



A FAILURE TO COMMUNICATE: KATRINA PINPOINTS DANGEROUS LAPSES IN OUR TELECOMMUNICATIONS POLICY

— PART OF COMMON CAUSE’S CONTINUING “EYE ON THE GULF” SERIES —

*“Outside [the Jefferson parish] mobile headquarters truck, two officers grip a stepladder while a third stands on the top rung waving his mobile telephone in the air, searching for a signal.”ⁱ
(Report from New Orleans, three days after Hurricane Katrina made landfall)*

The image is almost comical. But it’s no joke: Our police, fire and rescue personnel face enormous problems simply communicating with each other in emergency situations. Hurricane Katrina once again highlighted the failures of the emergency communications system:

- Police officers were unable to communicate with each other because their radio channels were overwhelmed.ⁱⁱ
- Supplies and workers were prevented from coming into New Orleans because city officials could not coordinate with police to authorize vehicles into restricted areas.ⁱⁱⁱ
- Rescuers lacked basic information about stranded residents, areas that needed to be searched, and floor plans of hospitals and nursing homes.

Katrina’s failures ought to push Congress to make sure that they are never repeated. Congress can ensure that emergency responders have the access to the public airwaves they need in order to communicate with one another and quickly receive crucial data for saving lives. Congress can also take the steps to open up the airwaves – a public resource – to community networks that will help all of us gain access to high-speed Internet, regardless of our income level, race, or locality.

As Katrina made clear, Congress’s capitulation to the broadcast lobby has hobbled our response to emergencies. In 1996, Congress directed the Federal Communications Commission (FCC) to give every existing television broadcaster a digital TV license, in addition to the analog license each had received for free years ago.^{iv} Those licenses allow broadcasters to operate using the airwaves – which are public property, just like our national parks and forests. If those airwaves had been auctioned off they would have been worth as much as \$70 billion.^v Broadcasters got this huge benefit courtesy of the American public with the understanding that, within a reasonable period of time, they would switch over to digital broadcasting and give back their analog licenses so that the analog airwaves could be redistributed for other purposes.



The following year, as part of the 1997 Balanced Budget Act, Congress directed the FCC to allocate a portion of those analog airwaves to public safety purposes. But broadcasters had already succeeded in inserting a loophole into the law that allows them to hold on to their analog licenses until some uncertain date far in the future – thus preventing first responders from getting access to the airwaves they so desperately need to upgrade their communications systems. Two weeks before Hurricane Katrina struck the Gulf Coast, the president of the Major Cities Police Chiefs Association, Harold Hurtt, called it “a life or death issue.”

“[W]e are still waiting for action eight years later. We have example after example of the need for improving our communications capabilities to enhance Homeland Security efforts. ... Broadcasters are preventing access by public safety agencies that serve more than half of America’s population. The most frustrating part is that broadcasters, because of the lack of a firm date for clearing the spectrum, can continue to block public safety’s access to this spectrum indefinitely.”^{vi}

The 9/11 Commission’s Report also recognized public safety’s need for additional airwaves.^{vii} John Lehman, former Secretary of the Navy under President Reagan and a member of the 9/11 Commission, expressed frustration with the continued delays earlier this summer:

“It is really scandalous in a way. One of our [the 9/11 Commission’s] recommendations was to free up a range of radio frequencies not being used. That hasn’t happened because they are being held onto by the broadcast industry due to a contingent possibility that they may be needed in distant future ... but they are the very frequencies that are needed by first responders and are used by police and fire departments.”^{viii}

Congress is poised to take up DTV transition legislation this year.^{ix} One major priority must be setting a so-called “hard deadline” for broadcasters to return their analog licenses, so that the airwaves which were promised to first responders nearly a decade ago are put to use for public safety as soon as possible.

A second – though no less important – priority must be reserving some airwaves for public use. Doing so would allow cities and towns to build “wireless networks” that could both aid emergency personnel, and help communities bridge the digital divide and better communicate with themselves.



Community wireless networks are already popping up in some parts of the country.^x Michael Calabrese, vice president of the New America Foundation, recently testified to Congress about their benefits:

“Municipal [wireless] networks – in small towns like Chaska, Minnesota, and in rural villages like Coffman Cove, Alaska – are blanketing underserved areas with high-speed Internet access at affordable prices. In other towns, such as Scottsburg, Indiana – public-private broadband networks have saved jobs by keeping businesses from moving out. And in ...Granbury, Texas and San Mateo, California, these same networks serve as mobile communications systems for police and other public safety agencies.”^{xi}

Wireless networks allow police, fire and rescue personnel to easily download street maps and floor plans of buildings, utilize text-messaging, transmit audio and video, and share up-to-the-second information.^{xii} They are also more stable than traditional radio communications because their infrastructure is decentralized. When a radio tower is taken out by a storm, the entire system collapses. But with a wireless network, even if many parts of the network (called “nodes”) are destroyed, the other pieces can still communicate. Paul Smith of the Center for Neighborhood Technology, a group that has built wireless networks in several Chicago-area neighborhoods, has tested the networks’ durability, and found them to be surprisingly resilient. He told the *New York Times*, “We’ve been running these little Apollo 13 disaster scenarios where a bunch of our nodes get taken out, and the whole system just reconfigures itself automatically.”^{xiii}

Another advantage of wireless networks for public safety is that the nodes run off relatively little power: about 10-14 watts, or approximately one-fifth of the energy used by a light bulb.^{xiv} So first responders can continue to send and receive data using batteries or solar power, even when the electricity is out for extended periods of time.

