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

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In the Matter of	)	
	)	EB Docket No. 04-296
Review of the Emergency Alert System	)	
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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 Commission has sought comment on whether the EAS is the most effective mechanism for warning the American public of an emergency and, if not, how the EAS can be improved.[2] In addition, the Commission has also sought comment regarding whether there should be a concerted governmental effort to combine the EAS with alternative public alert and warning systems to form a comprehensive and universally accessible public warning system.[3]

Public Television believes that its digital broadcast infrastructure can contribute to these goals in two ways. First, as Public Television moves forward to rebuild the system

[1] APTS is a nonprofit organization whose members comprise the licensees of nearly all of the nation's 356 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] In the Matter of Review of the Emergency Alert System, Notice of Proposed Rulemaking, FCC 04-189, ¶ 1 (rel. August 12, 2004).

[3] Id. at ¶ 32.

of satellite and terrestrial links that constitute the means by which stations interconnect with PBS and each other, an opportunity exists for the cooperative use of the interconnection system by both public television and the Federal Emergency Management Agency (FEMA) within the Department of Homeland Security (DHS) to enhance the effectiveness of EAS. As the Senate Commerce Committee recently observed, "[One] potential function of the television interconnection system that has been proposed and is being evaluated by the Department of Homeland Security is using it as the backbone of a new improved national emergency communications system."[4] In this regard, APTS, PBS and a number of public television stations have entered into an agreement with the DHS/FEMA to test and replicate a digitally-based emergency alert system delivered over the existing public television digital broadcast infrastructure.

Second, many public television stations throughout the nation are exploring opportunities to use a portion of their digital broadcast allotment to transmit educational and public safety data on a local and regional basis. In this regard, public television licensees, such Kentucky Educational Television, KERA (Dallas, TX), Thirteen/WNET New York, the New Jersey Network, Nashville Public Television, KLVX (Las Vegas, NV) and Maine Public Broadcasting, have already rolled out critically needed data transmission services to support not only their educational mission but also the public safety needs of the communities they serve. As the Senate Commerce Committee has observed, this new technology of datacasting has "enormous potential for providing valuable new public services to communities."[5]

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[4] Public Broadcasting Reauthorization Act of 2004, Report of the Committee on Commerce, Science and Transportation on S. 2645, S. Rep. No. 108-396 (2004) at 6.

[5] Id. at 9.

A. Public Television's Use of Datacasting to Enhance Homeland Security

After the events of September 11th, 2001, individuals and non-profit and commercial businesses and industries across the nation have revaluated their core values and have asked what they can do to ensure a better, more secure America. Public Television is eager to do its part and has developed innovative ways in which it can make a difference in ensuring Homeland Security and assisting public safety first responders in our country. In addition to their continuing on-air and community outreach initiatives, public television stations are partnering with local, state, regional and national public safety offices to provide the services these offices need to carry out their responsibilities more effectively.

Public Television plans to provide an alert and warning national network. This network would utilize "datacasting," which is over-the-air broadcasting of data embedded within a digital television signal, to send data to schools, offices, public safety and other local, state, and federal offices. The data may be text, video, audio, graphs and maps.

In this network, a public television station would receive data from DHS/FEMA and then insert the data for transmission in the digital TV signal. As the station broadcasts to its community, a small part of the digital signal would be used to send the packets of data. The data is then received on computers in schools, workplaces, and homes. This service takes very little of a station's digital capacity (as little as 1/16 of a megabit of the 19.4 megabits of digital spectrum available to each station) and is achieved through ongoing opportunistic use of the digital spectrum. The only equipment necessary for computers to receive the datacasting is a DTV tuner card that would be

inserted in the computer (which currently sells for approximately $300) and a small antenna to place on the computer (which retails for about $30.00).

This datacast system could be used as a national alert system. Additionally, it could serve the ongoing daily needs of public safety agencies and be used to assist first responders. In partnership with public safety agencies, Public Television could bring important, life-saving weather, medical, and other emergency information to users on a daily basis.

B. Public Television's New Interconnection System Can Support an Enhanced National Emergency Alert System

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/FEMA to enhance the effectiveness of EAS.

C. APTS Will Coordinate a Homeland Security Pilot Project Using Digital Technology to Protect Public Safety

This year public television will demonstrate the use of public television's national infrastructure and local reach to enhance homeland security. On September 29, 2004, APTS entered into an agreement with the Federal Emergency Management Agency within the Department of Homeland Security to launch a pilot program in the National Capital Region. The project will permit testing and replication of a digitally-based emergency alert system. This pilot alert system will serve as the basis for the next generation of an Emergency Alert System.

APTS will be joined by PBS and public television stations WETA (Arlington, VA) and Maryland Public Television, with support provided by the New Jersey Network (NJN) and WHRO (Norfolk, VA). The pilot will demonstrate how public television's Next Generation Interconnection System can play a role in the national delivery of a Digital EAS -- and a last mile delivery system to radio, TV and all consumer wireless devices. APTS member public stations across the nation will also be able to experiment

on their own with test data distributed over the PBS satellite system. The pilot will show how digital public television stations' infrastructure can allow the President of the United States to communicate with the American public during a national crisis.

