, by the end of the transition in each market, but no earlier, all television broadcasters should be required to both replicate and maximize the DTV coverage area of their final channel or lose interference protection to the unreplicated and unmaximized portions of that DTV coverage area.

Public Television believes that any rational build-out plan will allow television broadcast stations a reasonable amount of time to consider the propagation patterns, costs and other factors associated with each of their dual channels so that broadcasters will be able to make an informed choice of which channel to retain, *prior* to the time that any replication or maximization requirement takes effect. This will ensure that a broadcaster will not be forced to invest in replicated or maximized facilities for allocations that might be returned to the Commission, which would entail an unnecessarily wasteful investment of private and public capital that public television stations – and the funding sources upon which they rely – can ill afford. In addition, if the Commission were to require broadcasters to replicate and/or maximize prior to the channel election deadline, the Commission and other broadcasters in each market (and adjacent markets) would be faced with the technically difficult issue of how to “carry over” the replicated and maximized facilities to the final channel without interference to other operations. This would enmesh the Commission in an excessively large number of interference disputes as it attempts to construct a final DTV Table of Allotments.

The Commission has also sought comment on how its replication and maximization requirements would apply to stations with out-of-core DTV assignments and whether its replication and maximization requirements should be different for this class of stations as

compared to stations with DTV channels within the core. Public Television believes that stations with out-of-core channels should not be required to replicate or maximize on the out-of-core channels. This policy would avoid the waste of public and private capital that a replication or maximization requirement these channels would entail, as these channels will ultimately be returned to the Commission. Moreover, not requiring these channels to replicate and/or maximize will avoid the administratively complex interference issues of transferring replicated and/or maximized coverage from the out-of-core channel to an in-core channel.

Lastly, the Commission has also sought comment on whether the city-grade requirement is serving its purpose.³⁹ The Commission has asked whether it should adopt an intermediate signal coverage requirement beyond a broadcaster's current obligation to cover its community of license and whether it should change the city grade deadline to an earlier date or change it in other respects.⁴⁰ While Public Television supports the current Commission rules by which a city grade signal should be provided to a station's principle city of license by December 31, 2005, establishing an earlier date would be disruptive for station planning, especially for state licensees that must submit cost analyses for approval by their state governments well in advance of spending due to state budget planning policies, and would serve little purpose other than imposing greater costs on public broadcasters that are already struggling financially. In addition, in some circumstances,

³⁹ By December 31, 2005, public television stations are required to provide a "city-grade" signal that is 7dB stronger to their principle communities or cities of license than what they were initially required to provide. DTV Review Order, ¶ 27; and DTV Review Reconsideration, ¶ 39. The goal of this "city grade" signal requirement was to ensure that the majority of a station's analog service population would be able to receive a digital service. NPRM, ¶ 36. The Commission has noted that while it temporarily deleted its replication deadline, the principle community coverage requirement remained intact. NPRM, n. 5.

⁴⁰ NPRM, ¶ 36.

depending on what the increased power requirements would be, stations will have to purchase additional equipment or upgrade present equipment (e.g. purchase bigger cabinets or modify the transmission lines) to meet this requirement. This may require another time-consuming round of applications for grants from either federal or state authorities and would impose additional expenses on these stations that they can ill afford at this time.

B. Relief for Licensees without DTV Construction Permits

The Commission has noted that those stations that have not yet been granted a DTV construction permit have not yet been required to construct DTV stations.⁴¹ The Commission has proposed that such stations must commence DTV service pursuant to special temporary authority within one year from adoption of the Report and Order in this proceeding with waivers considered on a case-by-case basis in limited circumstances.⁴² The Commission has sought comment on this proposal and whether its channel election, replication and maximization deadlines should apply to these stations.⁴³

A number of public television stations have either not received initial DTV construction permits or have applied for additional or replacement DTV allotments that are

⁴¹ NPRM, ¶61.

⁴² NPRM, ¶62.

⁴³ NPRM, ¶ 62.

subject to pending Commission proceedings.⁴⁴ These applications are typically made to reduce interference to other stations, to expand service to new areas not served by a full-power NCE signal (for instance, to replace translators), and to seek in-core channel allotments where the station had been allocated an out-of-core channel. In addition, as noted above, some public television stations –such as Vermont Educational Television, WCMU (Mt. Pleasant, MI), WFUM (Flint, MI) and WGTE (Toledo, OH) –have experienced problems with international coordination, especially with Canadian authorities. These international coordination problems have delayed the granting of a construction permit and have been beyond the licensee’s control.

Public Television believes that it would be a waste of private and public capital for a station to be required to construct DTV facilities pursuant to a STA within one year from the adoption of the Report and Order in this proceeding if the eventual construction permit would be denied for reasons of interference or international coordination. A more rational policy would be to delay the construction deadline for those stations without construction permits until a construction permit is issued. After a construction permit is issued, these stations should be required to construct within a reasonable amount of time (e.g. one year or more). By the time the construction permit is granted, these stations will likely have chosen which channel will be their permanent digital channel (presumably the one for

⁴⁴ These include, but are not limited to, WEDH (informal objection to maximization proposal and conflicting allotment proposal); Mississippi Authority for Educational Television (seeking a substitute channel at Boonville); WKNO (application for new DTV only channel at channel *56); WXXI (application for new DTV only channel at channel * 61, with petition to substitute it for an in-core channel); the University of Florida (Gainesville) (application for new digital only channel at Crystal River on channel 39); WSDE in Duluth (recently allocated channel 31 this year- CP application not yet filed); KOCV (Odessa, TX) (pending application for a CP due to a channel change effective Jan 27, 2003); KACV (Amarillo, TX) (pending application for CP due to channel change, authorized September 23, 2002); WNVT (Fairfax, VA) (pending application for CP due to desire to operate in digital only); KSRE (Fargo, ND) (CP pending channel assignment change approval by FCC); and WGTV, WABW and WXGA, all operated by Georgia Public Broadcasting (pending petitions to change channel assignments).

which the CP is granted), so the channel election deadline may be waived for these stations. In addition, any requirement to replicate and/or maximize should be the same for these channels as for others and should come at the end of the DTV transition in the relevant market.

