

# ENHANCING THE COMMUNITY RESPONSE TO AID FIRST RESPONDERS

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# WHY ARE WE HERE?

- Current State of Affairs
- What is 5G?
- Is a carrier-grade network the only option?
- Who needs 5G?
  - First responders (clearly)
  - But, also the people that they need to help

# WHY IS CITIZEN RESPONSE IMPORTANT



Cajun Navy





# Wireless Innovation for a Networked Society (WINS) Challenges

powered by 

- <http://wirelesschallenge.mozilla.org>
- Challenge #1:
  - How can we leverage wireless technology to keep people connected to each other and to vital information sources in the aftermath of a disaster where Internet access is unavailable or compromised?
- Challenge #2:
  - How can we leverage existing infrastructure to provide robust wireless Internet connectivity in communities that need greater access?
- \$1M in prize money for each

# CONNECTING THE UNCONNECTED!

- Heavy interest in the challenges
  - Many design submissions in Phase 1
    - Over 100 selected to submit an implementation plan in Phase 2
    - 14 selected for Finalist showcase (August 2018)
    - Winners of each challenge announced (September 2018)
  - Timely announcements
    - Hurricanes Florence and Michael showed the need for these solutions
    - Administration focused on rural broadband delivery
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# OFF-THE-GRID INTERNET CHALLENGE

- **HERMES**
    - shortwave radio meets cellular for super long distance communication on devices you already own.
  - **Project Lantern**
    - WiFi hotspot device that lets you send maps, status, and messages across town when the Internet is down.
  - **EmergenCell**
    - Off-the-grid, self-contained, LTE network-in-a-box for emergency response.
  - **Wind**
    - Network designed for opportunistic communication and sharing of local knowledge that provides off-grid services for everyday people, using the mobile devices they already have.
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# SMART COMMUNITY NETWORKS CHALLENGE

- **Southern Connected Communities Network**
  - Community-controlled broadband ISP in rural Appalachia and the South. A working line-of-sight broadband tower that can deliver wireless gigabit within a 25 mile radius.
- **Equitable Internet Initiative (EII)**
  - An effort to redistribute power, resources, and connectivity in Detroit through community Internet technologies. Intranet resources emphasized over Internet.
- **SMARTI**
  - A prototype that marries solar energy with WiFi mesh technologies. Project by the San Antonio Housing Authority in San Antonio, TX;
- **ESU 5 Homework Hotspot**
  - TV White Space hotspots that help bridge the connectivity gap for students in Rural Nebraska (Beatrice, NE)

# WHAT'S NEXT?

- Car-ownership changed the way people live and move
- Often under-utilized communication resource
  - Used mainly as a AM/FM receiver, and glorified Bluetooth speaker
  - GPS, and rarely 4G
- Imagine this in every car and first responder vehicle:



**ENDLESS OPPORTUNITIES – JUST DREAM BIG!**