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

In the Matter of	)	
Review of the Emergency Alert System	)	EB Docket No. 04-296

COMMENTS OF THE ASSOCIATION OF PUBLIC TELEVISION STATIONS

The Association of Public Television Stations ("APTS")[1] hereby submits Comments in the above captioned proceeding.

The inherent flexibility and capabilities of digital television enable public television stations to deliver a number of enhanced services to the public in ways that could only be dreamed of in the analog world. In addition to offering a mixture of high-definition programming and multiple standard-definition programming, many public television stations are also transmitting critical public safety and alert and warning data over their digital transmitters.

The Commission seeks comment on the use of the PBS interconnection system to support a national digital emergency alert system.[2] The Commission also seeks comment on the one-year Digital Emergency Alert System (DEAS) National Capital Region Pilot,

[1] APTS is a nonprofit organization whose members comprise the licensees of nearly all of the nation's 355 CPB-qualified noncommercial educational television stations. APTS represents public television stations in legislative and policy matters before the Commission, Congress, and the Executive Branch and engages in planning and research activities on behalf of its members.

[2] Review of the Emergency Alert System, First Report and Order and Further Notice of Proposed Rulemaking, FCC 05-191, EB Docket No. 04-296, ¶ 66 (Nov. 3, 2005).

which demonstrates how the 326 digital public television stations across the country can act as a wireless network capable of broadcasting data, or “datacasting," public alerts and warnings during times of national crisis. As the Commission notes, this pilot project datacasts DEAS text, voice, and video over public television stations, and successfully has Common Alerting Protocol (CAP) messages and DEAS-enabled relays to cell phones, Internet, pagers, electronic bulletin boards, etc.[3]

Additionally, the Commission seeks comment on what role it should play in supporting an integrated public alert and warning system as developed by APTS and the Department of Homeland Security (DHS) for multiple platforms.[4] APTS urges the FCC to work closely with DHS and to provide support, where necessary, at the direction of DHS. In this regard, it should be recalled that in 2004, the Commission’s own Media Security and Reliability Council concluded in part that “a single federal entity should be responsible for assuring” an effective public warning capability, and that “lead responsibilities and actions” should be established “within the overall discipline of emergency management.”[5] APTS believes that DHS is the federal entity with overall emergency management capabilities that is best equipped to manage a national public warning capability.

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A fully digitized public television system offers significant new public safety advantages. In this regard, public television’s congestion-free bandwidth can support

[3] Id.

[4] Id., ¶ 71.

[5] Media Security and Reliability Council, Comprehensive Best Practices Recommendations, p. 11 (March 2, 2004).

public alert systems as well as closed networks to enable public safety and emergency management agencies to securely transmit critical, time-sensitive information. These services are provided through a technology called "datacasting," whereby data originating from a public safety agency would be received by a local PTV station, which then encrypts the data, inserts it into the digital TV signal, and sends the packet through its digital transmitter to personal computers or local area networks equipped with an inexpensive DTV tuner card and a small antenna. The data can consist of video, text, audio, graphs and maps.

A datacasting system of this type provides many advantages to public safety agencies. First, transmission of the data over the digital broadcast signal is nearly instantaneous, compressing minutes of alert time and information lags to just a few seconds. Second, this infrastructure can bypass the congestion common to wireline and wireless services, such as the Internet, telephone and cellular networks. Third, the system is "addressable" so that public safety agencies can pinpoint to whom the data is sent, whether to relevant agencies, mobile units, or first responders in the field. Lastly, because public television stations reach nearly every American household, the digital infrastructure – once fully built out – could supplement the digital broadcast Emergency Alert System as a national alert system.

A. Local Examples

Several public television stations and state networks have already pioneered local public safety datacasting networks. For example:

- Kentucky Educational Television (KET), in partnership with the local branch of the National Oceanic and Atmospheric Administration (NOAA), is using its digital broadcast capacity to immediately send emergency storm alerts, weather

information, criminal profiles and updates, and other time-sensitive materials instantaneously to computers in emergency offices around the state.

- Channel Thirteen/ WNET in New York City is leading the way in prototyping a new broadband emergency alert system capability using a portion of its digital spectrum in order to demonstrate how first-responders can receive high-value information that will improve their ability to perform critical functions during an emergency. Thirteen/WNET is combining use of datacasting over its DTV facility with use of its Instructional Television Fixed Service (ITFS) spectrum to provide two-way communications for public safety officials and first-responders.

- New Jersey officials and the New Jersey Network (NJN) are working together to use datacasting send vital information – evacuation instructions, bioterror alerts, images of skin rashes, medical procedures – to emergency workers. In the first homeland security datacasting project in the country to work with a nuclear facility, the NJN datacasting system has been tested in the Emergency Planning Zone around the Oyster Creek Nuclear Generating Station, in partnership with the New Jersey State Office of Emergency Management.

- Nashville Public Television (NPT) has launched Tennessee's first-ever DTV IPcasting system for education, homeland security and public service. NPT's new datacasting system -- called "MetroCast" -- is delivering video, audio and text alerts and information to first-responders, in partnership with the Nashville Mayor's Office of Emergency Management, Nashville Fire Department and Tennessee Emergency Management Agency.

B. Leveraging National Assets

Public television can also provide an effective national or regional alert and warning system over its national digital interconnection infrastructure and ubiquitous local transmission facilities.

PBS and public television stations are in the process of rebuilding a system of satellite and terrestrial links to interconnect with PBS and each other in the digital era. This system, a hybrid of satellite and terrestrial distribution, is flexible and scalable, designed to keep pace as technology evolves, and supports future content demands for multi-channel, high-definition, datacasting and other digital initiatives. In addition, it is

national in scope but with a local reach that is universally accessible to rural and urban communities alike.

