Cellular/PCS Introduction
Cellular/PCS Structure

- **BTS**: Base Transceiver Station
- **BSC**: Base Station Controller
- **MTSO**: Mobile Telephone Switching Office
- **PSTN**: Public Switched Telephone Network
- **Data Bases**: Centralized databases for subscriber information

**Connections**:
- **Radio Link**: Forward and reverse connections between Mobile and BTS.
- **Bearer Trunk**: Connection between BTS and MTSO.
- **Signaling Trunk**: Connection between BSC and MTSO.
International Structure

ITU

ITU-T  ITU-R

Recommendations

Member Countries
ITU-R

• Terrestrial Services
  – Procedures and registration of terrestrial national frequency assignments

• Space Services
  – Procedures and Registration of frequency assignment and allocation of orbital slots

• Regional Radio Conferences

• World Radio Conferences
  – about every 4 years
ITU Regions

Figure 1: Map identifying Region 1, Region 2, and Region 3, as defined in paragraph 2.104(b), and the Tropical Zone (shaded area), as defined in paragraph 2.104(c)(4).
US Regulatory Structure

• Dual authority
  – Federal Government Entities
    • NTIA Certification
    • Code of Federal Regulations Title 47, parts 300-399
  – Everyone else
    • FCC License
      – Code of Federal Regulations Title 47, parts 0-19
    • Transmitter-specific licenses
    • “Blanket” functional licenses, aka “unlicensed”