

FCC's U-NII Advisory and Enforcement Actions Underscore Potential Growing Pains of Spectrum Sharing by Unlicensed Devices

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October 8, 2012

One of the central issues in any spectrum sharing environment is the ability to enforce compliance with the regulations governing operation of the devices in the band, particularly the operation of secondary devices sharing spectrum on a non-interference basis with primary services. This is equally the case when new categories of unlicensed users gain access to share a band with incumbent operators. Currently, the exploration of what spectrum bands the federal government may be able to make available for access by private sector broadband providers and users, whether as a result of spectrum sharing or band clearing, has assumed center stage among policy makers. Last week's [meeting](#) of the Commerce Spectrum Management Advisory Committee (CSMAC) underscored the importance of rule enforcement when maximizing access to spectrum and the need for trust and confidence among users in a spectrum sharing environment.

At the end of September, the Federal Communications Commission (FCC) took several coordinated steps to enhance the better operation of a spectrum sharing framework adopted several years ago. Terminal Doppler Weather Radars (TDWRs) maintained by the Federal Aviation Administration (FAA) operate at airports in the 5600-5650 MHz band to obtain a variety of data used in real time by aviation operations, such as gust fronts, wind shear, and microbursts. The band is also used by wireless ISPs operating IEEE-802.11a devices on an unlicensed, non-interference basis as part of the Unlicensed National Information Infrastructure (U-NII) framework.

On September 27, the Commission issued an [enforcement advisory](#) (Advisory) directed to not just wireless ISPs operating U-NII equipment in the 5600-5650 MHz band, but to manufacturers, retailers, and marketers of U-NII devices. The multi-faceted target audience serves as a reminder that FCC enforcement actions to preserve the viability of sharing frameworks, especially when they involve unlicensed operations, will not be limited to the persons or entities operating the radio devices.

The Advisory reminds operators of U-NII devices in this band that only equipment certified under the FCC's rules may be used and that equipment must be installed and configured properly, including following the additional steps that must be taken when the devices are within 35 km of a TDWR. Further, users of these devices, like users of all unlicensed devices, need to keep in mind that compliant installation and configuration does not necessarily entitle one to use a certified device under all conditions – the devices must still not cause interference to TDWRs or other licensed services and must accept interference from any source.

The Advisory also served as a reminder that retailers need to ensure that what is on their shelf that must be authorized under the FCC's rules is, in fact, properly authorized before it goes on the shelves. From the FCC's perspective, the prohibition against marketing prior to certification falls squarely on retailers, even if importers or distributors may also have regulatory liability. Given the potential for U-NII devices, if not compliant and if not installed or configured properly, to cause harmful interference to operations that support air safety in the vicinity of airports, this is not a matter for retailers to take lightly.

Finally, the FCC reminded manufacturers that their U-NII devices operating in the same band as TDWRs – actually anywhere in the 5.25-5.35 and 5.47-5.725 GHz bands – must meet certain requirements (such as a Dynamic Frequency Selection (DFS) mechanism that users cannot disable, so as to detect the presence of, and avoid co-channel operations with, incumbent federal radar systems) and must provide certain information to the users. And, as noted above, manufacturers (or importers) must certify the devices before they are marketed or offered for sale.

The Advisory cautions users, retailers, and manufacturers that failure of each group to comply with the applicable rules can lead to FCC enforcement action, including substantial monetary forfeitures, seizure of the equipment, and even criminal sanctions, including imprisonment. In that regard, contemporaneous with the Advisory, the FCC issued two enforcement orders against AT&T and Skybeam Acquisition Corporation. In the [AT&T Forfeiture Order](#), the Commission fined AT&T \$25,000 for operating a U-NII device incapable of satisfying the DFS requirements and in frequencies outside the authorized range. The FCC issued a Notice of Apparent Liability against [Skybeam Acquisition Corporation](#) ordering the company to show cause why it should not be fined \$15,000 for operating an uncertified U-NII device on unauthorized frequencies and with DFS functionality disabled. The Commission's records make clear that there are other investigations ongoing and several other notices of apparent liability pending. While it remains to be seen how many future enforcement actions there will be as a result of uncertified U-NII devices being marketed or non-compliance devices being operated, our readers should be reminded that liability for interfering with the TDWRs may not necessarily be limited to FCC enforcement if air operations are adversely impacted and property damage, injury, or worse results.