APTS is currently talking with several companies to discuss their interest and determine their level of participation. Wireless phone companies, cable television operators, and other network providers will be encouraged to participate in the pilot project. The best practices developed during the pilot may serve as a common datacasting model for jurisdictions around the nation to adapt for public warning systems. In addition, this pilot will generate information regarding the communications needs of federal and state agencies and how they may use these capabilities to provide local emergency communications.

D. Local Public Television Stations Are Addressing the Public Safety Needs of Their Communities

One of the pioneers of this Homeland Security Communications Network is **Kentucky Educational Television** (KET), one of the very first public television licensees to enter the digital age. KET has already formed an impressive number of state-wide partnerships with emergency managers, law enforcement officials, dispatch centers, universities, schools and hospitals. 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 with DTV tuner cards around the state.

In partnership with the University of Texas Medical Branch-Galveston, the **KERA** Homeland Security system in Dallas can deliver crisis communications to discrete or general audiences, including simultaneously sending different messages to health departments, DMAT teams, hospitals, law enforcement/ fire safety, and the general public. The University of Texas Medical Branch-Galveston is the largest telemedicine provider in the nation and the only academic campus in the U.S. with a maximum CDC-related biological containment laboratory (BSL4 research laboratory).

Thirteen/ WNET in New York City is leading the way in prototyping a new broadband emergency alert system capability using its digital transmitter located on the Empire State Building. WNET-DT is planning to use a portion of its digital spectrum in order to develop a system to capture, integrate, disseminate and display video, other sensor data, and multi-source intelligence data to support special operations for urban environments, perimeter defense, homeland defense emergency response systems and emergency broadcast systems. The project will demonstrate how first responders will receive valuable information that will improve their ability to perform critical functions during an emergency. This end-to-end system design and demonstration will incorporate a variety of technologies such as Ad-Hoc Networked Unattended Ground Sensors (UGS), portable/mobile COFDM receivers, in-band return path, real-time Error Resilience, MPEG4 encoding/streaming, and embedded multimedia players. As a terrestrial broadcast television licensee, Thirteen/WNET is planning to support the project by combined use of datacasting over its DTV facility with use of its Instructional Television Fixed Service (ITFS) license 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 to send vital information to emergency workers. In the first homeland security datacasting project in the country to work with a nuclear facility, the NJN datacasting system is being tested in the Emergency Planning Zone around the Oyster Creek Nuclear Generating Station. Working in partnership with the New Jersey State Office of Emergency Management, NJN installed datacasting cards in the personal computers at Ocean County and Lacey Township Emergency Operation Centers. As this project demonstrates proof of performance as an efficient and robust distribution of emergency information to multiple receiving devices using NJN's digital television airwaves, the plans are to expand it to emergency centers across the state.

Nashville Public Television (NPT) has launched Tennessee's first-ever DTV IPcasting system for education, homeland security and public service. This past year, NPT launched a demonstration of its ability to deliver local and regional public safety information for the Nashville Mayor's Office of Emergency Management, Nashville Fire Department and Tennessee Emergency Management Agency.

KLVX, Las Vegas, Nevada has worked with the Clarke County Emergency Preparedness office to take advantage of the system KLVX has in place to transmit video and other information to the 300 schools in the region currently linked to KLVX. Current emergency plans from the county designate the public schools as safe evacuation sites, and KLVX can communicate with these centers in case of emergency. KLVX is now working to leverage the same technologies to provide for communication links to rural communities and the protection of incoming water supplies to the area. In addition, KLVX is also using its digital television technology to help Las Vegas public safety

personnel get up-to-the-minute information that can help them respond to emergencies. KLVX can use a portion of its DTV signal to transmit information—such as building blueprints or video or audio files – directly to first responders' computers or mobile data terminals.

To ward against potential communication problems in the event of an emergency, **Maine Public Broadcasting** (MPB) has forged partnerships to implement "MaineNet" - a unified, statewide alerting and communication system. Maine Public Television, Maine Public Radio, emergency management agencies, police, and weather service field offices have teamed up with the Maine Association of Broadcasters to build a coalition around creating a system to combine secure, reliable public alert capability with the potential for direct communications to local officials and first responders. The Maine Army and Air National Guards, and various departments within the state, have also signed on to access the homeland security component of the project. To be built on the current Emergency Alert System, the project will draw on a satellite-based warning and messaging system that allows users to disseminate warnings and messages to individual stations or groups of stations simultaneously and instantaneously, in a secure environment. MPB will leverage its datacasting infrastructure to provide the service, drawing on Public Television's new role in an era of heightened security concerns.

Conclusion

As the above examples demonstrate, public television stations throughout the nation stand ready to use digital broadcast facilities for the transmission of critical public safety data to enhance homeland security. Through this capability to datacast, public television stations can help support and extend the EAS system already in place. As the Commission considers what improvements or changes are necessary to the EAS, and as the Commission considers the merits of an alternative supplementary public warning system, it should be aware that Public Television stands ready to provide homeland security service on a local, regional or national basis over its digital infrastructure.

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