



Spectrum Frontiers NPRM

Presentation to the Federal
Communications Commission

June 15, 2016



TIA Supports the FCC's Efforts

- TIA applauds the Commission for proposing service rules for the mmW bands
- Market forces should drive the technological evolution
 - Regulation should not chill innovation
- Rules should recognize the continued importance of existing services in the bands
- TIA is pleased to see a mix of licensed & unlicensed bands
- There is convergence around many key issues
- **The Commission can & should Act promptly**



Power Limits

- Fixed and base station limits should be increased from 62 to **75** dBm / 100 MHz EIRP
 - TIA supports joint proposal (April 2016) from Ericsson, Intel, Nokia, Qualcomm, Samsung, Verizon
 - Lower than what TIA originally proposed (85 dBm)
- Create an intermediate category for CPE that is transportable but not intended for use in motion
 - TIA supports joint proposal for 55 dBm EIRP
- Adjust EIRP levels to accommodate over-the-air measurement techniques for smart arrays



Other Technical Rules

- Emission limits
 - Use Total Radiated Power (TRP) to measure compliance, not EIRP
 - Ex parte filings from Ericsson, Intel, and Qualcomm are somewhat similar if not in every detail
- Bands & duplexing
 - TIA supports licensing 28 GHz as a single block
 - TIA supports licensing the 37 and 39 GHz bands as fifteen unpaired blocks of 200 MHz each
 - TIA supports flexibility to choose between TDD, FDD, or any other duplex scheme



RF Exposure

- TIA supports the Commission's efforts (in a separate proceeding) to update the RF exposure rules
- But prompt action is needed to adopt IEEE C95.1-2005 as the applicable standard for UMFUS
 - As updated by IEEE C95.1a-2010
- Manufacturers need greater clarity on measurement and assessment methods
 - Issue KDB guidance



Network Security

- Network security is a critical concern for vendors
- Network security is addressed in the context of industry standards-making and in the implementation of those standards by TIA member companies
- TIA recommends:
 - FCC should monitor industry standards-making and participate as necessary
 - Avoid band-specific security requirements



Licensing approaches

- For licensed bands, TIA supports traditional approaches
 - Industry still has much work to do before bringing mmW to market
 - Exclusive licensing will maximize much-needed upfront investment and promote further R&D
- TIA opposes proposals to apply the 3.5 GHz three-tier model to mmW spectrum
 - Do not impose spectrum access system (SAS), beaconing, or active signal cancelling requirements
- Private sharing arrangements are a better solution



37 GHz Licensing

- There is significant record agreement that the hybrid licensing to “premises occupants” proposal should not be adopted
 - Raises interference uncertainty for premises owners and operators
- Valuable spectrum could lie fallow
 - Premises occupants would need to build out their own networks or hire a service provider to do so
 - Public network operators cannot reasonably predict interference challenges – spectrum becomes less attractive
- 37 GHz should be fully licensed by auction



FSS Issues

- FSS licensees should be allowed to obtain terrestrial rights through auctions or secondary markets
 - TIA supports the proposal to extend spectrum leasing rules to these bands
- FSS user stations should be allowed in the 37 & 39 GHz bands on a secondary basis
 - FSS use in the 37 & 39 GHz bands is restricted to space-to-earth transmissions, so no harm to UMFUS
- TIA supports extending flexible use rights to incumbent licensees



Licensing Rules

- Use BTAs and EAs, not counties
 - County licensing won't help rural deployment and would impose significant transaction costs
 - Both EAs and BTAs create opportunities for small providers
- TIA supports 10-year term with renewal expectation
- Performance requirements shouldn't skew the market
 - Don't measure buildout until the 10-year point
 - Provide multiple benchmarks, such as a safe harbor based on number of connections in the geographic service area
 - Recognizes importance of M2M and IoT connectivity
 - Declaratory rulings should be issued in advance
- TIA opposes proposals for spectrum aggregation limits