

Comments Re: Improving Wireless Emergency Alerts and Community-Initiated Alerting, PS Docket No. 15-91

With regard to FCC15-91, and the comments of Commissioner Mignon L. Clyburn to “improve the usefulness” of WEA, and Commissioner Michael P. O’Rielly’s comments to avoid reducing voluntary participation by networks, by “inappropriate tweaks or wholesale changes”, we offer the following comments, for your consideration.

With regard to voluntary participation by the commercial mobile industry, **it is the position of our association that expanded use of commercial mobile assets and spectrum must be commercially sustained** in order to achieve optimum performance and participation. This position is based on the recommendation of UNISDR ‘Hyogo Framework for Action’ as well as the position of Tom Wheeler who as president of the CTIA, advised our organization that; what we proposed, (the use of personal telecommunications spectrum and infrastructure) for humanitarian benefit could not be successful until it was market-driven. While the association accepts the terms of the WARN Act, that to imposition ‘user’ costs on alert and warning would limit participation, providing Government Information advisories should not be held to this this restriction. It is our comment that consideration be given to the expansion of WENS as a revenue-driven mobile feature.

In response to technical consideration, we respectfully offer the following comments.

Regards question one; in theory up to 15 Cell Broadcast pages (of 90 characters) can be ‘concatenated’ into a single 1350 character message. But as a ‘First Alert tool’, a shorter alert message that directs recipients to Local EAS Radio and TV stations that are providing more detailed instruction, may have benefit. Local culture should be considered in this regard. With regards to the embedding of phone numbers and URLs; although WENS is capable of delivering well over 10^5 scale messaging to a targeted area within 7 seconds without imposing load on a network, if the message results in a large number of users click on a link or attempt to send a text message or make a voice call, the network could ‘crash’. This is the principal reason why **Cell Broadcast Messaging is widely recommended as the best bearer service to be used for mass scale notifications** [like the highly regarded Japanese Earthquake and Tsunami Warning System]. Links could be published as plain text, or aimed at a special interest groups, such as the disabled or elderly. This approach would dilute the uplink traffic and spread the spike of load. Promotion of point-to-point traffic during the acute phase of an event cycle is ill advised and can only be initiated on a ‘best effort’ basis.

Regards question two; a message is formatted and trafficked to the IPAWS Open Gateway in Common Alert Protocol, CAP. The ‘target area’ is coded as a Geocode or a ‘free hand’ WGS84 ‘polygon’ of any shape or size. After delivery from the IPAWS Gateway to the network operations centres, (behind the network’s firewall); a ‘Cell Broadcast Centre’ server can then convert the polygon, or geocode, into a list of Cell antennas or coverage areas that lie within that polygon. This functionality already exists, is well accepted, and has been demonstrated. **Single cell resolution is currently available.**

Regarding further polygon definition, **we believe that this can be achieved without compromising message capacity.** We suggest that the polygon information be transmitted on a separate ‘Auxiliary’ but linked MI channel. Any terminal not equipped to further defining algorithm would not receive the polygon and thus be unaffected. However any device so equipped would read the polygon from the additional channel, and use its own position fixing system to determine if it resides within the polygon, and if not, disregard the message. This method would achieve very precise geographical scope, without consuming message capacity, or requiring software upgrades to legacy terminals. Since CB is a very low capacity system, algorithms are required to ensure that the total size of the polygon does not become significant in terms of pages utilized. Some geocodes follow rivers, which can produce a very complex polygon. Some political compromise as to the resolution of such polygons may be needed. This approach would not require an upgrade of network equipment as the parsing of the polygon could be done by the gateway unit in accordance with present needs, and trafficked to the auxiliary polygon channel as a normal message, resulting in no obligations on the part of the network.

Regards question 3, there are two types of 'testing'. One involves forwarding a test messages to the public (a familiarization and reassurance test). While this should be conducted sparingly, **if formatted similar to the monthly EAS test, and identified as "a monthly test of the Cellular Emergency Alert System", it could significantly improve awareness and acceptability.** By selecting a separate MI channel, a second type of message, a 'Heartbeat' test message, can be sent as frequently as needed to ensure the integrity and performance of the system without alienating the networks' valued subscribers. This association is on record advocating the allocation of specific non-public channels for training exercises and tests by first responders and government agencies. There are MIs in the Cell Broadcast standard, which are reserved and available for this purpose, however, the use of these MI channel numbers should be harmonized to prevent test messages being received unintentional by foreign visitors. The framework is already in place.

With kind permission of the Commission, the association would like to further offer two unsolicited comments.

The first is with regard to Commissioner O'Rielly comment mentioning the fact that network participation in WENS is voluntarily. As such it is critically important to respect this fact. In order to optimize the performance and public acceptance of WENS, the use of private infrastructure and spectrum by public agencies should be adequately compensated to incentivize the networks to perform. **Expanding the service provided by WENS to include authorized post-event and government-to-citizen public safety information has significant economic value.** Efficient command and control of recovery operations depends on effective communications. Super Storm Sandy reports clearly underscore the economic and political costs created when loss of power and communications infrastructure eliminated the availability and use of legacy broadcast and cyber media. Current legislative actions such as HR 1738 and MIR 15305 would provide a funding mechanism to develop a commercial mobile gateway interface, CMGI, to augment the IPAWS Open Gateway and provide for network capacity-based billing similar to the commercial model used by the State of Florida's 2008 CellAlert pilot project. The availability of a commercial interface to network CBCs would also create an 'onramp' for additional revenue-based applications like 3rd party notification providers that would benefit from access to and use of the more cost-effective and reliable CB messaging option.

Secondly the association would like to address a real and imminent threat to public safety and national security. As the Traynor Report, published by Georgia Institute of Technology, discloses, the American public is increasingly relying on mobile devices rather than radio and TV for emergency informatics. This has resulted in a clear and present threat. **As there is no way to integrate peer-to-peer or point-to-point media into a managed public warning program** like EAS, it has allowed for the purposeful dissemination of false disaster notifications by malicious groups. As reported by the New York Times and London Daily Mail, terror organizations have successfully created public panic on several occasions by posting false eyewitness reports of terror attacks, with the clear purpose of creating a denial-of-service condition that would compromise emergency response and e-911. The negative impact of these 'tests' on addressing an actual terror attack such as the Paris event is obvious. By contrast, Cell Broadcast is a point-to-multipoint bearer service, (rather than a peer-to-peer). **The general public cannot originate a Cell Broadcast message,** and with the use of gateways and security protocols, access is closely controlled. When a citizen receives a Cell Broadcast message, it could only have been originated by an authorized authority using a robustly secure non-repudiation pathway.

The only practical counter to this type of threat is to establish a recognized single-source of emergency information that would be relied on for authoritative instruction throughout the lifecycle of an event. If the public were to receive an eyewitness report of a disaster event on social media or a text message, and it was not substantiated by this recognized source, it might not be taken seriously. While expansion of the services provided by WENS is a key element, **it is the position of this association that the WENS program must be 'rebranded' to better reflect its purpose.** The term Wireless Emergency Notification Service is by some studies recognized by less than one percent of the public. We respectfully submit, renaming and branding expanded wireless emergency alerts as Cellular Emergency Alert Service, would vastly improve public understanding and acceptance.

In closing, we respectfully submit that there are no technological or financial challenges to optimizing wireless emergency notification. The challenge remains political.