C. Simulcasting Requirement

The Commission has asked whether it should retain, revise or remove its simulcast requirement, which for public television stations begins on May 1, 2003.⁴⁵ On March 24, 2003, representatives of public television petitioned the Media Bureau to temporarily suspend this requirement until the Commission has ruled on the issue in this proceeding.⁴⁶ This petition noted that while commercial television stations had a minimum of 11 months between the time they were to complete DTV construction and the beginning of their simulcast requirements, no time lag existed for public television stations between their mandatory construction date and the beginning of simulcast requirement. Moreover, the letter stated that some public television stations will be unable for some time to comply with the simulcasting requirements. In these cases, although the DTV stations are able to receive and broadcast PBS or other digital programming utilizing temporary satellite dishes located at their transmitters, necessary

⁴⁵ NPRM, ¶66. Commission regulations state that beginning on April 1, 2003, all DTV television licensees must simulcast on their DTV channels 50 percent of the video programming broadcast on their analog channels. On April 1, 2004, stations must simulcast 75 percent. On April 1, 2005, stations must simulcast 100 percent. 47 C.F.R. § 73.624(f). Although the 50 percent deadline is officially April 1, 2003 for all broadcasters, this is one month prior to the deadline by which public television stations are required to complete construction of their DTV facilities (May 1, 2003). Accordingly, the FCC has suggested that May 1, 2003 is the initial date that triggers the 50 percent simulcast requirement for public television stations. NPRM, n. 94.

⁴⁶ Emergency Request for Temporary Suspension of DTV Simulcasting Requirements for NCE TV Stations Pending Resolution of Second Periodic Review, MB Docket 03-15 (March 24, 2003).

STL or other digital interconnection facilities between their studios and the transmitters are not yet in place, making it difficult or impossible for the DTV stations to receive the simulcast programming feed from their studios. In other cases, encoding equipment to enable the station's NTSC programming to be digitized for DTV broadcast has not yet been delivered and/or installed.

Public Television opposes the continuation of the simulcast requirement. By requiring a simple repetition of the analog feed on the digital channel, the simulcast requirement discourages the flexible and innovative use of the digital medium, does little to drive consumer acceptance of digital television services and therefore does nothing to advance the digital transition.⁴⁷ The simulcasting requirement was intended to ensure that consumers enjoy a continuity of service when the analog spectrum is reclaimed at the conclusion of the transition.⁴⁸ But it is precisely a discontinuity of analog broadcasting's limited service – namely new and innovative digital programs and services – that will drive consumer acceptance of digital technology and thereby promote the digital transition and the ultimate return of analog spectrum. Moreover, it is more likely that by encouraging diverse and innovative digital programming, and by retaining its minimum hours of operation rules, the Commission may provide greater incentives for consumer

⁴⁷ See NPRM, ¶ 66.

⁴⁸ NPRM, ¶ 65.

adoption of digital services in a more content-neutral manner.⁴⁹

D. Interpretation of Section 309(j)(14)

The Commission has sought comment on a number of issues relating to the proper interpretation of Section 309(j)(14)(B) of the Communications Act, which governs the return of the analog television spectrum and conditions for extensions thereof on a market-by-market basis.⁵⁰

Beneficiaries of the Extensions. The Commission has asked whether it has the authority to grant blanket extensions to all stations in a market, to particular stations that successfully petition the Commission for an extension of time, or on a national basis.⁵¹ Public Television believes that the plain language of the statute and good policy dictate granting extensions to all stations in a market.⁵² While Section 309(j)(14)(B) authorizes the Commission to extend the analog return date “for any station that requests such extension,” this authority extends to situations where certain market conditions apply

⁴⁹ Instead, Public Television would support the Commission’s proposed minimum hours of operation proposal, whereby public television stations subject to the May 1, 2003 construction deadline must air, by May 1, 2003, a digital signal for an amount of time equivalent to 50% of the amount of time they provide an analog signal (which may be less than 24 hours each day). NPRM, ¶ 68. This minimum digital operation requirement would increase to 75% on April 1, 2004 and to 100% on April 1, 2005. *Id.*

The Commission has also sought comment on how a definition of simulcasting could affect the concept of substantial duplication where digital must-carry is concerned if it were to retain its simulcast requirement but craft a definition appropriate to digital operations. NPRM, ¶ 67. This question, however, is premised on a misreading of the relevant carriage statute. For purposes of the carriage of noncommercial educational stations, certain cable systems need not carry “stations” that substantially duplicate one another. Thus the “substantial duplication” standard applies between stations and not between the analog and digital *signals* of the same station. See 47 U.S.C. §§ 535(b), (e).

⁵⁰ See NPRM, ¶¶ 69 et seq., and 47 U.S.C. § 309(j)(14)(B).

⁵¹ NPRM, ¶ 71.

⁵² The Commission has also sought comment on when stations should be required to file extension requests. NPRM, ¶ 71. Public Television believes that this decision regarding the timing of extension requests is wholly within the Commission’s authority.

equally to all stations in that market. Thus, it would be anomalous, and indeed unfair to other stations, if only the petitioning station were to benefit from an extension of the analog reclamation where market conditions affect all stations in the market. Moreover, the purpose of the extension provision is to ensure that where digital services have not sufficiently gained consumer acceptance in a market, analog viewers in that market would not be disenfranchised. Because the purpose is essentially for the public's benefit, and not for the benefit of any one broadcast station, a proper construction of the statute in accordance with its consumer-friendly purpose would require the Commission to grant extensions throughout the market.

Definition of a Market. The Commission has also asked for comment on the proper the definition of a television market for purpose of granting extension requests. The Commission has asked whether a television market should be the Nielsen DMA, the Grade B contour of a requesting station, or a modified Grade B contour standard.⁵³ Public Television believes that relevant market definition should be the Nielsen DMA. It is the most usual measure of a market in the industry and is for the most part the definition upon which stations base their business plans. Moreover, using the Nielsen DMA would be consistent with the means by which local stations gain carriage rights on satellite through the local-into-local provisions of the Satellite Home Viewer Improvement Act, which also

⁵³ NPRM, ¶ 72-76.

relies on Nielsen DMAs.⁵⁴ By way of contrast, using the Grade B contour of a station to define a market would make little sense where, as Public Television has argued above, the Commission is authorized to grant extensions of the analog reclamation on a market-wide basis to ensure that analog consumers are not disenfranchised where digital service penetration has not reached the acceptable level.⁵⁵

