

**Testimony of John M. Lawson  
President and CEO  
Association of Public Television Stations**

**Before the  
Federal Communications Commission Independent Panel  
Reviewing the Impact of Hurricane Katrina on  
Communications Networks  
April 18, 2006**

Good morning, Madame Chairwoman and distinguished members of this crucially important review panel. I am John Lawson, president of the Association of Public Television Stations. I consider it a privilege to represent the nation's local public media service providers and to have the opportunity to share with you the ways in which public *digital* television can help save lives whenever the next Katrina, or Northridge, or terrorist attack occurs.

We've all heard repeatedly about the failures that emerged in the wake of Katrina, but as you know, this overlooks the acts of heroism that also took place, the ways in which service providers were able to perform under some of the most difficult and stressful conditions.

In Louisiana, Louisiana Public Broadcasting, headquartered in Baton Rouge, quickly became a de facto communications hub and operations center for national media outlets like CBS, as well as for the governor's office.

When the citizens of Mississippi who had weathered the storm were in desperate need of information on where to find critical supplies—food, water, medical attention—and shelter, they turned to Mississippi Public Broadcasting.

The FCC was very proactive in working with all our stations to share information, grant waivers, and process station requests quickly. In February of this year, at our annual meeting, our stations honored Chairman Kevin Martin for his leadership of the FCC during this emergency.

I am especially pleased that the FCC has tapped you, Ms. Victory, to lead this panel. With your previous government service as head of the National Telecommunications and Information Administration, you not only acted as the point person for our nation's spectrum policy, you also worked with public television and radio stations on our digital infrastructure build-out. This is the very same undertaking that has enabled us to develop a backbone for our digital emergency alert system.

I am here today to discuss how Public Television's digital infrastructure can play a dual-use role in developing a new, robust and efficient digital emergency alert and warning

system. As we all know, our nation's current Emergency Alert System (EAS) is built on an aging analog infrastructure and must be upgraded.

But the good news is that this state of affairs is changing, and I'm pleased to report that Public Television, working directly with the Department of Homeland Security, is playing an integral role in the development of an all-devices, all-hazards, digitally-based emergency alert and warning system.

#### Digital Emergency Alert System: DEAS

The next generation EAS is called the Digital Emergency Alert System, or DEAS. It is based on Public Television's digital transmission infrastructure. Like the current system, the DEAS is designed to ensure that the head of our national government—the President or his **successor**—**can** quickly communicate to the American public during an emergency. The current system—which, by the way, was never utilized during 9/11—~~is~~ limited to two basic reception devices: radios and televisions. And yet today, Americans have become fluent in an impressive array of **other**—**often, more portable**—**devices**, including cell phones, personal computers, Blackberries and other PDAs. Under the DEAS, the President could potentially reach the great majority of Americans quickly with an important message delivered to any one or all of these devices.

It is also important to note that the current Emergency Alert **System** was conceived during the Cold War era to provide warning for threats that were national in scope – namely, a nuclear attack. Today's most potent threats, acts of terrorism and national disasters, are by their nature more local or regional in scope, as the residents of New York, New Orleans, and "Tornado Alley" can attest. That is why the new DEAS will provide a backbone that can be interconnected to deliver alert and warning at the local, regional and national levels.

#### Role for Public Television

Public Television is a mission-driven institution. When **our** system was faced with the prospect of undertaking a daunting conversion from an analog to digital transmission platform, we naturally began to explore the many ways that this exciting new digital technology could be used to benefit the American people. With the emergence of a digital broadcasting application called datacasting, which I will discuss further, we quickly grasped that local digital public television stations could play a role in enhancing public safety. At first the idea focused on natural disasters such as tornadoes. And then came 9/11.

The other critical feature of the Public Television system is our penetration: we reach nearly 99 percent of American households with analog service and, soon, with digital. Indeed, our system's breadth is impressive, but so is our depth. We are deeply rooted in **our** communities, typically among the most trusted local institutions and ones that have forged strong linkages to other community institutions and populations.

In short, Public Television is building out a fully integrated digital infrastructure which, once complete, will reach nearly every American community. The DEAS is a very cost-effective, dual-use application that builds on this infrastructure.

