

The University Senate of Michigan Technological University

PROPOSAL 40-04

(Voting Units: Full Senate)

WIRELESS SPECTRUM USAGE POLICY

Purpose

The Federal Communication Commission (FCC) has jurisdiction over all radio frequency (RF) devices. Since this transmission medium is shared, there are many state and federal laws that govern its use. The goal of this policy is to preserve the quality of all university communication services that utilize wireless media, as well as to insure that Michigan Tech remains compliant with laws governing wireless spectrum.

Policy

All use of unlicensed spectrum for university-wide services will be documented and reserved through this policy. A Wireless Spectrum Review Committee will be commissioned to manage the allocation of unlicensed spectrum for use by particular departments or individuals.

The Wireless Spectrum Review Committee (WSRC) will have representation from each college and school, a representative selected by the Vice President of Research, a representative from both the graduate and undergraduate students, and an ex officio representative from Telecommunications Engineering. The WSRC will be responsible for establishing criteria for granting or revoking access to spectrum, as well as documenting these decisions for the public record.

Wireless communication devices used on campus, both licensed and unlicensed, must be registered with Telecommunication Services. Information required includes contact information, device location, operating frequencies, transmit power, approximate transmission range, and the FCC license information (license number, type, expiration date) for licensed bands. Devices that are exempt from being registered are: cellular phones, PCS devices, cordless phones, CBs, FRS, and marine radio devices. Any device not specifically excluded in the list above must be registered. Existing services will need to be registered within three months after the adoption of this policy. All new services must be registered prior to installation.

All unlicensed wireless transmission devices deployed on campus must conform to current standards for the frequency range in which they operate. To maintain maximum flexibility on campus, all devices deployed must be able to adjust transmission channels. Any exception to this policy must be approved in advance of deployment by the WSRC. All wireless services are required to transmit at the minimum power levels necessary to cover the desired service areas.

All new wireless services must insure that they will not interfere with existing, registered services prior to installation. Any new wireless service that desires to operate at a frequency currently in use by another may submit requests to the WSRC for consideration.

In addition to the above requirements that apply to all wireless devices used on campus, the following specific ISM and UNII Band requirements must be followed:

900MHz: no additional requirements

2.4GHz:

802.11b WiFi AP Devices:

Channel 1 (2.412GHz): reserved for university-wide services

Channel 6 (2.437GHz): shared spectrum, available for local use

Channel 11 (2.462GHz): reserved for university-wide services

Channels 2, 3, 4, 5, 7, 8, 9, 10 shall not be used unless necessary to avoid interference with other devices on Channel 6 or approved by WSRC

Channels 12, 13, 14 are not authorized by the FCC for use in the US and shall not be used

Bluetooth: no additional requirements

Wireless video products:

Channel 1 (2.41 GHz): Do not use (interferes with 802.11b channel 1)

Channel 2 (2.43 GHz): Do not use (interferes with 802.11b channel 6)

Channel 3 (2.45 GHz): Do not use (interferes with 802.11b channel 11)

Channel 4 (2.47 GHz): Shared spectrum, available for local use

Cordless phones:

2.4GHz phones are known to cause interference with 802.11b network devices and may not be used on campus where they cause interference with the wireless data network.

Other 2.4GHz devices: no additional requirements

5.3GHz:

802.11a Network devices:

Channel 36 (5.180GHz): reserved for university-wide services

Channel 40 (5.200GHz): shared spectrum, available for local use

Channel 44 (5.220GHz): shared spectrum, available for local use

Channel 48 (5.240GHz): reserved for university-wide services

Channel 52 (5.260GHz): outdoor use only, reserved for university-wide services

Channel 56 (5.280GHz): outdoor use only, shared spectrum, available for local use

Channel 60 (5.300GHz): outdoor use only, shared spectrum, available for local use

Channel 64 (5.320GHz): outdoor use only, reserved for university-wide services

Other 5.3GHz devices: no additional requirements

5.8GHz

5.725GHz -5.825GHz reserved for University services

MTU faculty, staff, and students deploying wireless services are responsible for understanding and adhering to any law or university policy governing their service. MTU Telecommunications Services is responsible for monitoring the university's compliance with federal, state, and local laws, and university policy that addresses wireless transmission and has the authority to power off any device found on campus that is disrupting university-wide or registered services or is transmitting illegally.