Mobile-Emergency Alert System Pilot Project Proves Viability of Mobile DTV for Emergency Alerts

Successful Conclusion of Field Trials Sets Stage for ATSC Standardization

LAS VEGAS, April 16, 2012 – Results of the year-long Mobile Emergency Alert System (M-EAS) broadcast pilot project clearly show that broadcasters across the country will soon be able to capitalize on the powerful combination of mobile DTV and rich media emergency alerts. Field trials in Massachusetts, Alabama and Nevada demonstrated how local TV stations can harness the power of terrestrial broadcasting to deliver multimedia alerts to the general public and to first responders in times of natural or man-made disasters.

Successful conclusion of the groundbreaking pilot project – led by PBS and LG Electronics and co-funded by the Corporation for Public Broadcasting (CPB) – sets the stage for standardization by the Advanced Television Systems Committee (ATSC) and evaluation by the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA). In parallel, LG is readying M-EAS-equipped mobile DTV receiving devices and Harris Broadcast is finalizing broadcast equipment designs to support a nationwide commercial deployment of M-EAS service, expected by 2014.

Demonstrated at this week's Mobile DTV Pavilion at the National Association of Broadcasters (NAB) trade show, the new Mobile Emergency Alert System is designed to deliver reliable, rich media alerts anywhere, anytime. The prototype LG mobile phones demonstrated this week offer not only audio and visual indications of emergency alerts, but also include a vibrating mode to notify all users (including those who might be visually impaired) about an emergency.

One Year Later: A Successful Pilot

The Mobile-EAS project was first announced at the 2011 NAB Show and was undertaken by PBS, LG Electronics (which developed M-EAS receivers) and its Zenith subsidiary (which provided funding for the project); and CPB (which provided a matching grant to PBS.) Harris Broadcast and Roundbox are also providing key components and technology.

In addition to public broadcasters, M-EAS is receiving widespread interest from commercial broadcasters, garnering support from NAB Labs (which has invested in Roundbox's M-EAS product development), the Mobile Content Venture, the Mobile 500 Alliance and the Open Mobile Video Coalition.

During the 2012 NAB Show, Vegas PBS – one of four PBS stations participating in the M-EAS Pilot Project – is transmitting mobile DTV signals with rich media emergency alert content for simulated national and local emergency scenarios, including a "suspicious package threat," an "approaching tornado," an "AMBER Alert" and "impending tsunami."

The terrestrial broadcast M-EAS project demonstrates the system's capabilities for delivering multimedia alerts (utilizing video, audio, text, and graphics) to mobile DTV-equipped cellphones, tablets, laptops, netbooks, and in-car navigation systems in order to avoid the potential roadblocks of chronic congestion of cellular systems during emergencies.

The new alerting application developed during the pilot project capitalizes on existing standards for implementation. The U.S. broadcast standard for mobile television, the ATSC A/153 Mobile DTV Standard, uses Internet Protocol (IP) at its core. The use of IP allows the new application to be flexible and extensible. Data delivery, non-real-time delivery, and electronic service guides are all included.

Enhanced Alerts Add Video, Audio, Maps, and More

The Mobile DTV pilot project, using terrestrial broadcasting, complements the current cellular-based system PBS is deploying with the support of the U.S. National Telecommunications and Information Administration and with the cooperation of the U.S. Department of Homeland Security. This system transmits 90-character emergency text messages to commercial mobile carriers.

PBS Chief Technology Officer John McCoskey said the NAB demonstration is logical capstone for the M-EAS project, for which the primary goal is to develop a system that can be easily replicated by both public and commercial broadcasters throughout the country to give access to vital emergency information to millions of viewers using mobile DTV receivers. "Our work together over the past year proves the viability of our concept – that mobile television can be an effective way to reach millions of people with a single broadcast, without relying on an overburdened cell phone system. We believe that the new ATSC Mobile DTV system can be harnessed to do far more than just the delivery of linear TV channels," he said.

M-EAS requires no additional spectrum and is an additional use of existing TV transmitters and towers. Standard equipment used to upgrade stations for Mobile DTV transmission is utilized.

"At NAB, we're showing how mobile emergency alerts might be received by a new generation of smartphones that are equipped to receive mobile DTV broadcasts as well as telephone and Internet access. We think this new system will be extremely valuable to federal, state and local emergency management agencies and the public they serve, while extending the community service role of public and commercial broadcasters alike," said LG's Dr. Jong Kim, president of the Zenith R&D Lab, the Illinois-based research and development subsidiary of LG Electronics.

Building on its long history of innovating broadcasting technology, public television is leading the way in the development and testing of the M-EAS pilot project. CPB provided funding to PBS for this new communications platform. Public television broadcasters Vegas PBS (KLVX), WGBH (Boston), and Alabama Public Television stations WBIQ (Birmingham) and WAIQ (Montgomery) are providing rich media content and serving as test markets for the project. Separately, Seattle commercial station KOMO-TV (Fisher Communications) developed the compelling tsunami video alert simulation.

“For more than 40 years, viewers and listeners have relied on public media for accurate and critical information about their communities,” said Mark Erstling, senior vice president, system development and media strategy at CPB. “We are proud to support PBS and local public media stations in the development of Mobile EAS technology, which leverages the speed and portability of new mobile technologies to help broadcasting stations provide essential local information in times of emergency.”

Since the 9/11 attacks, federal agencies and both the Bush and Obama administrations have adopted polices to upgrade the nation’s communications capability to respond to man-made and natural disasters. President Bush signed an executive order creating an Integrated Public Alert and Warning System (IPAWS). President Obama has called for a new public safety communications system for 21st Century America. The U.S. also has adopted the international Common Alerting Protocol for the way messages are structured.

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