

Wake Forest University

Wireless Spectrum Management Policy

1 Purpose

This policy is intended to provide a mechanism for managing the wireless communications spectrum on the Wake Forest University Reynolda Campus. Wireless communications for data and voice are an increasingly important part of the overall technology plan of the University. Thoughtful management of that spectrum will improve reliability, availability and security of these services to all members of our community. This policy applies only to over-the-air use of wireless spectrum. It does not include any broadcast over wired systems, such as Cable TV.

2 Definitions

Access Point:

An access point is a device which is intended to provide a communication path from a wireless network to a wired network.

Wireless Network Interface Card (WNIC):

A Wireless Network Interface Card is a device which is installed into a computing system for the purpose of communicating with an wireless network operating in an unregulated band. A computing system includes, but is not limited to Desktop PC, Laptop PC, Workstation, PDA or Cellphone when using an unlicensed band.

3 Policy

This policy applies to both the licensed and unlicensed portions of the Radio Frequency Spectrum. It does not apply to wireless technologies which are outside of that spectrum, such as Infrared.

Licensed Spectrum:

The use of licensed spectrum is controlled by the Federal Communications Commission (FCC)ⁱ. It is the responsibility of the license holder to maintain a valid license and to comply with all applicable Federal, State and Local regulations regarding the use of such equipment. Departments which utilize licensed spectrum must annually report the frequencies used to the Director of Information Technology Infrastructure.

Unlicensed Spectrum:

The FCC provides several portions of the RF Spectrum for public use without licensing. While the lack of license requirements provides accessibility, the lack of control increases the likelihood of radio interference.

Currently, the FCC provides the following Spectra for unlicensed use: 902-948 MHz, 2400 – 2483.5 MHz and 5725-5850 MHzⁱⁱ. This policy will apply to any future unlicensed spectrum which may from time to time be made available by the FCC. Should such bandwidth become available, the most restrictive policy will apply. Each section of Spectrum has different requirements and will be treated separately.

- **902 - 928MHz:** This band is typically used by consumer electronics such as cordless telephones.
 - Restrictions: No reporting is required. Users causing interference to any other frequency user are expected and required to amend their usage to eliminate the interference.
- **2400 - 2483.5 MHz:** This band is currently used for a variety of technologies today, including Bluetooth, Cordless Telephones, and 802.11, WiFi.
 - **Bluetooth:** There are no restrictions for Bluetooth users. Bluetooth use may cause interference with other devices in this spectrum and with each other. Users causing interference for any other user are expected and required to amend their usage to eliminate the interference. Failure to perform such remediation could result in removal of access by the University. Due to the limited security available with Bluetooth devices, users are responsible for ensuring the proper security for all of their devices.

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- **Cordless Telephone:** Cordless Telephones that operate in this spectrum may not be used.
- **802.11, WiFi:** Information Systems is responsible for the deployment of a campus-wide wireless network. No Access Points may be installed without the express, written permission of the Information Systems Department. In cases where particular locations on campus are not served, members of the Wake Forest Community may request access contacting the Information Systems Help Desk.
- **5725 - 5850 MHz:** This spectrum is reserved solely for Data Communications purposes. No Access Points operating within this spectrum may be installed on campus without the express written permission of the Chief Information Officer, Wake Forest University. Only University approved WNICs may be used.
- **Future ISM Bands:** The use of any spectrum made available by the FCC in the future for unlicensed communications will not be permitted without express, written permission of the Chief Information Officer, Wake Forest University.

Security:

Due to the public nature of the wireless signals themselves, access to the Wake Forest University Wireless network is permitted only to persons with valid WFU Network Accounts. Visitors that have a valid requirement for access to the Campus Wireless Network will be granted such access. Requests for visitor access will be made through the WFU Help Desk.

Standards:

It is the policy of Wake Forest University to standardize personal computing technologies whenever possible. Non-standard Access Points are not permitted. Non-standard WNICs are permitted, but will not be supported by Information Systems. Such non-standard WNICs must comply with all appropriate 802.11 standards. WNICs which do not conform will be removed from the campus network.

4 Applicability

The University's Computer Use Policy applies to the users of Wireless Data Networks.

5 Disciplinary Action

Violations of this policy may result in the suspension of access to the University Network. Appeal of any decision related to this policy may be made to the Vice President for Finance and Administration.

6 Responsibility and Oversight

The Chief Information Officer is responsible for implementing this policy. The policy may be revised from time to time as required by the Committee on Information Technology.

Approved by the Wake Forest University Committee on Information Technology. 22 March, 2004.

ⁱ A description of the Spectrum Allocation is described in Title 47 of the U.S. Code of Federal Regulations, Volume 1, Section 2.106. This is available from the FCC at http://www.access.gpo.gov/nara/cfr/waisidx_01/47cfr2_01.html.

ⁱⁱ Reference: Code of Federal Regulations, Title 47, Volume 1. Revised as of October 1, 2001. An online copy of this policy is available at: http://www.odessaoffice.com/wireless/fcc_ism.html