
WRC Trends

Presentation to National Spectrum Management Association Conference
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Background

- What: International treaty conference to revise the international Radio Regulations
- When: Every 3-4 years
- Who: Member States and Sector Members
- Why: Opportunity to advance U.S. innovation and economic growth, ensure national security



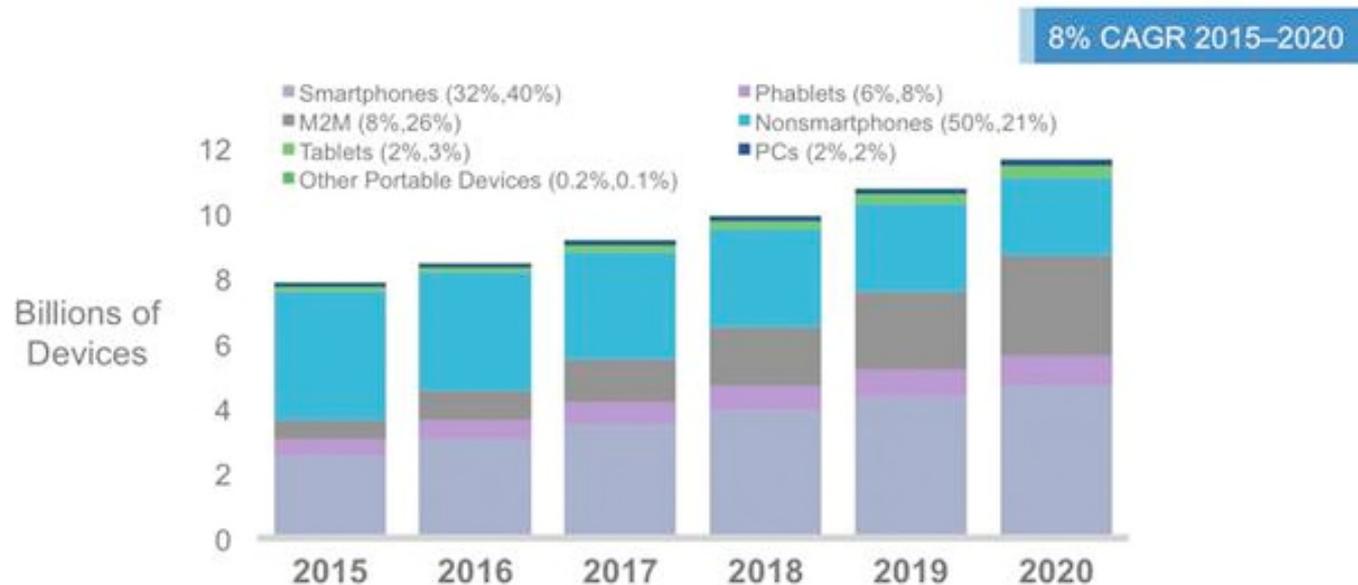
WRC-15

- U.S. priorities for WRC-15:
 - Acquiring more spectrum for mobile broadband (470-698 MHz, 1427-1518 MHz, 3400-3700 MHz)
 - Paving the way for innovative Unmanned Aircraft System (fixed-satellite service in the Ku and Ka bands)
 - Establishing a mechanism for global flight tracking (Aeronautical Mobile-Satellite (Route) Service allocation at 1090 MHz)
 - Ensuring the protection of critical government systems
 - Adopting an agenda for WRC-19 enabling continued U.S. technology innovation
- We achieved them all, complementing national efforts under the President's wireless innovation and broadband policies

WRC-19

- WRC-15 pointed the way and set the agenda for the technology innovations that will define the next decade
- 16 items on the WRC-19 agenda
 - Half based on Inter-American Proposals (IAPs) of U.S. origin
 - U.S. priorities: International Mobile Telecommunications > 6 GHz, High Altitude Platform Stations, Global Aeronautical Distress and Safety Systems, and 5 GHz Radio Local Area Networks
 - Advancing Non-geostationary (non-GSO) fixed-satellite service (FSS) in the V band, GMDSS modernization, MetSats in the 460-470 MHz band, and reviewing the orbital position limitations in Appendix 30
 - Other items of interest: Earth stations on mobile platforms communicating with geostationary FSS in the 17.7-19.7 and 27.5-29.5 GHz band and Intelligent Transport Systems
- C band non-GSO FSS systems in the Report of the Director
- Council will decide date and confirm agenda