### **What is Datacasting?**

In order to appreciate the capabilities of a DEAS, it is necessary to understand the central application involved—namely, datacasting. Digital television, or DTV, is most closely associated with high-definition television (HDTV). But DTV is really a powerful, wireless data transmission system. It is also very flexible. From a single transmitter, a broadcaster can send any mix of HDTV, multiple standard-definition channels, or high-end data to any DTV reception device within 50-60 miles.

One of these applications, called datacasting, is a one-way broadcast transmission of Internet Protocol (IP) information. The data being transmitted can take the form of text, video, audio, and graphics. Datacasting uses only a portion of the broadcast spectrum. Moreover, datacasting can deliver large amounts of data embedded in the broadcast signal at a rate of up to 19.4 megabits per second @BPS-4e equivalent of up to 13 T-1 lines.

Datacasts are encoded within the digital television signal and then decoded by an inexpensive receiver that is easily hooked up to a personal computer, laptop or computer network. Reception can be achieved through a small portable antenna that sits on top of the PC (or laptop in the field), or users can receive the signal through a conventional rooftop TV antenna. The signal can also be instantly retransmitted over wireless and other networks.

### **Advantages of Datacasting**

Datacasting boasts several key attributes:

- **Datacasting is highly scalable and congestion-free.** It avoids the communications bottlenecks we saw in New York and Washington on 9/11. Because it is a broadcast medium, it takes no more bandwidth to reach millions of end-users simultaneously than it does a single end-user.
- **Datacasting is secure.** Through additional technology, data can be encrypted, rendering it far less vulnerable to hackers than Internet-based communication.
- **Datacasting is flexible.** It can be "addressed" through conditional access to a select group of end-users (such as a federal agency, a local fire department or a school district) or made available to the widest possible audience—anyone with an antenna and digital receiver.

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## Department of Homeland Security-APTS Pilot Program

At this time, however, I would like to focus the Panel's attention on one particularly important project that is being pursued **jointly** between the Department of Homeland Security (DHS) and APTS.

In October, 2004, DHS's Federal Emergency Management Agency (FEMA) signed a cooperative agreement with APTS to conduct a Digital Emergency Alert **System**—National Capital Region Pilot Project (**DEAS-NCR**). The pilot was launched to demonstrate how Public Television's digital **infrastructure** could be used to support the distribution of presidential messages to the public and of digital all-hazards Emergency Alert System (EAS) messages to TVs, radios, personal computers, telephones and wireless networks.

Public broadcasting participants in the pilot include APTS, the Public Broadcasting Service (PBS), WETA-TV and FM, Maryland Public Television, WHRO (Norfolk, VA), KAKM (Anchorage, AK) and the New Jersey Network. These Public Television entities were joined by WTOP-AM radio, WRC-TV (both in Washington, DC), Comcast Cable, the National Cable & Telecommunications Association (NCTA) and XM Satellite Radio. Participating telecommunications industry organizations include **Cingular** Wireless, Sprint-Nextel, **T-Mobile**, the Cellular Telecommunications and Internet Association (CTIA) and USA Mobility, among others.

Phase I of this pilot project focused **primarily** on testing whether emergency alert and warning messages could be **successfully** transmitted to end-users in a workable **format**—known as the Common Alerting Protocol (CAP) format. The Pilot was formulated around the concept of real-time activation by FEMA of simulated emergency alert and **warning** messages into the DTV network of PBS and WETA, who redistribute the alert messaging to other participants in the pilot.

I am pleased to say that Phase I of the pilot project was a resounding success. We were able to demonstrate that this infrastructure works and works well. In particular, I would like to recognize John Archer, Vice President of Operations for XM Satellite Radio, who is here today.

### Phase II of the DEAS-NCR Pilot

Based on the success of the first phase of the **DEAS-NCR** Pilot, the Department of Homeland Security extended the pilot by an additional six months. The purpose of the extended pilot program was to lay the foundation for the national roll-out of a **digitally**-based federal public safety alert and warning system.

Phase II had three major components. First, the Pilot did additional testing and evaluation, and **further** development of the components of the pilot system. Additional testing sites beyond those in Phase I of the pilot, including 19 additional public broadcast stations outside the National Capitol **Region**, were incorporated in Phase II.

