



# Industry Association Roundtable

National Spectrum Managers Association

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for the

Satellite Industry Association



# Satellite Industry Issues and other FCC Initiatives

- Ultra-Wideband Systems
- Earth Stations Onboard Vessels (“ESVs”)
- 3650-3700 MHz Band
- ITS-DSRC in the 5.9 GHz Band
- AMSS Rulemaking
- Cell Phones on Aircraft



# Ultra-Wideband Systems

- SIA filed a Petition for Reconsideration of the UWB 2<sup>nd</sup> R&O and 2<sup>nd</sup> MO&O on March 11, 2005
- Principal concern: the 0 dB I/N protection requirement used to derive permissible UWB power levels is insufficient to protect sensitive FSS downlink operations
- ITU and other recent studies demonstrate that more appropriate protection value is  $-20$  dB I/N



# Earth Stations Onboard Vessels

- General Licensing Requirements
  - “ESV system license” comprised of a hub earth station(s) and/or large numbers of technically identical ESV terminals
  - ESV power limits and pointing accuracy requirement of 0.2 degrees, with automatic shut-off at 0.5 degrees
  - 24/7 point of contact with capability to cease ESV transmissions; retain ESV tracking data for one year
  - ESVs on foreign vessels must comply with U.S. requirements



# Earth Stations Onboard Vessels (cont'd)

- C-Band

- Co-primary status for ESV transmit operations in the 5925-6425 MHz uplink band and coordination required within 200 km of the U.S. coastline or offshore fixed microwave stations; dockside ESV receive operations in the 3700-4200 MHz band can be coordinated for renewable 180-day periods
- Coordination limit of 72 megahertz in the 6 GHz band per coordination area using no more than 2 satellites; all ESV operations collectively limited to 180 megahertz of coordinated spectrum in any given coordination area
- Automatic shut-off if vessel travels outside of the coordinated area within the 200 km coordination distance or falls below coordinated speed; 300 gross ton minimum vessel size



# Earth Stations Onboard Vessels (cont'd)

- **Ku-Band**

- Co-primary status in the 11.7-12.2 GHz (downlink) and 14.0-14.5 GHz (uplink) bands, with downlink operations also permitted in the extended Ku-band (10.95-11.2 GHz and 11.45-11.7 GHz) on an unprotected basis vis-à-vis U.S. terrestrial systems
- Coordination requirements to protect Space Research (14.0-14.2 GHz) and Radio Astronomy (14.47-14.5 GHz)
- ALSAT authority



# 3650-3700 MHz Band

- Nationwide, non-exclusive licenses for terrestrial operations, including Wireless Internet Service Providers (“WISPs”); registration requirement for fixed and base stations
- Deleted restriction on mobile service in the 3650-3700 MHz band, with mobile-to-mobile transmission limited to areas within base station transmission range
- Fixed station power density of 25 Watts/25MHz (or 1W/MHz up to 25MHz); mobile station power density of 1W/25MHz
- Established coordination zones around grandfathered FSS stations with 150 km radius
  - FSS operators have a good faith duty to negotiate within zones



# 5.9 GHz Band

- Dedicated Short Range Communications (“DSRC”) operations in the 5850-5925 MHz Band
  - Intelligent Transportation Society of America (“ITS America”), American Association of State Highway and Transportation Officials (“AASHTO”) and SIA sponsoring a cooperative effort to develop a sharing regime
- Issues
  - DSRC/FSS Earth Station Spectrum Sharing Protocol
  - “Best practices” to avoid and mitigate potential interference from both in-band and adjacent band sources
  - Examination of the potential for interference from aggregate DSRC transmissions in the 5.9 GHz Band into co-frequency FSS space stations receivers



# AMSS Rulemaking

- Ku-band Aeronautical Mobile Satellite Service (“AMSS”) NPRM released February 9, 2005
- Issues
  - AMSS and U.S. Spectrum Allocations
  - Protection of Ku-band FSS operations
  - Protection of Space Research (14.0-14.2 GHz) and Radio Astronomy (14.47-14.5 GHz)
  - U.S.-registered aircraft abroad and foreign-registered aircraft in U.S. airspace



# Cell Phones on Aircraft

- NPRM to facilitate the use of wireless devices onboard aircraft released February 15, 2005
- Issues
  - “Picocell” concept
  - Interference from airborne wireless operations
  - Who has the right to provide airborne wireless services?
  - Licensed versus unlicensed operations
  - Use of terrestrial wireless spectrum to provide off-board communications links



# Thank you!

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