The Commission has also asked for comment on instances where a station's analog signal market encompasses multiple DMA's. In this case, the Commission has asked whether a modified DMA test would be more appropriate. For instance, where a station's signal reaches both its "home" DMA and another neighboring DMA with significant viewership, the Commission could require that both DMA's meet the statutory criteria before the analog spectrum is returned.⁵⁶ The Commission has also asked what percentage of viewership in the secondary DMA should be required before return of the analog spectrum is required: 85 percent or some lower threshold?⁵⁷ Public Television believes that the return of analog spectrum should only occur when the last DMA in which a station's signals are received has reached the statutory 85 percent threshold. Thus the

⁵⁴ 17 U.S.C. § 122(a). See also 47 U.S.C. § 339(a)(1)(B) ("[A]ny satellite carrier may also provide service under the statutory license of section 122 of title 17, United States Code, to the local market within which such household is located."). A DMA, or "designated market area," means a designated market area as determined by Nielsen Media Research and published in the 1999-2000 Nielsen Station Index Director and Nielsen Station Index United States Television Household Estimates or any successor publication. 17 U.S.C. § 122(j)(2)(C). A noncommercial station's DMA includes "any station that is licensed to a community within the same designated market area as the noncommercial educational television broadcast station," and also includes the county in which the station's community of license is located. 17 U.S.C. § 122(j)(2)(A)-(B).

⁵⁵ The Commission should be aware, however, that for purposes of cable carriage, a local noncommercial educational station is entitled to must-carry status if it is licensed to a principal community whose reference point is within 50 miles of the principal headend of the cable system or if the station's Grade B service contour encompasses the principal headend. 47 U.S.C. § 535(1)(2). See also 47 C.F.R. § 76.55(b)(1-2).

⁵⁶ NPRM, ¶ 77.

⁵⁷ NPRM, ¶ 77.

threshold should be the same in both DMAs to ensure that analog viewers are not disenfranchised in the secondary market, even if digital penetration is sufficient to meet the 85 percent mark in the primary market. In addition to comports with the general purpose of the extension provision, this position also flows naturally from the plain language of Section 309(j)(14)(B), which does not grant the Commission authority to establish lower thresholds for some markets over others.

Converter Technology Test. For purposes of satisfying Section 309(j)(14)(B)(ii), the Commission has solicited comment on the proper definition of “digital-to-analog converters.”⁵⁸ Public Television agrees with the Commission that to satisfy this test, digital-to-analog converters must convert all forms of digital broadcast signals to analog, including all HDTV formats.⁵⁹ To include converters that cannot convert some forms of digital broadcast signals (particularly HDTV) to analog would frustrate the purpose of this statutory provision, which is to ensure that consumers are able to view all forms of digital broadcast signals in any format available in their market, not just some forms of digital broadcast signals. In addition, the Commission has sought comment on how to account for situations where a cable system down-converts digital signals to analog at the headend.⁶⁰ This should not count toward the statutory definition of “digital-to-analog converter technology.” The purpose of this provision is to ensure consumer access to digital signals in their homes. But downconverting digital broadcast signals at the headend does not ensure this access. In fact this method ensures that digital broadcast signals are never received in the home, as the digital signal is stopped at the headend and

⁵⁸ NPRM, ¶ 82.

⁵⁹ NPRM, ¶ 82.

⁶⁰ NPRM ¶ 83.

then converted to analog. This unnecessarily disenfranchises consumers, who should have the choice to access those signals through whatever means they feel appropriate, and it violates the purpose of the statute.⁶¹

The 15 Percent Multichannel Video Programming Distributor (“MVPD”)

Digital Subscription Test. The Commission has also solicited comment on a number of issues concerning the 15 percent MVPD digital subscription test for purposes of Section 309(j)(14)(B)(iii). The Commission has noted that a literal reading of the statute requires that a MVPD carry all DTV stations in a market to satisfy the first prong of the 15 percent test, but it has observed that in almost all DMA’s there are stations not carried by systems either under must carry or retransmission agreements, either due to poor quality signals, the fact that the cable system has reached its one-third cap or other factors.⁶² The Commission has asked whether the rule applies only to stations entitled to must carry or to all stations in a market.⁶³ Public Television believes that the purposes of the statute would be best served by counting a MVPD that carries those local broadcast digital stations that are *eligible* for must carry status. This would include all eligible full-power stations, public television translator stations (if operating in digital) and some low power stations, depending on the eligibility requirements in statute and the Commission’s rules (e.g. the provision of a good quality signal). This policy would ensure that the

⁶¹ Section 309(j)(14)(B)(iii) provides further guidance in this regard. This provision also references “digital to analog converter technology” and specifically requires that “households” have access to this technology. 47 U.S.C. § 309(j)(14)(B)(iii). This provision and Section 309(j)(14)(B)(ii) should be read in *pari materia* to ensure consistency within the same statute to accomplish the same purpose: consumer access in the home to such technology.

⁶² NPRM, ¶85.

⁶³ NPRM, ¶ 87. The Commission has also asked whether its rule should apply only to primary, full-power stations, or whether it should include LPTV stations such as Class A or translator stations. NPRM, ¶88.

maximum number of digital stations are carried on the MVPD prior to the return of the analog spectrum.

The Commission has further solicited comment on whether subscribers to a MVPD carrying digital signals should be counted if they are not actually able to view the signals (presumably either because they lack the equipment to view such signals or do not subscribe to the digital tier).⁶⁴ The Commission has concluded that to count subscribers who cannot view the digital product would be inconsistent with congressional purpose and has proposed to require that households be able to view DTV signals if they are to count toward the 15 percent, meaning subscribers should be able to view DTV signals either in digital mode or down-converted to analog mode in their homes.⁶⁵ Public Television agrees with the Commission that this reading of the statute is appropriate and promotes the purpose of the statute, provided that any down-conversion of the digital signal is accomplished in the home so that if consumers so choose, they may access digital signals in the format they were intended.⁶⁶ In this regard, Public Television believes that cable systems that downconvert digital signals to analog at the cable headend should not be considered to be “carrying” digital broadcast signals within the meaning of Section 309(j)(14)(B)(iii)(I).⁶⁷

⁶⁴ NPRM, ¶ 89.

⁶⁵ NPRM, ¶89.

⁶⁶ In addition, the Commission has asked where a translator rebroadcasts the DTV signal of its parent to a MVPD but in analog format, whether those subscribers should count toward the 15 percent threshold. NPRM, ¶89. Public Television believes that subscribers who receive these translators cannot be counted toward the 15 percent threshold, as the households receiving the signal of these stations via their MVPD would not be capable of receiving digital signals from analog translators even if they purchased the appropriate digital display equipment. If counted, these subscribers would run the risk of losing access to any of these signals once the analog spectrum is returned, a result that is contrary to the purpose of the statute. This issue underscores why it is important to create rules for the operation of digital translators, many of which feed cable headends in rural areas.