APTS believes public television stations will play an important role in supporting a Digital Broadcast EAS system through the digital interconnection infrastructure public broadcasting is developing. The Next Generation Interconnection System (NGIS) will serve as a vital link between the Public Broadcasting Service (PBS) and local public television stations. The NGIS will leverage new digital technologies to create and deploy a platform that will, in addition to providing a central distribution platform, enable two-way and point-to-point communications. Because NGIS is designed to link local digital stations within a national digital infrastructure, this system can be leveraged to support a national homeland security alert system. NGIS is a critical component of the ongoing transition from analog to digital broadcast technology. It provides the national architecture to link the digital assets that local communities, state governments and the federal government have invested in across the country. In this regard, as public television moves forward to build its digital interconnection system, an opportunity exists for its cooperative use by both public television and DHS to enhance the effectiveness of EAS.

C. The APTS-Department of Homeland Security DEAS Pilot

On October 21, 2004, the Department of Homeland Security (DHS) signed a cooperative agreement with the Association of Public Television Stations (APTS) to conduct the DEAS-NCR (Digital Emergency Alert System - National Capitol Region) pilot. This six-month pilot demonstrated how DHS can improve public alert and warning during times of national crisis through the use of the local public television (PTV) digital

television (DTV) broadcasts. The pilot demonstrated how PTV's digital infrastructure can support the distribution of digital all-hazards Emergency Alert System (EAS) messages (such as audio, video, and/or data messages) by secure and nonsecure means to TVs, radios, personal computers, cell phones, cable and wireless networks.

The DEAS-NCR pilot is a joint venture by public television with the Department of Homeland Security's Federal Emergency Management Agency (FEMA) and Information Analysis and Infrastructure Protection Directorate. The DHS Office of National Security Coordination in FEMA serves as the Federal Government's Executive Agent for the national-level EAS, including Presidential-level messaging during times of crisis or emergency. In addition, the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA) and the Federal Communications Commission's (FCC) Homeland Security Office are full participants with DHS in the pilot.

The DEAS – NCR pilot also includes a wide range of participants from the broadcast, cable television, and wireless telecommunications industries. Media industry organizations participating in the pilot include APTS; WETA-TV and FM radio (Washington, DC); Maryland Public Television; WHRO-TV (Norfolk, VA); the New Jersey Network; WTOP-AM radio (Washington, DC); WRC – TV, an NBC affiliate station (Washington DC); Comcast Cable; the Weather Channel; and XM Satellite Radio. Also observing is the National Cable and Telecommunications Association. Participating telecommunications industry organizations include Cingular Wireless, Nextel, T-Mobile, Sprint, and USA Mobility. Also observing for the wireless industry is the Cellular Telecommunications Industry Association. A number of systems and technology companies have also provided support and equipment for this project, including

SpectraRep, Kencast, Logic Innovations, Triveni Digital, Hormann America, Qualcomm, and others.

The pilot included the design and deployment of the basic DTV datacasting system, installation of DTV datacast receivers among participants, and development of text and audio alerting software applications that utilize the Common Alerting Protocol (CAP). One of the features of the DEAS – NCR pilot is that it is based almost entirely on commercially available "off-the-shelf" hardware and software. The CAP-based alerting software was developed for this pilot, and is not a commercial product. As much as possible, the CAP software references existing EAS activation codes and processes. Successful testing was done of XML text messages, audio, and video.

The results of the pilot showed that digital broadcasts to voluntary media and telecommunications service providers will significantly improve and enhance the ability of Federal, State, and local governments to provide critical and lifesaving emergency messaging to the nation. Moreover, using public television's existing infrastructure, DHS can leverage public – private partnership to efficiently demonstrate a significantly enhanced public alert and warning message capability.

Because Phase I of the DEAS pilot focused primarily on technology demonstration and proof of concept, DHS extended the pilot into a Phase II. In Phase II, DHS is examining how the PTV DTV system can best provide support and enhancement to state and local activations of the alert and warning system. Phase II is designed to allow DHS to identify best practices and to develop a foundation for deploying the DEAS nationally. This system will also supplement and integrate with the existing national-level EAS. Further, Phase II includes the development of a plan and budget for a national

rollout of the public television DEAS architecture. Lastly, Phase II also includes support for coordination of the PTV DEAS with other DHS Integrated Public Alert and Warning System (IPAWS) related pilots.

Phase II of the pilot program will lay the foundation for a future digitally-based federal public safety alert and warning system. Like the current national EAS, the planned Digital EAS will make provisions for state and local governments to use this digital broadcast backbone. The best practices developed during this pilot project will be used as the model for deploying the DEAS nationally. The DEAS will supplement the current Emergency Alert System (EAS) that uses 34 Primary Entry Point (PEP) radio stations to provide the President and other designated officials the capability to speak to the American public during periods of national emergency.

Additionally, Phase II of the pilot includes additional testing sites beyond those included under the first phase of the pilot in the National Capitol Region, with extension to 18 additional public broadcast stations outside the National Capitol Region and CAP application development and customization.

Lastly, APTS is providing DHS with a DEAS National Deployment Plan. The DEAS National Deployment Plan will include cost and schedule estimates, macro-level work breakdown estimates, technical risk determinations and other technical implementation options. Standards recommendations and certification & accreditation security issues will be considered.

Conclusion

APTS submits the above information in the record to provide details concerning the use of the PBS interconnection system and the on-going pilot project between APTS and the Department of Homeland Security. In addition, APTS urges the FCC, consistent with the recommendations of the Media Security and Reliability Council, to work closely with the Department of Homeland Security and to provide support, where necessary, at the direction of DHS.

Respectfully submitted,

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