Second, APTS's work was coordinated with other alert and warning pilots and vendors, such as the one that DHS is developing to provide satellite connectivity to the nation's current Primary Entry Point (PEP) stations. These other pilots are also consistent with DHS's goals for an Integrated Public Alert and Warning System (IPAWS) framework. The goal here is to ensure that a DEAS can work with, and be complementary to, other aspects of an improved national alert and warning system.

Lastly, Phase II involved the development of a DEAS National Deployment Plan as well as a final DEAS Pilot Report for Congress. The DEAS National Deployment Plan includes construction and **timeline** estimates, technical risk determinations and other implementation options.

### **Next Steps**

We at APTS are gratified to play a role in this effort, and our member stations are fully committed as well. We could not be more pleased with the way the DEAS-NCR Pilot has progressed and how that might translate to a fully developed, robust national alert and warning system. I would also like to commend Reynold Hoover at the White House and Kevin Briggs and his colleagues at FEMA in DHS for their foresight in recognizing the dual-use features of DTV, and for forging a very productive working relationship with public television.

### **Local Origination**

Looking forward at the national deployment plan, we must mention our stations' efforts in their communities. It is also important that we plan and provide resources for local origination equipment. The purpose of local origination is to allow communities to take advantage of the federal DEAS whenever emergencies of a local or regional nature occur.

For example, any number of communities that lie within the range of **hurricanes**—from Gulf States to the Atlantic seaboard—would benefit from a fully integrated local and national warning system that would enhance the National Oceanic and Atmospheric Administration (NOAA) weather service. Datacasting can be used not only to provide initial warning but also to distribute detailed information such as evacuation routes, instructions for sheltering in place and other safety tips. Information is crucial in any crisis, whether a chemical spill at an industrial site, an incident at a nuclear power plant, or other man-made or natural disasters.

The ability to create and distribute local and regional messages and data packets is vital to a fully integrated emergency alert and warning system. It is in the best interest of the American people, who expect local and national coordination in times of crisis. Fortunately, the capability necessary to accomplish this is within our grasp.

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## Local Examples

The best practices developed during the DEAS pilot also are serving as a common datacasting model for local jurisdictions to use on a daily basis for weather and other emergency information, depending on their local needs. Stations around the country are using datacasting in partnership with public safety agencies, emergency alert operations centers, schools, hospitals and other partners to provide public warnings, information to first responders, and to protect local structures ranging from nuclear power plants to Las Vegas casinos. Stations also provide ongoing educational training, such as port security training.

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

- Kentucky Educational Television (KET), in partnership with the local branch of 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 Educational Broadband Service (formerly 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 to send vital information – evacuation instructions, bioterror alerts, images of symptoms, 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.

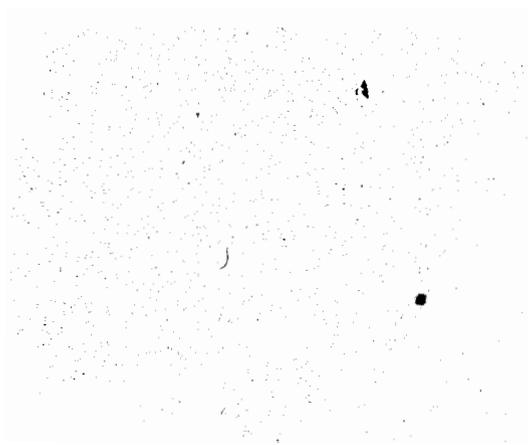
## Conclusion

Public Television is gratified that we can play a role in helping to shape our nation's next generation emergency alert and warning system, and most importantly to deliver that capability. It is a natural extension of our public service mission. We believe that one day in the near future Public *Digital* Television will play a crucial role during a crisis that will save lives and property.

All these capabilities of public television datacasting are possible. Local public stations stand ready to play an integral part in the new DEAS both on a national and local scale.

It is our fervent hope that before the next **Katrina** or its equivalent hits—wherever that may be—first responders and other public safety providers will have access to robust, timely and critical information and messaging, delivered wirelessly to their communications devices through a digital television broadcast signal. And we hope that one day all citizens will similarly be able to receive timely, accurate alerts—both in advance of and in the aftermath of a disaster—to secure their safety and that of their loved ones. And we in the public television community **hope** to play a central role in making sure that happens.

Thank you for giving me the opportunity to address this Panel, and for your attention to my demonstration. I would be happy to answer any questions you may have.



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