⁶⁷ See NPRM ¶ 89.

Responsibility for Determining Market Conditions. The Commission has noted that while Section 309(j)(14)(B) seems to imply that the burden of demonstrating relevant market conditions lies with the broadcaster requesting an extension of the date for the return of analog spectrum,⁶⁸ the legislative history contemplates that the Commission will perform its own analysis and conduct a consumer survey to determine whether the criteria specified in Section 309(j)(14)(B)(ii)(converter technology test) or Section 309(j)(14)(B)(iii)(15 percent test) apply in the market.⁶⁹ For instance, the Conference Report states:

In addition, the conferees recognize that this analysis [under 309(j)(14)(B)(iii)] will impose additional burdens on the Commission. Consequently, the conferees expect that the Commission will pursue this analysis only if it first concludes that a station does not qualify for an extension under the network digital television broadcast test or the converter technology test.

In establishing the requirements for the 15 percent test, the conferees sought to establish objective criteria that could be determined by “yes” or “no” answers obtained from consumers surveyed in the relevant market. The conferees expect that the Commission will perform its own analysis, and that it will base this analysis of both the converter technology test and the 15 percent test on statistically reliable sampling techniques. A broadcast television licensee requesting the extension and other interested parties are to be afforded an opportunity to submit information and comment on the Commission’s analysis with respect to those tests.⁷⁰

Public Television believes that a proper reading of this statute and legislative history requires the Commission to monitor market conditions and give notice to broadcasters in each market concerning its analysis whether that market has reached, or is

⁶⁸ “The statute provides that the Commission shall grant an extension “for any station that requests such extension” if the Commission finds that the statutory conditions are met. This language could be read to require the station seeking an extension to provide the necessary information to justify the extension under one or more of the statutory criteria.” NPRM, ¶ 93.

⁶⁹ Id.

⁷⁰ NPRM, ¶93, quoting Balanced Budget Act of 1997, 105th Cong., 1st Sess. Conf. Rep. 105-217, at 577-578 (1997).

likely to reach, the 15 percent threshold set forth at Section 309(j)(14)(B)(iii).⁷¹ Once this information is provided to broadcasters in each market, the broadcasters should have an opportunity to comment on the completeness and/or accuracy of this determination. As the legislative history indicates above, the Commission should conduct the bulk of the market analysis first. This sequence gives meaning to the requirement above that it is expected that the Commission will “perform its own analysis ... on statistically reliable sampling techniques” and that “broadcast television licensee requesting the extension and other interested parties are to be afforded an opportunity to submit information and comment on the Commission’s analysis.”⁷² Thus, to make its case, a station should be authorized to present data on market conditions to the Commission in support of its request, but it should not be required to shoulder the entire burden of data collection: this is the province and expertise of the Commission itself, as the legislative history recognizes.

E. Distributed Transmission Technologies

On June 6, 2002, NAB and a number of other parties, including APTS, PBS and Pennsylvania State University urged the Commission to grant primary status to the multiple transmitters in a distributed transmission system and license them under Part 73 of the rules, as opposed to treating them similarly to LPTV, translator, and booster stations.⁷³ Distributed transmission has been defined as being similar to a cellular

⁷¹ By way of contrast, as the legislative history above indicates, the Commission may not be required to monitor market conditions network digital television test or the converter technology test.

⁷² NPRM, ¶93, quoting Balanced Budget Act of 1997, 105th Cong., 1st Sess. Conf. Rep. 105-217, at 577-578 (1997).

⁷³ Letter from Valerie Schulte, NAB, to Rick Chessen, Associate Bureau Chief, Media Bureau (June 6, 2002).

telephone system in that a service area is divided into a number of cells, each served by its own low power transmitter.⁷⁴ Distributed transmission differs from a cellular telephone system in that all adjacent cells use the same frequency (a “single-frequency network”).⁷⁵ The Commission has sought comment on a number of issues related to distributed transmission systems and the proposal to grant these services a limited kind of priority.⁷⁶

As the Comments of Merrill Weiss Group⁷⁷ in this proceeding explain, distributed transmission technology can offer solutions to a number of difficult system design problems that often can be resolved in no other way. It has applications to reach blocked populations within a station’s service area. This is especially important in hilly or mountainous terrain with large populations living in valleys. It can be useful when a station is unable to obtain sufficient tower capacity at an adequate height to reach the service area that has been allotted to it. It can be used when a station has started with a small service area and needs to maximize that service area without enlarging its central facility. It is the only method that can allow relatively uniform signal levels to be achieved throughout a widely dispersed service area so as to enable, for example, reception using indoor antennas while at the same time not increasing interference to neighboring broadcasters. Distributed transmission can also allow broadcasters to locate their main transmitters at locations optimized for serving large DMAs while at the same time obtaining necessary City Grade service over outlying communities. And it can help

⁷⁴ See comments filed in response to the *Notice of Proposed Rule Making* in MM Docket No. 00-39, including those of the Merrill Weiss Group (“Weiss”).

⁷⁵ *Id.*

⁷⁶ NPRM, ¶¶ 99-106.

⁷⁷ Comments of Merrill Weiss Group, MB Docket No. 03-15 (April 21, 2003), p. 7.

with replication of NTSC service by DTV facilities that otherwise might not be able to achieve the coverage needed, especially in cases of VHF broadcasters moving to UHF channels.

