Emergency Data Exchange Network

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Core Modules

- Cortex M0 processor with SD card storage
- LoRa packetized radio communication
  - 33cm or 70cm, 20dBm, 2km range
  - 27kbps
- Bluetooth Low-Energy Serial Control
- Display modules
- Gateway modules

Voice Network

- RFM69HCW packetized radio
- 4.8kbps, 0.5km range
- Any node can be a simplex voice repeater
- Codec2 voice compression
  - Mode 700C gives 0.5s of audio per packet
  - codec2-ios: github.com/blanu/codec2-ios

Open Questions

- Can we amplify the 20dBm signal to 30dBm?
- Can we port Codec2 from Cortex M4 to M0?
- Source for 900MHz antennas?

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