



Advanced Warning and Response Network for a Mobile America

Terrestrial broadcasting represents the backbone of an advanced warning and response network that can reach tens of millions of American in times of emergency. Relying on the “dual use” of existing television broadcasting infrastructure, the Advanced Warning and Response Network (AWARN) offers live TV emergency alerts and its underlying technology of digital television broadcasting can distribute multiple video and other rich media assets to an unlimited number of handheld, vehicular, or fixed receive devices. Of critical importance AWARN and related next-generation technology under development can help meet the disaster communication needs of the public and first responders alike, without placing any bandwidth demand on cellular networks.

Reliable, Secure and Ubiquitous

- **No bottlenecks:** AWARN helps reduce Unintentional Denial of Service (DoS) by bypassing bandwidth bottlenecks that overload current cellular-based systems.
- **Hardened:** Broadcast stations, with back-up generators and fuel reserves, typically stay on the air even when electricity to whole regions is cut.
- **Non-Grid Dependent:** Battery-powered mobile devices are rechargeable in-car.
- **Accessible:** Features such as text-to-speech and vibrate-upon-alert for mobile devices, which, along with all of the rich media content available to users, mean that AWARN alerts will reach many more Americans, including those with hearing or sight limitations. Multilingual support can extend that reach to millions of non-English speaking Americans.
- **Geo-targeting:** Utilizing geographic location information embedded in the Common Alerting Protocol (CAP) message, combined with the location awareness of receiving devices, AWARN alerts can be displayed on only the devices targeted to receive the alerts.
- **Encryption enabled:** Digital TV signals can simultaneously send public alerts while sending specially encrypted video and other data feeds to first responders and emergency managers.

Interoperable with Existing Networks

- **Seamless Integration:** AWARN is already built to the CAP standard and is designed for seamless incorporation into the U.S. Integrated Public Alert and Warning System (IPAWS).
- **Open Technical Standard:** AWARN is planned as a fundamental element of the emerging ATSC 3.0 broadcast TV standard. AWARN's predecessor technology, Mobile EAS, was approved by the Advanced Television Systems Committee (ATSC) in 2013, with the M-EAS open standard is designated as ATSC A/153 and using Internet Protocol (IP). Also, the Consumer Electronics Association (CEA) has a Recommended Practice (CEA-CEB-26) that guides the inclusion of mobile emergency alerting in mobile receiving devices.
- **Federal recognition:** AWARN predecessor Mobile EAS has been officially recognized by a FCC advisory committee. In its final report to the Commission, the Communications Security, Reliability and Interoperability Council III (CSRIC III) encouraged the deployment of M-EAS in mobile phones.
- **Station Deployment:** Capitol Broadcasting's WRAL/Raleigh is authorized under FEMA's Memorandum of Agreement to access and retransmit live alerts . Four TV stations in Florida (WESH, WPTV, WFLX and WPBF) deployed elements of live TV video emergency alerting for the 2014 hurricane season.