Recent demonstrations of a similar technology – namely digital on-channel repeaters – have shown that distributed transmission networks can be both technically feasible⁷⁸ and spectrum efficient.⁷⁹ In addition, ATSC reports in its comment in this

⁷⁸ For some time, work has been done on the feasibility and reliability of on-channel DTV repeater technology. Comments of the Merrill Weiss Group, MM Docket No. 00-39, p. 21 (May 17, 2000), *citing* S.A. Lery, W.H. Paik, and R.M. Rast, “Extending HDTV Coverage using Low Power Repeaters—a Cellular Approach,” *IEEE Transactions on Broadcasting*, Vol. 38, No. 3, pp. 145-150 (Sept. 1992). For instance, in 1998 the Advanced Television Technology Center (“ATTC”) began to investigate the feasibility of using this technology within the ATSC 8-VSB digital television system to extend the signal of a main station to remote and RF-challenged locations. See Comments of the Advanced Television Technology Center, MM Docket No. 00-39, pp. 1-2, 4-9 (June 16, 2000). On September 4, 1998, ATTC performed a real-world test and analysis that confirmed that a properly engineered digital on-channel repeater could work in conditions where the target audience was shielded from the main transmitter by terrain. ATTC selected a site in Charlestown, WV that was shielded from the Washington, DC area by a low ridge of mountains and successfully repeated the DTV signal of public television station WETA on the same channel to Charlestown by using digital on-channel repeater technology. *Id.* ATTC achieved a nearly 100 percent success rate. *Id.* It concluded that this technology could be used “in terrain isolated topology to extend reliable coverage into areas of marginal DTV service.” *Id.* at 8. It also concluded that this technology would be able to “improve coverage areas where low signal strength and strong multipath exists by increasing the received signal strength well above the original primary-only signal.” *Id.* at 8. In addition, in a paper published in June of last year, Charles Rhodes demonstrated the feasibility of on-channel digital repeaters based on the successful field tests of Paul Burkeholder, Humboldt County TV District, Nevada, and Sam Zborowski, vice president and chief technical officer of ADC Wireless Group, in Pittsburgh. Charles Rhodes, “Engineering and On-Channel Off-Air DTV Repeater,” *TV Technology* (June 28, 2000). Recently, a variety of other pilot projects have been initiated as well. For instance, WPSX, licensed to the Pennsylvania State University, has received funding from the Department of Commerce and an FCC experimental license (issued in June, 2001) to test on-channel repeaters to reach populations living in the valleys of central Pennsylvania. See Letter from H. John Morgan, Assistant Chief, Video Services Division, Mass Media Bureau, to The Pennsylvania State University (June 26, 2001), 1800E-1HJM, File No. BEXP-20010608ABD. See also The Pennsylvania State University’s Comments, MM Docket No. 00-39 (May 17, 2000). Further, WSKG, Binghamton, New York, has received a grant from the Corporation for Public Broadcasting to test the feasibility of implementing multiple low-power on-channel DTV repeaters to deliver its DTV signal to the many remote rural populations of up-state New York.

⁷⁹ First, distributed transmission technologies use digital modulation, which is more spectrum-efficient and less prone to cause interference with adjacent channels and other services than analog technology. For example, protection ratios are more favorable with DTV signals than with NTSC signals, and DTV receivers are less sensitive to interference than NTSC receivers. In addition, DTV signals require less power than NTSC signals to reach the same service area. Secondly this technology is spectrum efficient because all stations in a network use the same channel.

proceeding that it has developed specifications for synchronization of multiple transmitters emitting 8-VSB signals in accordance with A/53B, a development which Public Television applauds. Public Television believes that distributed transmission networks will serve to promote the DTV transition by providing digital signals in areas where, due to terrain or other factors, distribution of a digital signal would be otherwise difficult.

Public Television therefore supports the development of distributed transmission networks. In this case, the Commission should give a limited primary status to DTV stations in a distributed transmission network and license them under part 73 of its rules.⁸⁰ This priority should be given to such networks if they serve the predicted DTV contour of a full power DTV operation and should be treated with the interference protection due to a full power DTV operation.⁸¹ With regard to the more technical issues raised by the Commission's Notice,⁸² Public Television supports the policies suggested by the Merrill Weiss Group in its comments in this proceeding.⁸³

F. ATSC Issues

The Commission has sought comment on a number of issues relating to recent revisions of the ATSC standard and has asked whether it should incorporate some or all

⁸⁰ See NPRM, ¶ 101.

⁸¹ See also Comments of Merrill Weiss Group, MB Docket No. 03-15 (April 21, 2003), pp. 16-17. Public Television believes that it would be better to limit these networks to the predicted DTV service contour of a hypothetical full power DTV transmitter, rather than a Grade B contour, which is a measure of analog distribution and wholly inappropriate to the measurement of DTV service areas. See NPRM, ¶ 102. Similarly, digital on-channel repeaters that serve the predicted service contour of an associated full-power DTV station should also get the same degree of interference protection.

⁸² NPRM, ¶ 102 *et. seq.*

⁸³ Comments of Merrill Weiss Group, MB Docket No. 03-15 (April 21, 2003).

elements of the revised ATSC standard A/53B into its rules.⁸⁴ Public Television agrees with the Commission that updating the rules would reflect improvements in the standard and will benefit both the public and broadcasters by allowing broadcasters to make technical improvements in their service that will enhance the quality of DTV services they provide.⁸⁵ Public Television strongly supports the comments of ATSC filed in this proceeding that request incorporation of A/53B Amendment 2 (transport stream amendments) into Commission rules. In addition, Public Television applauds ATSC for its development (currently underway) of a second “robust” data stream that will allow reception at lower signal-to-noise ratios than the main data and that will enable better mobile reception of DTV signals. Public Television also supports ATSC’s request that the Program and System Information Protocol (PSIP) Standard be incorporated into the Commission’s rules. It is important that viewers be provided with a uniform approach to channel selection and navigation for DTV services, a functionality that mandatory PSIP rules will provide. Details on the PSIP protocols (including inclusion of the PSIP Captioning Service Descriptor) can be found in the ATSC comments in this proceeding, which Public Television strongly supports.

⁸⁴ NPRM, ¶ 113.

⁸⁵ Id.

