

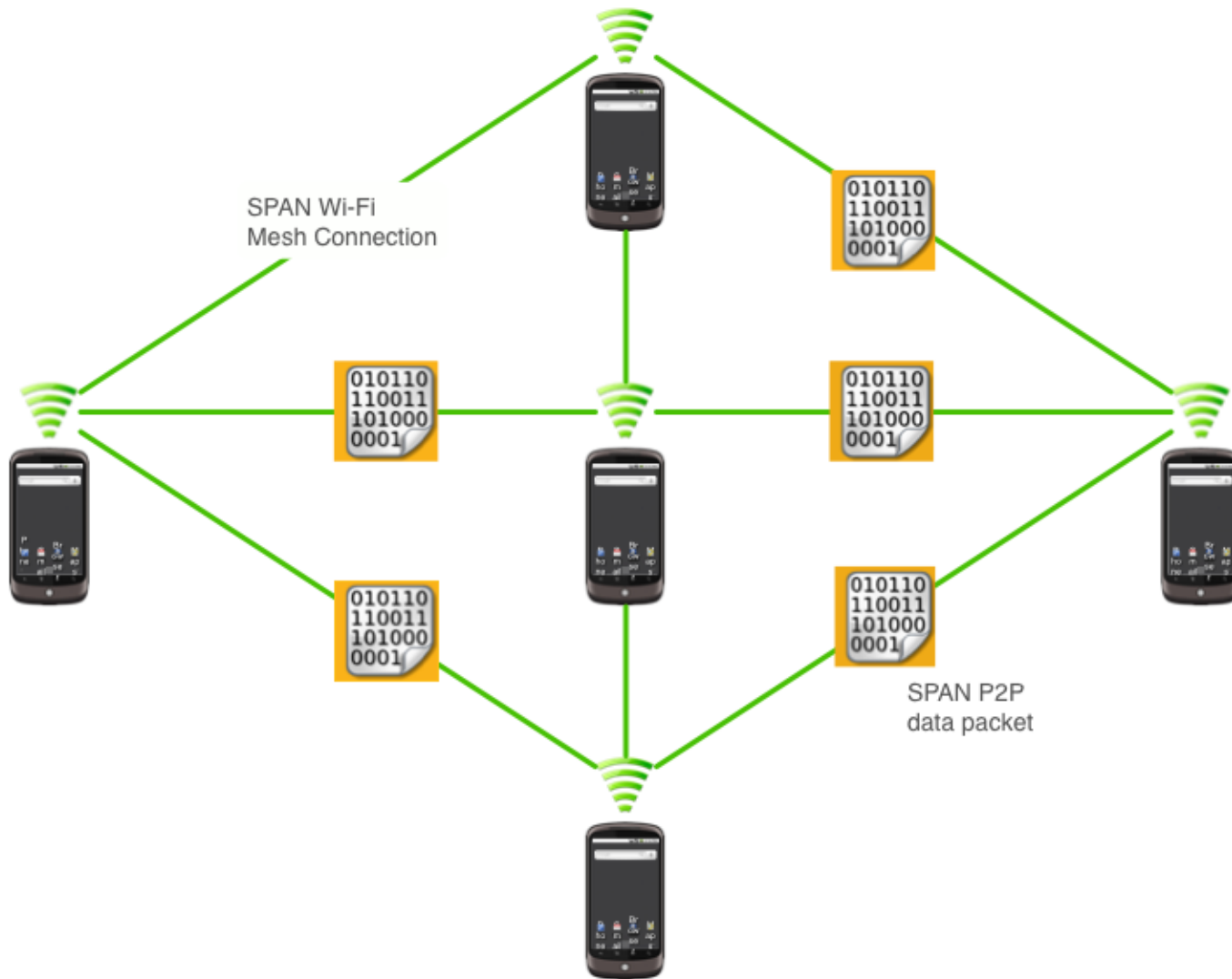
# Off-Grid Communications with Android: Meshing the Mobile World

