

“Cybercrash: The Law and Policy of Network Failures”

The Communications Network

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First Responder Communications

Lessons Learned from 9/11

■ World Trade Center

- Channel quantity was insufficient and coverage in buildings worsened after the collapse. Repeaters and command & control systems were destroyed as a result of the collapse. This made ground zero communications difficult for the FDNY.
- Mobile wireless systems were overloaded due to extraordinary call volume.
- Lack of redundancy in use of towers hampered Federal and Local Public Safety Communications systems that were positioned on one tower.
- Two-way pagers and blackberry devices worked well.

- Source: "Long Island/New York City Emergency Management Conference: Lessons Learned from the World Trade Center Attack", Public Safety Wireless Network (now SAFECOM), June 2002



Washington Street view of Verizon's West Street building after the collapse of 7 WTC. Numerous building breaches on floors 1, 2, 4, 7, and 9 caused by the collapse.

First Responder Communications

Lessons Learned from 9/11

■ Pentagon

- Relatively successful emergency communications due to regional planning of Council of Governments (since Air Florida crash in 1982).
- Some commercial services were congested due to a spike in call demand at Ground Zero (except Nextel Direct Connect, which was used to communicate with federal agencies).
- As number of responding agencies increased, incompatibilities (i.e., in equipment and frequencies) became evident. Only initial responders were interoperable.

- Source: "Answering the Call: Lessons Learned from the Pentagon Attack", Public Safety Wireless Network (now SAFECOM), January 2002

First Responder Interoperability Initiatives

- DHS has a number of First Responder Grant programs aimed at improving ability to deal with threats. www.grants.gov, www.firstgov.gov. (\$2.2 billion State Homeland Security Grant Program; \$725 million Urban Area Security Initiative)
- SAFECOM Program – Administration eGov initiative to coordinate communications interoperability among federal/state/local first responders. www.pswn.gov
- DOJ's High-Risk Metro Area Interoperability Assistance Project. Top 25 Metro areas.
- Project 25 (P25/TIA 102) – Premier digital interoperability standard for first responders. User defined. Adopted by many federal agencies and a number of State and local public safety agencies (enhances interoperability and competition).

First Responder Interoperability Initiatives

- Wireless Priority Service (WPS) – a service available only to designated individuals at all government levels: national security, emergency responders, and private sector critical infrastructure leaders and decision makers, as approved by Federal Communications Commission Rules and Requirements and the NCS. www.ncs.gov
- Plans are to bring its current WPS carrier (T-Mobile) to full operating capability this summer and to add other carriers to the program.
- NCS/DHS is executive agent.

TOPOFF 2 – Terrorism Exercise

Lessons Learned

- Top Officials 2 (TOPOFF 2) was a Congressionally- mandated, national terrorism exercise.
- TOPOFF2 was designed to identify vulnerabilities in the nation’s domestic incident management capability.
- Interagency communications was identified as one of the most important difficulties.
- “Hot zone” coordination, agency protocol and acronym coordination and seemingly simple task like getting everyone on the same radio frequencies were challenges.



Main site of simulated dirty bomb detonation. *City of Seattle – Erik Stuhaug.*

Source: TOPOFF 2 After Action Summary Report for Public Release, Dept. of Homeland Security, December 19, 2003.

http://www.dhs.gov/interweb/assetlibrary/T2_Report_Final_Public.doc

Project 25

- User-driven (Fed/State/local) digital interoperability standard with manufacturer participation through TIA.
- Provides for competition between manufacturers—user's choice.
- Voluntary Federal Government standard adopted by many Federal Agencies, including: Justice, Treasury, DHS, DOD, Interior, DEA, FBI, FCC, NCS, NSA, Customs, Border Patrol, DISA, Secret Service, Park Police, INS, Forest Service and Fish and Wildlife Service.

700 MHz Public Safety Spectrum

- Reallocated to Public Safety from TV channels 60-69 (24 MHz) in 1997.
- Much of the spectrum is encumbered by the DTV transition rules.
- HERO Act HR 1425 forces transition to free up spectrum for Public Safety.
- FCC has recently proposed a “hard” DTV transition date of 2009.

President's Spectrum Initiative

- On May 29, 2003 President Bush signed an Executive Memorandum announcing the Administration's commitment to develop and implement a comprehensive United States Spectrum Policy for the 21st Century.
- The initiative is designed to:
 - 1) foster economic growth;
 - 2) ensure national and homeland security;
 - 3) maintain U.S. global leadership in communications technology development and services; and
 - 4) satisfy other vital U.S. needs in areas such as public safety, scientific research, federal transportation, infrastructure, and law enforcement.
- The President's Memorandum also defines two courses of action:
 - 1) The establishment of a Federal Government Spectrum Task Force; and
 - 2) To conduct public outreach to a broad range of stakeholders.

Summary

- The President's policies are working to promote economic growth.
- Prepare, Plan, Share Best Practices.
- September 11th taught us a great deal about the status of our telecommunications infrastructure. Redundant systems and networks are key to making sure that first responders have the resources they need to handle emergency situations.
- Systems that promote interoperability and the use of public safety spectrum will evolve as the country cuts over to DTV and reclaims valuable spectrum from broadcasters.
- The Administration's efforts to promote a spectrum policy for the 21st Century spectrum will go far to balance the spectrum needs of industry, government and the public.