Conclusion

Public Television urges the Commission to advance the digital transition by adopting the following policies:

- Modify the financial hardship standard when granting extensions to the digital facilities construction deadline to reflect the unique and diverse ways in which public television stations are funded.
- Create reasonable and limited transitional digital cable carriage rules.
- Ensure that the entirety of a station's free, over-the-air digital broadcast signal is carried by cable systems both during and after the transition is complete.
- Facilitate the operation of digital translators (and digital on-channel repeaters) so that the digital transition may proceed in rural as well as urban areas.
- Require maximization and replication of digital facilities only at the end of the digital transition.
- Retain the December 31, 2005 city grade signal requirement.
- Use Nielsen DMAs for purposes of Section 309(j)(14)(B) and only count technology that can bring all formats of digital signals into consumer homes (either in digital or down-converted to analog in the home).
- Conduct the bulk of the market analysis required by Section 309(j)(14)(B) and its legislative history.
- Authorize distributed transmission technologies and grant such technologies limited priority status.
- Adopt the revised ATSC standard A/53B and other noted recommendations of ATSC

Respectfully submitted,

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Appendix A

Public Television Multicast Plans

- **NJN Public Television**
 - **New Jersey Workplace Literacy Program.** This program helps address New Jersey's adult literacy problem through a groundbreaking partnership with the NJ Department of Labor and other state agencies and community-based organizations. NJN uses a variety of technologies, including its digital television signal, to deliver workforce training materials to welfare recipients, dislocated workers and other job seekers at 14 sites across the state. NJN will showcase NJN's first digital series called JOBCAST that is broadcast on NJN's digital channel. NJN is now expanding this initiative to adopt in-school programs for teenagers, with private sector support.
 - **New Jersey's 21st Century Digital Classroom.** NJN's newest educational service is designed to use the power of digital broadcasting to broaden access to technology-mediated education for children in New Jersey's urban schools. NJN has produced original video content, which it datacasts to a media server located in Columbus Elementary School in Trenton, the pilot site. 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 NJN's customized, modular video segments to enhance the content in the lesson plan. NJN will showcase the menu of the video segments itemized on user-friendly computer screens and how NJN created the relevant metadata into the back-end so that teachers and students can easily find materials on their navigation screens. NJN worked with Triveni Digital, an industry leader based in New Jersey, to create the technical infrastructure. Other partners include the New Jersey Department of Education; the New Jersey Historical Commission; cultural, historic and educational organizations; and other community organizations.
 - **New Jersey Network "Civic Channel."** NJN also plans to provide a "civic channel" to broadcast local news and public affairs to New Jersey residents who otherwise lack access to this information through commercial media outlets. NJN has recently been approached by the New Jersey Department of Law and Public Safety to broadcast arguments before the New Jersey Supreme Court.
 - **New Jersey Ready to Learn Channel.** New Jersey's Ready to Learn Channel, would feature college credit telecourses, K-12 instructional television, adult education opportunities, the Ready to Learn service and other lifelong learning programming. This channel would also present educational forums, academic competition, teacher news and information, lectures and other types of school information. Programming could be enhanced with downloadable material broadcast over-the-air or streamed as video content over the Web.
 - **New Jersey Cultural and Entertainment Channel.** This channel would serve as a showcase for New Jersey local artists, playwrights, and filmmakers, where

their projects would be developed and featured. The channel would also assist New Jersey educators with the state arts education mandate by providing arts and cultural materials for students.

- The **South Carolina ETV Network** currently offers gavel-to-gavel coverage of the South Carolina General Assembly through over-the-air digital multicasting. In addition, SCETV offers an educational channel, featuring a combination of PBS You, college courses from University of South Carolina and Clemson University, and original educational programming. A “South Carolina Channel” is in development; featuring regional arts festivals lecture series, book festivals, and university events.
- **WCMU** (Mount Pleasant, MI) is considering a partnership with the state’s other PTV stations to develop a “Michigan Virtual University” (MVU) multicasting channel. Programming on this channel would feature regional college credit telecourses with interactive components and Internet courses. The state has already set up the infrastructure for MVU by maintaining a digital clearinghouse that could house the telecourses for this channel.
- **WMEC** (Macomb, IL) is partnering with the Illinois Board of Higher Education (IBHE) to produce the Lifelong Learning Channel that will feature college credit telecourses and non-credit telecourses, continuing education, and job training opportunities. The station will also work with a consortium of five local colleges and universities to develop this programming.
- **KBDI** (Broomfield, CO) plans to multicast at least four channels in standard definition television during daytime hours. This includes a *Legislative and Political News Service* that will provide continuous, in-depth coverage of state, county and local governments; a *Latino Initiative Channel* for the Spanish-speaking and bilingual community which will emphasize news, public affairs and social and cultural events; a Local Arts & Cultural Channel where programming will feature regional cultural events and productions; and an *Environmental Affairs Channel* will feature programming on outdoors, wilderness and environmental affairs.
- **WTVP** (Peoria, IL) plans to use its multicasting capabilities to increase its education and public affairs programming, including:
 - A pre-kindergarten through high school service aimed at schools throughout the area.
 - A post secondary channel to serve the needs of area colleges and universities.
 - A lifelong learning channel, programmed and operated by local educational agencies, to serve the needs of adult learners.
- **WNYE** intends to multicast several educational channels in standard definition television during daytime hours. Some of them include:
 - A teacher training channel.

- A general instruction channel. Programming will focus on K-12 instructional television, adult education, distance learning opportunities, college credit telecourses, and PBS You programming.
- A general programming channel. Featuring news and documentaries, this channel will be largely educational in nature but will be targeted to a more general audience than the general instruction channel. Programming would include information on both local and national educational opportunities, including parenting instruction and healthcare courses.
- A foreign languages channel. Designed for international residents living in the city, this channel will feature programming in at least 12 different languages, including Japanese, Chinese, Italian, Greek, Polish, and Eastern European languages as well as provide some English subtitles. The channel will focus primarily on public affairs – complete with local news, international news and cultural programming from various countries around the world.
- **WNET** plans to multicast several channels in standard definition television during daytime hours. Possibilities include:
 - A Ready to Learn Service: programming to prepare very young children for school.
 - An Empire State Channel. In collaboration with other New York state public television stations, WNET intends to develop an Empire State Channel that could provide instructional television programming for K-12 teachers and students, GED preparation, college-level telecourses, teacher and workforce training, and televised proceedings on a range of public events and legislative hearings.
 - An Arts & Culture Channel. Using its MetroArts cable programming as a base, WNET will design the Arts & Culture Channel to expand New York's arts and culture television offerings. The new schedule will encompass and tap into the media resources and opportunities available from arts and cultural organizations, exhibitions, lectures and tours taking place in the city.
 - A Spanish Channel. WNET proposes this unique channel to address the needs and interests of New York City's Spanish-speaking community. The station would also seek to provide programming for other segments of the diverse metropolitan community.
 - An Adult Education and Lifelong Learning Channel, featuring college telecourses, employment programming, job training and services, and other adult learning services.
 - A K-12 Instruction Channel: a channel designed to bring television and computer technologies together to provide new learning opportunities for students and teachers.
- **KBDI** plans to multicast at least four channels in standard definition television during daytime hours. They include:

