
Broadband, Broadcast, and Homeland Security Finding the Right Balance...

By Tom Wolzien

More than eight years after 9/11 and four years after Katrina, the nation is no closer to providing reliable emergency information to its citizens, a population increasingly fractionalized by diverse electronic communication devices. As the nation looks toward a new broadband policy, it would be well to consider a policy that balances the strengths and weaknesses of broadband, of broadcast, and of the impact on Homeland Security.

Broadband provides phenomenally precise point-to-point communications as a way for individuals to find what they want when they want it. But when many people need something at the same time, the broadband circuits--wired or mobile--can clog up and the information-carrying data can't pass. Broadcast is the opposite of broadband precision. Its transmissions are intentionally imprecise, blanketing an unlimited number of users with the same information from a central point simultaneously. No clogs.

The risk to Homeland Security from an un- balanced approach to broadband and broadcast is apparent to anyone who has tried to use a phone--cell or wire line--during a large scale emergency like a hurricane or crisis like 9/11. Because there are intentionally not enough circuits to go around, the system slows or shuts down. Mobile calls don't connect. Wire line calls overwhelm the central telephone offices. And, as more and more people rely on broadband data, those systems, too, will overload because they are not designed for everyone to use them at once. The worst risk is for people relying on mobile phones for communication who are out of the house. There is no economic incentive for mobile phone companies to provide emergency capacity to permit all mobile phones or data connections to work at once, even if the bandwidth were available.

Broadcasting information through the regular pathways of digital television stations provides a way to blanket crisis areas, or almost the entire country, if needed, with information essential to save lives throughout the crisis, no matter how long it goes.

Broadcasters with solid news and engineering operations have the ability to provide this crisis service today, but that doesn't mean it can be received by citizens outside the home. The problem is that there are no receivers for this emergency broadcast information built into the country's 280 million mobile phones. Even the most sophisticated cell phones, like the Iphone, only have the ability to connect to information sources by easily overloaded wireless broadband.

This Homeland Security communications problem can be remedied by a simple requirement from the Federal Communications Commission that all mobile devices include a tiny digital television receiver that would work along side the current broadband connections. Working

cell phones including the little TV data receivers have been shown at the past two Consumer Electronics Shows. Since most mobile phones get traded in every two to three years, on average, almost every one of the 280 million mobile subscribers would have the emergency capability in a half decade or less.

To be fair, current mobile phones could be used to deliver short messages to large, pre-determined groups of the population—everyone with a cell phone registered in Westchester County, for example. This works for a street closing, but cannot address the psychological component in a continuing national emergency. Text is no replacement for seeing and hearing a real human on a continuing basis. Consider, for example, if live video of Rudolph Giuliani's extraordinary briefings on and after 9/11 were reduced to SMS.

What right does the Government have to require inclusion of the tiny tuners? Since it regulates the airwaves, it can also regulate receivers of those airwaves. There's substantial precedent. During the early Cold War, radio sets were required to show emergency channels with little Civil Defense (CD) marks on the tuners. Similarly, after Congressional action, the FCC required that Ultra High Frequency channels above channel 13 be included in television sets previously limited to channels 2-13 during the 1950s. And, more recently, the FCC defined receiver design for new digital televisions after the conversion from analog TV to digital was required by Congress. It was that foresight by Congress that set the ground work to permit deployment of the tiny digital broadcast receivers for mobile phones.

As the nation considers a broadband policy, it has the opportunity to solve the challenge of simultaneous emergency communication to a fractionalized populous. It is a need that we hope won't come, but for which we know we must be prepared. The complementary strengths and weaknesses of broadband and broadcast must be considered, as though our lives depended on understanding those differences. They may.

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