The Crisis in First Responder Communications

Jerry Brito
What is the interoperability problem?
What is the cause of the problem?
Knowledge?
“[U]nless immediate measures are taken to alleviate spectrum shortfalls and promote interoperability, public safety agencies will not be able to adequately discharge their obligation to protect life and property in a safe, efficient, and cost effective manner.”
PSWAC
Sept. 11, 1996

NTFI
9/11 Commission
2003 - 2004

Hurricane Katrina
Independent Panel
2006
Money?
NTIA Grants $1 Billion
DHS Grants $5.6 Billion
H.R. 1 $3 Billion

“Although some New Orleans and Louisiana state officials attribute the lack of true interoperability for first responders to in the region to financial limitations, this flies in the face of the massive amounts of federal grants to Louisiana.”

-House Katrina Committee
Spectrum?
Policy.
WARNING:

Egg Head Content
Collective Action

- Activities that, in order to be successful, require two or more actors to coordinate their efforts.

- Collective action is therefore group action meant to further an interest of the group.
Collective Action Problem

- A situation in which the rational course of action for the individual members of the group does not coincide with the group-oriented course of action necessary to obtain the “collective good”
Mancur Olson
& Group Theory

- Small Groups
  - Privileged
  - Intermediate
Mancur Olson & Group Theory

- Large Groups
- Latent
Public safety = large latent

Over 50,000 public safety agencies
Selective Incentives

☐ Negative
☐ Positive
Selective Incentives

- Negative

- Positive

Sorry We’re Closed
Selective Incentives

☐ Negative
☒ Positive

AARP
Selective Incentives

☐ Negative

☐ Positive
How is it you have completely interoperable mobile communications?
Case Studies
Walky-Talky

- Radios were obsolete and failing
- Entrepreneurs built network for police and fire
- Opened to other public service groups
- Interoperability is part of package
O2 Airwave

- Radios were obsolete and failing
- Ofcom sharers’ list
- Guaranteed network availability
- Local flexibility through tiered services
  - Core service
  - Menu exclusive services
  - Menu competitive services
- Interoperability is part of package
Radios were obsolete and failing

Proposition: “We can build you your own network, or you can join ours.”

Shared with commercial customers

Interoperability is “a take it or leave it proposition.”
Recommendations
- License PS spectrum to commercial carriers
  - Auction licenses, use revenue for PS
  - Allow PS to sell/lease their spectrum
- National footprints
  - At least two carriers
  - Require interconnection
- Allow shared use with private users
  - Priority for public safety
Thank you.