- A Legislative and Political News Service to provide continuous, in-depth coverage of state, county, and local governments.
- A Latino Initiative Channel with public service television for the Spanish-speaking and bilingual community.
- A Local Arts & Culture Channel featuring regional cultural events and productions, including community drama, music, arts festivals.
- An Environmental Affairs Channel that will feature programming on outdoors, wilderness and environmental affairs, including coverage of the regional environment and outdoors experiences and issues.
- **KQED** is considering multicasting the following channels in standard definition television during daytime hours.
 - A Kids and Children Channel with education services for kids.
 - A Local Channel featuring locally-produced documentaries.
 - A Teacher Training Channel designed to assist teachers with certification through the station's Education Network, KQED EdNet.
 - A Foreign Language Channel that will feature services for non-English speaking viewers, including programming in Russian, Chinese, and Spanish.
- **WUFT** intends to multicast several channels in standard definition television during daytime hours. Possibilities include:
 - A PBS Kids and the Ready to Learn service.
 - A lifelong learning channel, featuring "how to" programming.
 - A college credit telecourses channel, produced in partnership with the station's licensee, the University of Florida.
 - A rebroadcast of the analog signal.
- **WMFE** plan to multicast several channels in standard definition television during daytime hours. Possibilities include:
 - A WMFE Kids Channel. This channel will include PBS Kids and local children's programming.
 - A WMFE Encore Channel. This channel will feature a rebroadcast of primetime public television fare, including portions of Schedule X.
- A number of Florida stations plan on participating in the **Florida Knowledge Network**. This will be a teacher-training resource delivered directly into the state's classrooms, providing educators with direct access to the highest quality programming, electronic

field trips, and distance learning. Linked with the state Department of Education and school systems in 17 counties, the network will tailor programming schedules and curriculum for localized use. Stations will adapt the Department of Education feed to meet their viewing area's specific needs, supplementing the programming with local educational content. Datacasting will allow teachers to download lesson plans and educational materials, and programming may include instruction on the GED, math, science, English, art, music, and foreign language.

- During early transition, **KNME** plans to multicast several channels in standard definition television during daytime hours. Some of them include:
 - A PBS Kids feed and Ready to Learn service.
 - A PBS You feed, adult education, and college credit telecourses programming.
 - A New Mexico Channel featuring gavel-to-gavel coverage of the state legislature and other public affairs programming.
 - A workforce development channel.
 - A rebroadcast of the analog signal.
 - As the rollout progresses, KNME will introduce more multicasting services. Some of them may possibly include:
 - An adult learning service featuring professional development opportunities for K-12 teachers and vocational training for others.
 - GED-on-TV
 - A New Mexico "University of the Air," including distance education programs and college credit telecourses.
 - A community service channel.
 - A business channel.
 - A medical/healthcare service.
 - A pledge-free subscription channel.
- In collaboration with multiple educational institutions, **Maryland Public Television** plans to launch a dedicated education channel, providing a number of services to meet the lifelong learning needs of MPT's viewers. Potential partners include the University System of Maryland, the State Department of Education, the Maryland Higher Education Commission, the Information Technology Board, local school districts, and the states community colleges. Among the possibilities under discussion are:
 - A College of the Air. In collaboration with community colleges across the state, MPT currently broadcasts two hours of college-level telecourses a night, serving 18,000 students annually. As it converts to digital, the network plans to offer a College of the Air -- dramatically increasing the number of telecourses it broadcasts and the students it helps educates.
 - Teacher Training. A dedicated educational channel would allow MPT to expand its Mathline service and create additional subject-oriented training services. For example, in collaboration with Colleges of Education at Maryland colleges and universities, MPT could develop more professional development programs for in-

service and pre-service teachers, allowing them to learn from master teachers across the state. Working with local school districts, MPT could videotape some of the state's best teachers in action, showcasing the most effective instructional practices to enhance the quality of instruction in classrooms across Maryland.

- GED/Adult Education. In collaboration with the Maryland State Department of Education, MPT has broadcast a series of programs offering adult students an opportunity to study for their GED. With additional broadcast time, MPT could offer additional adult education courses focusing on basic literacy, basic mathematics and other similar offerings. Many of these courses are currently available through national educational distributors and others could be developed in collaboration with Maryland adult educators. These services would allow home-bound adults, correctional institution inmates and others unable to travel to adult education courses to further their basic educational skills.
- Electronic Fieldtrips. In collaboration with a variety of educational organizations, Maryland Public Television has developed a number of live interactive distance learning events that transport Maryland students to places across the state and across the country. The educational channel would regularly offer these programming opportunities to Maryland students.
- Workforce Training. Working with businesses and educational institutions, MPT could develop and offer workforce training. By providing this service, the network could contribute to Maryland's economic community.
- During early transition, **Nashville Public Television's** multicasting platform will include:
 - A children's education channel, featuring instructional television.
 - An adult learning and teacher training channel.
 - A public access channel on which viewers could dictate programming.
 - A government access channel, covering the city council and other agencies.
 - Following the transition, Nashville Public Television will likely focus on four areas:
 - Increased Educational Programming. Nashville Public Television intends to use its multicasting capacities to expand and enhance its educational services to schools. Currently, NPT offers two distinct schedules of curriculum-based or related programming for K-12 schools, one on broadcast and the other on cable. With the advent of digital broadcasting, the station plans to carry both of these schedules, which will be available to all students in every classroom. NPT will continue to offer significant amounts of teacher training activities in the use of technology in the curriculum, as well as develop educational programs that could be delivered in the future on digital platforms.
 - A Kids Education Channel. The station will also launch a Kids Education Channel, a schedule of both younger and older children's educational programs so that a broader range of children will have access to age-

appropriate programs during more hours of the day. For example, NPT could run a schedule of programs for children aged 6 and above during the late afternoon hours and into the early hours of primetime.