Trends: Mobile

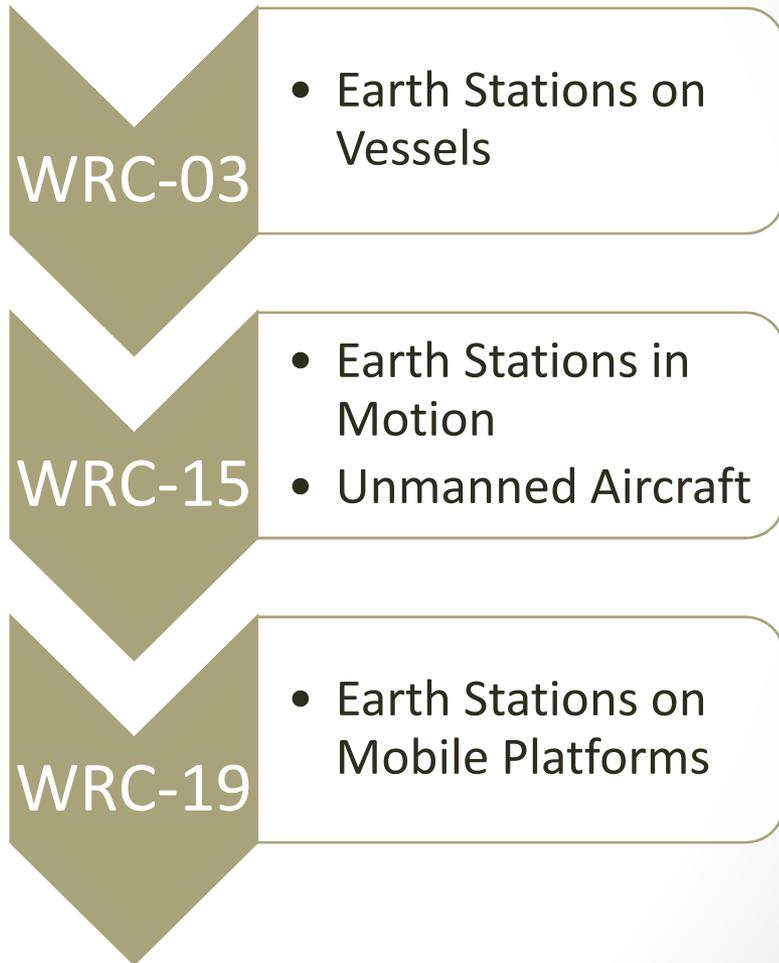


Source: Cisco Visual Networking Index Mobile, 2016

- Cisco predicts eightfold increase in mobile data traffic 2020 over 2015
- Identification of spectrum for International Mobile Telecommunications will remain a top priority
 - WRC-15 focused on spectrum below 6 GHz
 - WRC-19 will study more than 30 GHz of spectrum above 24 GHz
- Trend is toward multi-WRC process – allocation/identification by country footnote grows until it becomes regional or global

Trends: Satellite

- Satellite systems are using the fixed-satellite service to “go mobile”
- Non-geostationary satellite revival
 - Commercial constellations
 - Nano-/pico-sats



Trends: Aviation

- Unmanned Aircraft Systems (UAS) are next wave in aviation
 - Global UAS market for commercial applications expected to reach \$5.59 Billion by 2020, 32% compound annual growth rate ([MarketsandMarkets](#))
- Aviation safety is a globally shared goal
 - Allocation of spectrum at WRC-15 for Global Flight Tracking
 - Global Aeronautical Distress and Safety Systems at WRC-19
- High Altitude Platform Stations at WRC-19
 - Unmanned, lightweight, solar-powered aircraft
 - Broadband delivery mechanism

ITU for spectrum + ICAO for Standards and Recommended Practices

Other Observations

- Leverage synergy with U.S. national spectrum management approach
 - Presidential memos on 500 MHz and sharing
 - Bands in Spectrum Frontiers proceeding, Middle Class Tax Relief & Jobs Creation Act of 2012, and pending legislation
- Think ahead – from an agenda item to a global spectrum solution is generally a long game (10+ years)
- Engage with regional organizations
 - Particularly CITELE and sub-regional organizations in the Americas