**## What is Meshtastic?**

An open source, off-grid, decentralized, mesh network built to run on affordable, low-power devices.

* Open source
  + Code is freely available
* Off grid, decentralized
  + Doesn't depend on the internet, a central server, registry, etc.
  + Can be stood up in the middle of nowhere with no connection to an existing network.
* Mesh network
  + Wikipedia: A mesh network is a network topology in which the nodes connect directly, dynamically and non-hierarchically to as many other nodes as possible and cooperate with one another to efficiently route data to and from clients.
  + Maybe a stretch, but basically the focus is that most nodes contribute to extending the network and it can function without much planning.
* Affordable devices
  + Devices range from $20 ~ $100.
  + Many options for 3D printed cases and DIY builds.
  + Also options for hardware that is ready out-of-the-box.

**## What else?**  
That's a good one-liner, but what does it not answer?

* Text-based communications - APRS-like
  + Direct & group messaging.
  + Position and telemetry reporting
  + Bots and some others
  + NOT voice, video, or browsing the web.
  + Different than APRS in that nodes by default repeat traffic like a digi
* Mostly unlicensed ISM bands - 900MHz in US
* LoRa - "long range"
  + CSS - Chirp Spread Spectrum
    - SS, but not really wide-banded.
  + Similar to FT8 in working below noise floor.
  + Focus on distance over speed

**## Why Meshtastic?**

* Keep in touch
* Comm plan for emergencies
* Fun

## Where?

* Neighborhood
* Outdoor activities
* Metro or larger area

## How? - Get Device

* Show various hardware options - photos
* Discuss phone app and how app/node relationship works. - photos
  + Phone app doesn't require internet or Wi-Fi
* Node options
  + nRF52840 Battery / solar
  + ESP32 - Wi-Fi
  + PA / LNA options

## How? - Device Setup (all slides)

## Links / contact (all slides)

## Other

* LoRa-APRS