In fact, wireless networking was the technology of choice of the workers who came in to rebuild communications systems throughout the Gulf Coast in the first days and weeks following Hurricane Katrina.^{xv} Consider this story:

Just as Katrina proved the vulnerability of traditional telephone and cellular networks, it also showed how Internet-based technologies could be used to speedily re-establish links with the outside world.

...In Bay St. Louis, MS, help came from a group based at the Naval Postgraduate School (NPS) in Monterey, Calif.



That team brought a number of vehicles, including a 33-foot RV loaded with Wi-Fi and satellite gear as well as emerging technologies for carrying high-bandwidth connections over a range of miles.

Commanders sent the team to the hospital in Bay St. Louis, which had been flooded by four feet of water.

...Within five hours of the NPS team's arrival, anyone with a laptop at the hospital could send e-mail, surf the Web and send instant messages. With an Internet telephone, they could make and receive calls over the connection that's similar to a low-priced DSL link.

To expand coverage, the NPS students deployed ...Wi-Fi equipment to set up additional wireless access points and mesh them together to form a single cloud that could extend for more than 10 miles. The ...equipment works even if one node goes down.^{xvi}

Wireless networks can be an invaluable part of a strong emergency communications network, but they also bring a myriad of benefits to communities in non-emergency times. According to wireless network expert and co-founder of the Champaign-Urbana Community Wireless Network Sascha Meinrath, networks can help:

- Disadvantaged schools and community centers bridge the digital divide by offering low-cost, high-tech resources and opportunities for adult education and distance learning.
- Small businesses and individuals gain access to low-cost broadband Internet access.
- Citizens become media producers – broadcasting Internet radio, self-publishing journalism, or displaying art projects.
- Local libraries become hubs for free, open access to information.
- Doctors transfer information to patients with limited mobility, as well as exchange patient information with other doctors, clinics, pharmacies, and hospitals.
- Local governments offer e-services to residents, such as online voter registration, directions to polling stations, bill payment, access to tax advice, and public service announcements.^{xvii}

In order to build these wireless networks, communities need increased access to the publicly-owned airwaves. Congress can make that happen by setting aside for public use a portion of the airwaves that are currently being used by television broadcasters to broadcast their analog signals, but that will soon be returned.

However, many in Congress want to auction off access to the airwaves to cell phone and other wireless technology companies in order to generate more money for the public treasury.^{xviii} But auctioning off these valuable airwaves would be like auctioning off the Grand Canyon.



Something that should benefit all of us will instead be in the hands of a few wealthy special interests.

Congress can and should act now to promote telecommunications policies that serve public safety and the public good. Lawmakers should:

- Support a hard deadline for the digital television transition, so that first responders can use the airwaves promised to them nearly a decade ago.
- Give communities access to the airwaves they need to develop wireless networks that will serve public safety interests, as well as small businesses, local governments and individual citizens.

The airwaves belong to the public. It is critical that Congress acts to place the communication needs of our public safety officials and our citizens ahead of the profit-driven desires of big telecommunications companies.



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- ^v Neil Hickey, “What’s At Stake in the Spectrum War?,” *Columbia Journalism Review*, Jul/Aug 1996.
- ^{vi} “Public Safety Organizations Call for Congress to Provide Critical Spectrum for Emergency Communications,” City of Houston Police Department, 23 Aug. 2005.
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- ^{viii} Michael Smerconish, “The Missing Link in Homeland Security,” *Philadelphia Daily News*, 14 July 2005.
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- ^{xiii} Clive Thompson, “Talking in the Dark,” *The New York Times*, 18 Sept. 2005.
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- ^{xvi} Matthew Fordahl, “Geek Cavalries Turn Post-Katrina Landscape into Wireless Lab,” Associated Press, 4 Oct. 2005.
- ^{xvii} Sascha Meinrath, “Community Wireless Networks: Participatory Media and Neighborhood Empowerment,” <http://www.saschameinrath.com/writings/2005-04--28%20--%20Wirelessing%20the%20Revolution.ppt>, last visited 11 Oct. 2005.
- ^{xviii} Amol Sharma, “Fall Agenda: Broadcast Spectrum Reallocation,” *Congressional Quarterly*, 3 Sept. 2005.