



UNII Device Approvals

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UNII Device Status

- TDWR related field investigations ongoing
 - Interference cases substantially reduced
 - Several Notices of Unauthorized use issued by Enforcement Bureau
 - Notice of Apparent Liability issued to Utah Broadband
 - Cases under investigation
 - Equipment not operating within authorized bands
 - Equipment modified through software
 - Unauthorized equipment



Current Activities

- Technical working group agreement on revising test criterion for devices with radar detection
 - Plans to revise test patterns for current Bin 1 to better detect TDWR
 - Modify current Bin1 tests for detection bandwidth
- More work needed to address frequency separation issues
 - Current devices with typical emission characteristics need to have extra center frequency separation to protect radars
 - Several options being considered including separate requirements for indoor and outdoor devices, database for enabling operation, beacons for master devices



Other Actions

- Requiring notches in the TDWR bands for devices in the short term
- Additional guidance for installation of outdoor devices
- More detailed review of software configuration control of devices prior to approval
 - Guidance on the role of master and client devices
- Further guidance on client devices and additional review requirements



UNII Client Device Evaluation

- Client Device reviews requirement revised in KDB 848637
 - Must ensure compliance with the requirements of Section 15.202 for clients in addition to all the other requirements
 - Client modes must not support active scanning, probes, beacons, Ad-Hoc operations or Group Owner modes for Wi-Fi Direct
 - If device has software configuration control for operation in different modes (different scanning modes) and operate in multiple bands (non-DFS and DFS) Questions for the DFS (U-NII) application for devices that can operate in multiple bands need to show compliance with the requirements of 15.202 in addition to those of 15E.
 - Application must provide software and operations description on how the software and / or hardware is implemented to ensure that proper operations modes can not be modified by end user or an installer.
 - If the device is a module the operational description must provide that the transmitter settings cannot be changed by software not provided with the module
 - Submit a channel/frequency plan for this device showing the channels that have active scanning or passive scanning.
 - Device must not support ad-hoc mode operation or Group Owner mode for Wi-Fi Direct in the bands not allowed to operate as a master according to 15.202
 - A complete User's Manual and/or Professional Installers Manual. If the manual is not complete, upload an updated User's Manual exhibit.
 - Complete test report and supplement as described in the KDB



TCB and Audit Review

- TCB's must review the operational description to ensure compliance for software configuration control
 - Not enough to have a statement the device complies
 - Necessary to have reasonable explanation of how it is achieved, for example,
 - No multiple modes supported
 - Software drivers do not allow radio parameter controls
 - Hardware locks for specific products for US compliance
- FCC will be closely auditing these devices



Questions and Answers

Thanks!