

# Wireless Medical Device Challenges

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## FCC/FDA Wireless Medical Test Bed Workshop

March 31, 2015

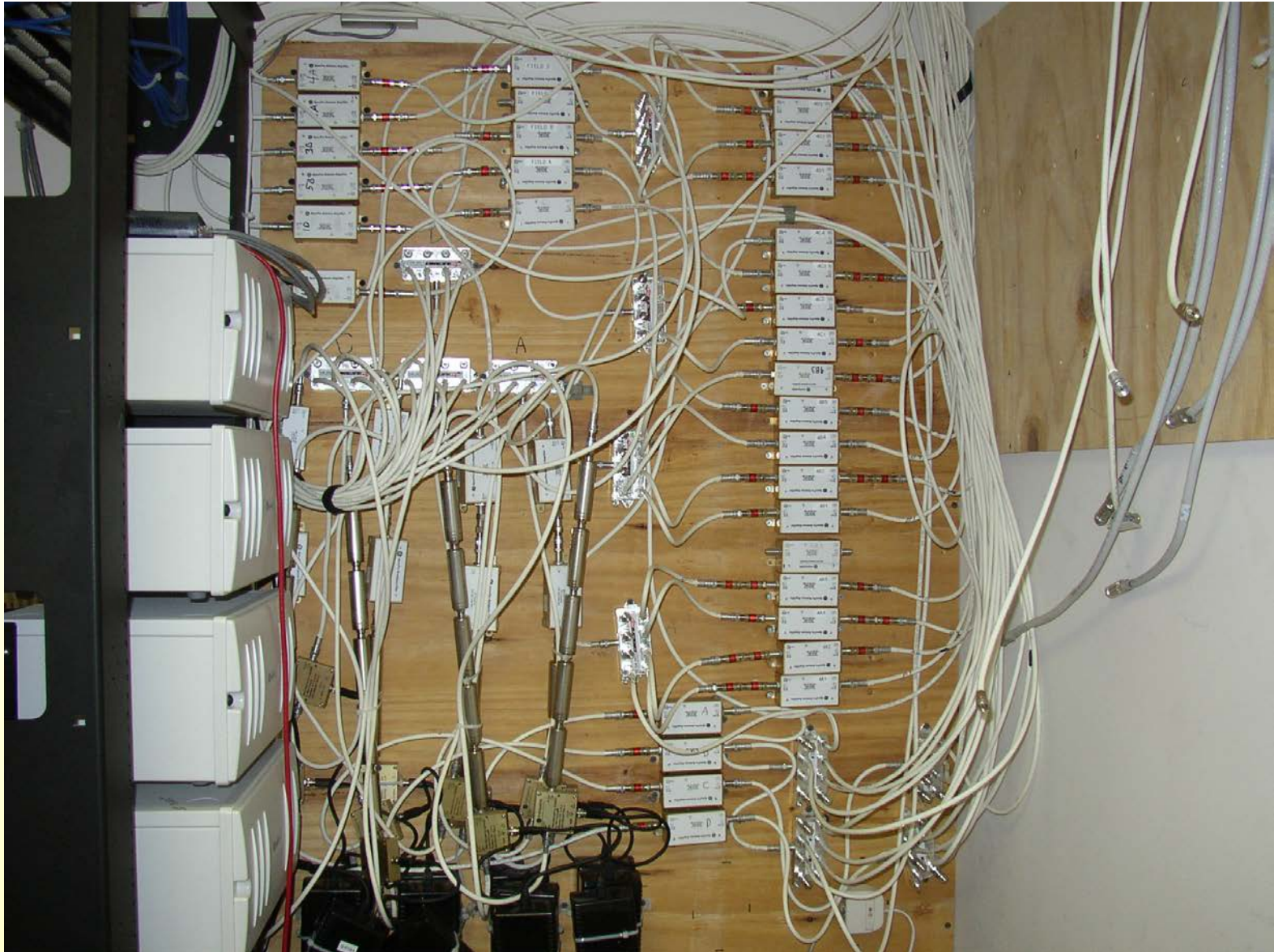


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# FCC Services Utilized

- ISM (Industrial, Scientific, Medical)
- WMTS (Wireless Medical Telemetry Service)
- PLMRS (Private Land Mobile Radio Service)
  - ◆ Public Safety
  - ◆ Bio-medical Telemetry
  - ◆ Industrial/Business
  - ◆ Private Land Mobile Paging
  - ◆ Radiolocation
- Paging
- MURS (Multi-Use Radio Service)
- FRS (Family Radio Service)
- GMRS (General Mobile Radio Service)
- MedRadio/MICS (Medical Implant Communications Service)
- Part 15
  - ◆ Medical Telemetry
  - ◆ RFID
  - ◆ Spread Spectrum
  - ◆ U-NII (Unlicensed National Information Infrastructure)
  - ◆ UWB (Ultra WideBand)
    - ★ Medical Imaging
- MBAN (Medical Body Area Network)
- Cellular Radio Service
- SMRS (Specialized Mobile Radio)
- AWS (3G) - Advanced Wireless Services Spectrum
- PCS (Personal Communications Service)
- Amateur Radio
- Private Operational Fixed Microwave

# Wireless Systems Aren't Wireless...



3/31/2015

... just a reminder.

# Wireless Medical Test Beds

- THE #1 REASON FOR CREATING WIRELESS MEDICAL DEVICE TEST BEDS IS TO ENSURE THE SAFETY AND HEALTH OF THE PATIENT!!!!
- This requires defining functional, not technical requirements for “Medical-Grade Wireless” by FCC and FDA

# Wireless Medical Test Beds

- Develop and prove new technologies for medical uses.
  - ◆ With the long-promised expedited experimental licensing
- Determine reliability of existing technologies for medical uses.
- Providing compliance metrics for standards organizations and industry alliances.
- Providing design information to the radio and medical device manufacturers.
- Providing performance and reliability information for vendors, healthcare delivery organizations and third-party integrators.
- Providing performance, reliability, and safety information for consumers at home, work, and play.