

WinnForum 6 GHz Workshop:
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New Fixed Wireless Services via 6 GHz Must Protect Band Incumbents

Members of WISPA are long standing incumbents who, among other functions, are operators of licensed Point-to-Point long-distance back-haul in the 6 GHz Band and extensive operators in the 5 GHz Band.

Use of AFC: Appropriate simple and automatic frequency control should be employed in a clear and simple manner that utilizes current applicable radio presence and propagation data to adequately protect incumbent users.

Use of Propagation Data by the AFC: Propagation between the unlicensed transmitter and the Fixed Services receiver needs to be modeled by the AFC to determine if sufficient path loss exists. If path loss is low enough that harmful interference is possible, then the unlicensed operation would need to avoid that Fixed Services receiver's frequency range or reduce its power.

Use Accurate Terrain and Clutter Information in Propagation Models: Use propagation information that does not underestimate path loss. Calculation of path loss should include real RF obstructions including buildings and structures, terrain, vegetation, and curvature of the Earth; and with a preference that clutter, including natural ground cover and other physical obstructions, be considered, as these can cause very high attenuation at 6 GHz.

AFC Should Consider Reasonable Protections but Not Over-Extend to Waste Spectrum

Database Queries Should Be Infrequent: If the AFC is updated as applications are filed and rejects authorization of frequencies that are expected to be brought into use in the near term, then a longer polling interval should suffice. This approach would help keep the cost of the AFC down.

Guard Bands: The selectivity of current-generation Fixed Services receivers, which make use of digital signal processing as well as traditional filters, should be the basis of any guard band requirement. The same considerations should also govern the relevant signal levels.

Emission Masks: Out of channel emission mask requirements should not be excessively strict as the mask can be taken into account by the AFC.

6 GHz Can and Should Include Unlicensed Uses including Point-to-Multipoint

*WISPA as well as the Wi-Fi community support a **blend of uses** in the Band whereby the FCC provides an expanded set of rules for the continued use of licensed Point-to-Point protected operation; and, adds substantial spectrum access to unlicensed flexible and varied uses including Point-to-Multi-point and indoor uses.*

All such access should protect incumbents from unwarranted and harmful interference.

***Additional unlicensed access** would provide much needed mid-band spectrum to reach and cover many under or un-served Americans with broadband service. Such resources will be valuable in providing for the future with abundant access.*

Unlicensed Point-to-Multipoint Use in the Band with AFC: AFC can coordinate the higher-powered client devices of a point-to-multipoint system the same way it coordinates the access point. If one or more potential clients cannot use a given frequency that is available to the access point, then those clients should be allowed to briefly connect to the access point, be informed by the AFC that the frequency is unavailable, and then either discontinue transmission or only transmit on frequencies that the AFC does make available to them.

The Wireless Innovation Forum (WInnForum) is best suited to serve as the neutral industry stakeholder standards development organization (SDO) for fair and appropriate guidance in the 6 GHz Band.

WISPA supports the **Wireless Innovation Forum (WInnForum)** in the creation of a neutral 6 GHz Stakeholder group to provide for industry driven standards, specifications and protocols that are best for the Band and encourage new, dynamic and flexible use through a range of technologies (technology agnostic) and purposes.

WISPA asserts that some standardization makes sense to foster and encourage fair use of the Band, while further asserting that keeping protections for incumbents and access simple are vital to success.

Key Issues for Consideration by a Neutral Stakeholder Group like WinnForum:

- a) Aspects of the AFC that can viably be deployed (various forms) to protect incumbents.
- b) Communication or exchange of information between AFCs.
- c) Best practices for database queries.
- d) Use of Aggregate and Individual interference analysis in protection.
- e) Security of the ecosystem. Verification and Validation.
- f) Any test and validation required or best deployed.
- g) Use of Professional Installation.
- h) Indoor and Outdoor (by/between) impacts.
- i) Mitigation of Interference.
- j) Use of accurate propagation models or harmful interference data.

The 6 GHz Band is vital mid-band spectrum which if expanded to allow for indoor and outdoor unlicensed use while protecting incumbents, will serve as an outstanding opportunity to provide digital access where its needed.

WISPA supports the efforts of WInnForum to advance the Band through appropriate industry stakeholders.

For Further Information:

Wireless Internet Service Providers Association:

<http://www.wispa.org>

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