



NEWS

For Immediate Release

ADVANCED WARNING AND RESPONSE NETWORK ENABLES LIVE VIDEO EMERGENCY ALERTS

Life-Saving Technology Designed to Leverage
Robust Next-Generation ATSC 3.0 Broadcast TV Standard

WASHINGTON, Feb. 19, 2015 – Americans will be able to receive video emergency messages anytime, anywhere – even when the cellular network becomes congested or the electric grid goes down – thanks to the Advanced Warning and Response Network (AWARN), a new service expected to be a key element of next-generation television broadcasting.

AWARN (www.AWARN.org) will leverage the higher data throughput, more robust transmission and improved indoor reception that will be delivered by the emerging “ATSC 3.0” technical standard for broadcast TV, which will replace the current system that ushered in HDTV over 15 years ago. The new transmission system, expected to be an ATSC Candidate Standard this year, will deliver many consumer benefits, including the delivery of reliable, rich media emergency information to smartphones, tablets and indoor television receivers.

AWARN is a next-generation approach to public warnings, a bottleneck-free and standards-based approach that utilizes terrestrial broadcasting rather than cellular network connectivity. This means high reliability and mass, instantaneous distribution even when cellular systems fail and electric power is disrupted across wide areas.

“Broadcasting is the lifeline for millions of Americans during emergencies, and next-generation technologies like AWARN reflect broadcaster’s focus on innovation as well. Advanced emergency alerting will support the core public safety and community service missions of local TV and radio stations,” said Sen. Gordon Smith, President and CEO of the National Association of Broadcasters. The NAB Labs is among AWARN’s growing list of participants and supporters.

Today’s AWARN announcement dovetails with the Advanced Television Systems Committee’s formation of a new “Advanced Emergency Alert Implementation Team” that will address business, regulatory and technical requirements for the successful inclusion of advanced emergency alerting with commercial rollout of ATSC 3.0.

Current System Inadequate, Say Multiple Studies

AWARN addresses the need for a new approach to emergency communications highlighted in a number of recent high-profile studies.

A 2014 draft report from the National Institute of Standards and Technology (NIST) identified network congestion driven by demand for video as creating a risk of “unintentional denial of service” on new LTE-based public safety networks, such as FirstNet. And, in the wake of the 2011 tornado disaster in Joplin, Mo., a 2013 NIST report recommended that “the full range of current and next-generation emergency communication ‘push’ technologies” be developed and utilized to better warn citizens of impending dangers.

A just-released study by the University of Maryland’s National Consortium for the Study of Terrorism and Responses to Terrorism found that current “Wireless Emergency Alert” text messages – which are only 90-characters long – need to provide more actionable information and be rearranged. This research, commissioned by the U.S. Department of Homeland Security, recommends adding “high information maps” to increase the effectiveness of messages.

“AWARN will go far beyond text and static maps. It will deliver full-motion video, radar images, evacuation maps, and other rich-media information when needed. America needs a new alerting system for the 21st Century, and AWARN can be a pillar of that new system,” said former broadcasting executive John Lawson, now President of Convergence Services, and a chief architect of the AWARN system.

“Those networks are subject to failure from a variety of conditions, including congestion, when too many subscribers are trying to make calls at the same time, from towers that fall because of high wind or earthquakes, or from a simple loss of electric power. As we saw in the wake of Super Storm Sandy, cellular networks were wiped out, but broadcast TV stations all stayed on the air,” Lawson explained.

ATSC 3.0 Advanced Alerting Will Enhance the Nation’s Preparedness

AWARN will deliver multimedia alerts (utilizing video, audio, text, websites and graphics) to ATSC 3.0-equipped cellphones, tablets, laptops, netbooks, and in-car navigation systems. Using next-gen TV broadcasting technology, including robust transmission to mobile devices, AWARN will avoid the roadblocks and chronic congestion of cellular systems during emergencies.

AWARN builds on the Mobile EAS alerting application developed during a pilot project capitalizes on existing standards for implementation. The use of Internet Protocol technology allows the new application to be flexible and extensible. Data delivery, non-real-time delivery, and electronic service guides are all included.

Deployed through advanced ATSC 3.0, AWARN will significantly enhance current capabilities for sending alerts, because:

- It bypasses bandwidth bottlenecks that often overload non-broadcast systems;
- Millions of devices will receive the alert simultaneously — just as easily as a single device — because broadcasting is a one-to-many transmission system;
- ATSC 3.0’s architecture will allow the transmission of alert messages with video, photos, graphics (such as evacuation routes), text and audio; and
- Next-gen broadcast TV will reach many more Americans, including people with disabilities and non-English speaking audiences.

Just as with Mobile EAS in ATSC 1.0, AWARN and ATSC 3.0 will integrate seamlessly with FEMA’s Integrated Public Alert and Warning System (IPAWS.) Alerts generated by FEMA or

state, regional, or local authorities already trigger limited broadcast and text alerts to be received by viewers and listeners.

The addition of AWARN Emergency Alerts means that devices equipped to receive AWARN signals can be easily triggered by IPAWS to display video, photos, audio, and text alerts to a variety of specially-equipped devices. Broadcasters have extensive news-gathering and weather information already available to them such as remote pick-ups and Doppler radar.

AWARN is supported by leading broadcasters and technology companies including Gates Air, LG Electronics (and its U.S. R&D subsidiary Zenith), Monroe Electronics, Triveni Digital, NAB Labs, Capital Broadcasting, PBS, and others.

The AWARN logo and a Fact Sheet are both available [here](#).

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AWARN Media Contacts:

John Taylor
LG Electronics USA
John.Taylor@lge.com
202-719-3490

Dave Arland
Arland Communications
Dave@ArlandCom.com
317-701-0084