

August 24, 2007

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Deputy Chief  
Public Safety & Homeland Security Bureau  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Room 7-C753  
Washington, D.C. 20554

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Federal Communications Commission  
Bureau / Office


Dear Ms. Fowlkes:

On behalf of the Association of Public Television Stations (APTS), please accept the attached memorandum, detailing Public Television's Digital Emergency Alert System (DEAS), as a public filing before the Commercial Mobile Service Alert Advisory Committee (CMSAAC). John Lawson, President and CEO of APTS, is a member of the CMSAAC, in accordance with the statutory designation in the Warning, Alert, and Response Network Act (WARN) (Section 603(b)(3)(E)).

APTS, in partnership with the Department of Homeland Security, is completing the deployment of the national DEAS, through funding from DHS. As specified in Sections 602(c) and 606(b) of the WARN Act, additional funding will be made available from the Department of Commerce to compensate Public Television Stations for compliance with the WARN Act requirements to add equipment to ensure geographically targeted alerts through the DEAS. The attached memorandum is pertinent to the work of the CMSAAC, as directed by the Warn Act.

Please contact me if any questions arise regarding the Public Television DEAS.

Sincerely,



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Lisa M. Fowlkes  
August 24, 2007  
Page 2

cc: Chairman Kevin J. Martin (w/encl.)  
Commissioner Michael J. Copps (w/encl.)  
Commissioner Jonathan S. Adelstein (w/encl.)  
Commissioner Deborah Taylor Tate (w/encl.)  
Commissioner Robert M. McDowell (w/encl.)  
Derek Poarch, Chief, Homeland Security Bureau (w/encl.)  
Kenneth Moran, Deputy Bureau Chief, Homeland Security Bureau (w/encl.)  
Timothy A. Peterson, Chief of Staff, Homeland Security Bureau (w/encl.)  
Jeffrey Goldthorp, Chief, Homeland Security Bureau (w/encl.)  
Gregory Cooke, Legal Counsel, Homeland Security Bureau (w/encl.)  
John Lawson, APTS  
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## **THE ASSOCIATION OF PUBLIC TELEVISION STATIONS SUMMARY OF PUBLIC TV DIGITAL EMERGENCY ALERT SYSTEM**

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 not be imagined 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.

### Public Television's Digital Datacasting Alert and Warning Services

A fully digitized public television system offers significant new public safety advantages. In this regard, public television's congestion-free bandwidth can support 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. Datacasting is an IP-based open architecture system. 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 and phone 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 could provide nation-wide, as well as localized, warning and alert to the American public.

#### Public Television’s Digital EAS Pilot with DHS

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 Digital Emergency Alert System - National Capitol Region pilot (DEAS-NCR). 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 was 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 were full participants with DHS in the pilot.

The DEAS – NCR pilot also included a wide range of participants from the broadcast, cable television, and wireless telecommunications industries. Participating mobile service providers included Nextel, T-Mobile, Sprint, Cingular Wireless, and USA mobility. Media industry organizations participating in the pilot included 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.<sup>1</sup> A number of systems and technology companies also provided support and equipment for this project, including SpectraRep, Kencast, Logic Innovations, Triveni Digital, Hormann America, Qualcomm, and others.

#### A. Phase I of the Pilot

Phase I of the DEAS pilot focused primarily on technology demonstration and proof of concept. Phase I 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).<sup>2</sup> The results of the pilot showed that digital broadcasts to media and telecommunications service providers will significantly improve and enhance

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<sup>1</sup> Also observing were the Cellular Telecommunications Industry Association and the National Cable and Telecommunications Association.

<sup>2</sup> One of the features of the DEAS – NCR pilot was that it was based entirely on commercially available “off-the-shelf” hardware and software. The CAP-based alerting software was developed for this pilot. 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 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 is leveraging a public – private partnership to efficiently demonstrate a significantly enhanced public alert and warning message capability.

#### B. Phase II of the Pilot

Based on the success of the pilot, DHS extended the pilot into a Phase II. In Phase II, DHS examined how the PTV DTV system can best provide support and enhancement to state and local activations of the alert and warning system. Phase II of the pilot included additional testing sites beyond those included under the first phase of the pilot in the National Capitol Region, with extension to 19 additional public broadcast stations outside the National Capitol Region and CAP application development and customization.

Phase II was designed to allow DHS to identify best practices and to develop a foundation for deploying the DEAS nationally. Phase II also included support for coordination of the PTV DEAS with other DHS Integrated Public Alert and Warning System (IPAWS) related pilots, including supplementing the existing national EAS. Lastly, Phase II included the development of a plan and budget for a national rollout of the public television DEAS architecture.

#### National Deployment of PTV's DEAS

In July 2006, the Association of Public Television Stations (APTS) signed an agreement with the U.S. Department of Homeland Security (DHS) to deploy nationally the DEAS. Using best practices developed during the pilot project, APTS is currently adding technological upgrades to every Public Television station across the country,

creating the backbone infrastructure of a digital presidential emergency alert and warning system. Right now, stations in 20 states have received DEAS equipment, and by the end of August, 2007, stations in an additional 8 states will receive equipment. This national build-out of the DEAS is on schedule to be completed by the end of 2007.

Once fully built, the DEAS will supplement the current Emergency Alert System (EAS) that uses the 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. The build-out will also serve as foundational infrastructure that can be built upon to facilitate governors' and local authorities' use of the DEAS for state and local emergencies.

#### DEAS and WARN

As specified in Sections 602(c) and 606(b) of the Warning Alert & Response Network (WARN) Act, additional funding will be made available from the Department of Commerce to compensate Public Television stations for compliance with the WARN Act requirements to add equipment to ensure geographically targeted alerts through the DEAS. Pursuant to Section 602(c) of WARN, funding is to be provided soon after the Federal Communications Commission adopts relevant technical standards based on recommendations from the Commercial Mobile Service Alert Advisory Committee (CMSAAC). John Lawson, President and CEO of APTS, is a member of the CMSAAC, in accordance with the statutory designation in the WARN Act (Section 603(b)(3)(E)).

**For further information contact: John Lawson, President and CEO (202-654-4212) ([john@apts.org](mailto:john@apts.org)), Mark Erstling, Chief Operating Officer (202-654-4201) ([mark@apts.org](mailto:mark@apts.org)) or Lonna Thompson, Senior Vice President & General Counsel (202-654-4215) ([lonna@apts.org](mailto:lonna@apts.org)) of the Association of Public Television Stations.**