Jeff Robble

# Smart Phone Ad-hoc Networking (SPAN)

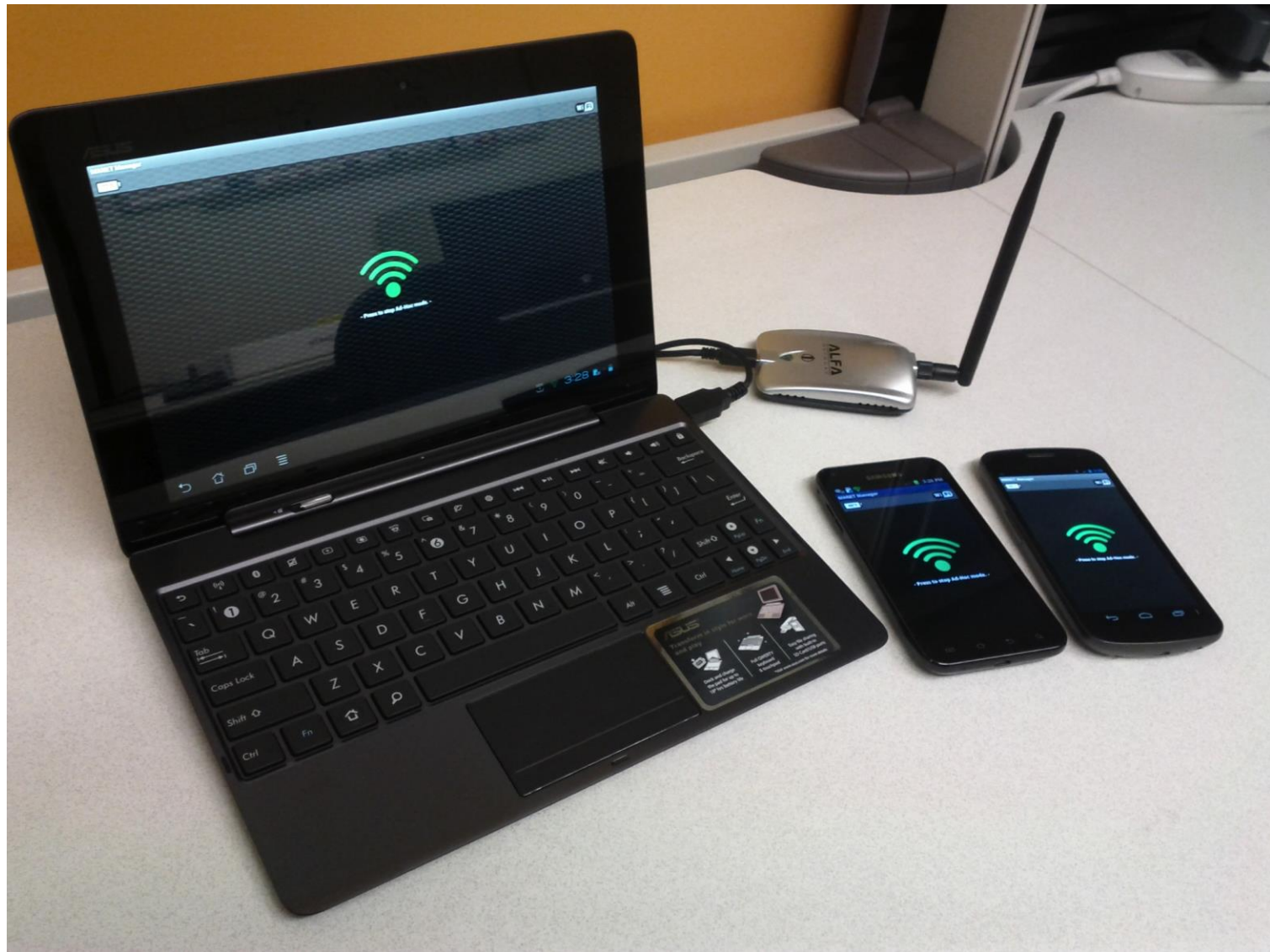
- Open Source research project funded by the MITRE Corporation
- Collaborative effort of private, public, and independent contributors worldwide
- Used in Emergency Preparedness and Response situations and humanitarian efforts

**MITRE**



# Smart Phone Ad-hoc Networking (SPAN)

- Leverage the ubiquity of smart phones to create a P2P mesh network
- Network is headless, no cell towers or wireless APs
- Relay messages through peers
- Network dynamically expands as more peers join
- Network is self-healing, peers can leave at any time



# Smart Phone Ad-hoc Networking (SPAN)

- Communicate when infrastructure is broken or cannot be trusted
  - Form a P2P VPN over the mesh
- Nodes can act as gateway devices
  - Share cell service with peers

# FEMA Scenario

Downlink Internet  
via satellite



3 Sector Wi-Fi  
on all towers