- An Adult Education Channel. A continuing education and adult education channel, which would incorporate adult learning courses offering credit through local colleges as well as teacher and related professional development opportunities. Currently, one of NPT's cable channels offers programming from the Annenberg/CPB service, which could be expanded on the DTV broadcast platform.
 - The NPT Public Affairs Channel. The NPT Public Affairs channel will feature coverage of the Nashville City Council, the Tennessee Legislature, and public events at venues like the Freedom Forum First Amendment Center. Nashville Public Television already has programming partnerships with each of these institutions, which can be expanded in the digital environment.
- Digital television will allow **New Hampshire Public Television** to multicast four different streams of standard definition television signals simultaneously. Possible options for multicasting channels include:
 - A Children's Channel: a "safe place" for children filled with preschool and school-aged programming. This channel will feature such kids' fare as Arthur, Barney, and Bill Nye, the Science Guy.
 - A Professional Development Channel. This channel will be devoted to workforce training and professional development. Programming on this channel could increase savings for government and businesses as they cut down on employee training costs. For example, firefighters and emergency medical technicians (EMTs) could be re-certified via broadcast courses instead of assembling them twice a month for mandatory classes. Because they don't have to travel, the technology helps to save overtime and mileage costs while making learning more convenient.
 - A Distance Education Channel. This channel will increase educational opportunities for students living in rural areas. NHPTV expects digital television to level the playing field, making educational opportunities equally available to everyone. For example, one teacher could instruct students around the state on the intricacies of the Japanese language, while another teaches the fundamentals of physics.
 - Other possible channels include:
 - A Ready to Learn channel.
 - A Ready to Work channel.
 - K-12 Instruction.
 - Adult telecourses, GED on TV.
 - Government, public affairs, and legislative hearings.
 - Cultural Affairs.

- **Iowa Public Television** is planning to multicast the following channels in standard definition television during daytime hours:
 - A Children's Channel/Ready to Learn service. A "safe place" for children filled with preschool and school-aged programming, broadcast at times when other channels cater to adults with programming not suitable for children.
 - A Prime Times Channel. Programming aimed at addressing the unique concerns and interests of Iowa's senior population.
 - A Lifelong Learning Television Channel. A channel dedicated to formal instructional programming, college credit telecourses, GED on TV, foreign language training, English as a second language courses, workforce training, and repeat telecasts of general audience "how to" programming.
 - An All Iowa Television Channel. Reserved for programming produced by Iowa Public Television and other independent television producers in the state.
 - An Iowa Public Affairs Television Channel. A place where citizens can get information about their government through coverage of events, meetings, public affairs issues, and state and legislative activities.
 - A rebroadcast of the analog signal.

Appendix B

Public Television and State Funding Cuts

- The Rhode Island House of Representatives voted to rescind the digital funding for *WSBE* Providence, RI. Originally appropriated in 1997, the \$4.7 million cut was part of a last minute budget negotiation with the new Senate leadership who forced the House to choose between the WSBE money and the Car Tax Abatement, which has been a priority of the house for several years.

- *Nebraska Educational Telecommunications* (NET) is facing serious financial challenges in the wake of reductions in funding from the State of Nebraska and the University of Nebraska. NET receives 34% of its funding from the state, which cut NET's budget three times in the last year alone. NET's total budget dropped from \$32 million to \$25 million. NET ended the past 2 fiscal years (FY 2001 and FY 2002) with an operational budget deficit of approximately \$2.5 million and was able to balance its books only as the result of dipping into financial reserves that are now depleted. As a result of the challenges, NET has implemented more than \$5.7 million of its cuts to its operations. These cuts have affected all departments in the organization and have resulted in the elimination of many valued programs that serve the education community and the citizens of the state. In addition, 66.5 positions in the organization have been eliminated resulting in 39.5 layoffs of state and university employees.

- *South Carolina Educational Television's* budget approved for FY02-03 is approximately 9.2% less than the \$19.4 million ETV started off with for FY01-02. The FY03 budget is approximately \$17.6 million. From FY 00-01 through 02-03, SCETV's state budget has been cut by more than \$3.8 million. Include the loss of carry-forward funds and the total amount cut comes to more than \$4.4 million over two years. In addition to state budget cuts, SCETV has experienced increases in utility costs, health insurance, and operating costs associated with the digital conversion. SCETV has been adjusting to downsized workforce for over one year now with more than 60 positions vacant due to attrition. They will continue to adjust with increased use of technology, consolidation of job functions and prioritization of projects.

- *Oregon Public Broadcasting* has been hit hard by a rescission of \$1.1 million from the State Biennial budget. In addition, almost \$200,000 more was sliced from the State budget in the past few months, meaning that OPB is almost \$1.3 million short this biennium. In June, OPB cut the full-time equivalent of approximately 19 people due to a shortfall in local underwriting, huge increases in health plan, and the write-down of some bad debt.

- *New Hampshire Public Television* (NHPTV) is also facing budget cuts. The state of New Hampshire is anticipating a 5% cut across the board. If NHPTV

were to lose state funding (accounting for 24% of annual income) its loss would amount to over \$2.2 million federal money in matching funds. This would affect its ability to produce a local nightly public affairs program and to provide teacher training, distance learning and ITV services to schools. These budget cuts would also require lay-offs, would affect its political coverage, and affect its ability to provide 60 Ready to Learn workshops with parents and caregivers (where 13,000 books are given to families and children in need annually). Additionally, there has been a \$1.6 shortfall in underwriting and corporate support that may further affect the FY 2004 budget.

- **Oklahoma Educational Telecommunications Authority** is also facing state appropriations cuts. Oklahoma's state appropriations were cut by 12.5% this year, or about \$500,000.
- **Maine Public Broadcasting** (MPB) has lost a total \$79,000 from current year (FY03) state funding with more possible cuts in the future. The most recent cut, on Jan 13th, has reduced the state allocations to MPB by 3%. The state money in Maine, allocated for infrastructure costs only, includes operational costs, but not the bulk of DTV conversion costs. MPB raised over \$20 million for DTV through a capital campaign and from a State bond that brought in \$9.4 million. Through their proactive approach in dealing with an overall budget shortfall of \$385,000, Maine Public Broadcasting has had a workforce reduction of only 3.8%.
- **Maryland Public Television** (MPT) receives 30% of its budget from the State of Maryland. The state its FY 03 budget by about \$550,000. For FY 04, the Governor has proposed a reduction of approximately \$675,000; the legislature has proposed an additional cut of a similar amount. In addition, because of a drop in membership and underwriting, MPT has had to reduce 15% of its staff over the last eight months.
- The **University of North Carolina Center for Public Television** also experienced precipitous declines in state funding. State funding for FY 03 declined from \$40 million from the previous year to \$28 million: a 30% decrease in funding.
- In the past 14 months the state funding to **Idaho Public Television** has been reduced by 15%: about \$263,000. As a result Idaho PTV has had a 14% workforce reduction.
- **WNET** in New York is facing a 15% cut in state funding: \$11.7 million down from \$13.8 million.