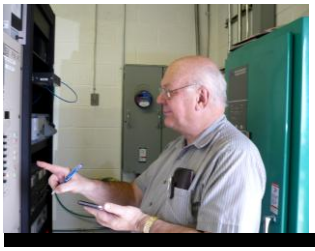

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EAS Decoded

The National Test of the EAN Alert Code

By Warren Shulz

[June 2011] The FCC and FEMA have set the date for the first National EAN test of the EAS. Warren Shulz has been involved with EAS for years on the LECC and SECC in Chicago and Illinois. Will the upcoming test solve more problems than it creates? Here is Warren's view:

The current Emergency Alert System (EAS) came into being in 1997, replacing the Emergency Broadcast System (EBS), itself a 1963 replacement for the original 1951 CONELRAD alert system. With the Common Alert Protocol (CAP) and a renewed focus by FEMA, will the EAS work when needed?

BROADCASTERS AT THE READY

For over 50 years, broadcasters have stood at the ready to relay an EAN (Presidential Alert). Since the days of CONELRAD, EBS, EAS, CAP and into the next generation of plans and receivers, broadcasters have maintained systems to perform this task.

In January 2010, FEMA did the first EAN exercise in the State of Alaska and saw flaws re-appear – the very same ones that were found during an inadvertent EAN released in Illinois on June 26, 2007.

It was only then, ten years after EAS was mandated, that the EAN code was found to be flawed – the Part 11 EAS Rules were found to be contradictory – and that no end-to-end test had ever been attempted, much less performed, on the installed equipment base.

So what we are really doing this Fall is performing the end-to-end test of a system that never was proven in 1997 when the existing hardware was originally deployed.

THE EAN CODE IS A BIG DEAL

As mentioned, the EAN code has not seen the light of day outside of Alaska, except for a few rare leaks. While the results of the Alaskan tests have not been widely disseminated, we do know a few things about what was demonstrated.

The EAN code is a *non-time-out code* that locks the ENDEC (EAS encoder/decoder) to a monitor source. It can only be terminated by the receipt of the EOM (End of Message) – or by a power recycle (re-boot).

So, on the test day you need to stand "at the ready" to re-take your studio audio source should your ENDEC not receive the EOM to terminate the test. Otherwise your ENDEC will

be re-broadcasting your LP monitor assignment until you hand abort the take-over.

DO WE STILL NEED THE EAN?

So what would require a Presidential EAN alert? I do not know because in spite of all the calamities over the past 50 years nothing warranted a Presidential Alert to the nation's general public.

Broadcasters really do not want some faceless bureaucrat taking over their station to relay old facts of a news story they already could be airing.

In fact, we regularly see major events unfold over CNN, FOX News, and the other 24/7 dedicated news channels without the need for an EAN alert. It is called news and information. Many events really are self-announcing or lead-ins to the major news stories unfolding as they progress live on the air.

Or, perhaps this whole concept is without and real merit at all. Something like a solar flare or EMP could cripple both broadcast operations and receivers, making an EAN impossible to send or receive.

MAKING THE EAN A SUCCESS

In my opinion it will take three National EAN test cycles to get to an 80% success.

This National EAN test will show the flaws in the EAS State Plans that no one common authority supervises. In fact, my preference is to call this an "exercise" and not a test.

Issues in connecting from the PEP stations to state entry points will be the weak link. The PEP system original design was for a "Network of Last Resort" that was tasked with this role of being the alert "door bell."

Being mostly on AM stations, PEP coverage may not match the station's coverage map due to interference, man-made noise, and nighttime propagation conditions.

RELAY FROM NPR

A little-known option is that an NPR station can replay the PEP EAN from the NPR satellite squawk channel. This was done by an MOU (Memo of Understanding) about ten years ago. The LP station which cannot receiver a reliable PEP station can fall back to a local NPR who agreed to connect their ENDEC to the satellite cue channel.

The NPR uplink has the same PEP ENDEC unit as a PEP station, driven from the Federal Operations Center (FOC) at Mt. Weather, VA. Hence, the NPR stations will receive the EAN via the same route as every PEP station. This is a good work-around for PEP reception issues and state entry-point failures to connect issues.

OR – ANOTHER IDEA

Perhaps in time the EAN Alert will be found to be better served over the NOAA Weather Radio Network, or via a direct satellite "all alert channel subscription" on Dish Network or Direct TV. Both are essentially in place and ready to be put to work feeding the EAS network.

Receivers for either service are easily available, which every LP could then monitor. During "spare time," the channel could show videos to help first responders.

The channel could even be advertiser supported with products and services of interest to first responders.

Some examples might include iodine pills, MRE's, boogie bikes, ammunition, water purification, home surgery kits, EMP survival, using Geiger counters, survival guide for radiation exposure, books on growing your own foods, how to live off the grid, seed banks, solar power, medical information, CB radio, H-F

radio, shelter in place survival, and similar things.

In the meantime, let us hope the FCC will begin to step up and communicate clearly with broadcasters, providing clear guidance and test procedures for stations, rather than just hassles from the EB.

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The EAS Forum is open for business. Information on the EAS and the various plans, receivers, a discussion group, and more can be found at http://eas.radiolists.net/ Check it out!

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