

HARRIS CORPORATION
EXPERIMENTAL SPECIAL TEMPORARY
AUTHORITY REQUEST
2421-2449 MHz BAND
CHICAGO, ILLINOIS
MAY 2006

DESCRIPTION OF EXPERIMENT

Harris Corporation (“Applicant”) is requesting an experimental STA to permit operation of the transmitting equipment specified in this application, using unlicensed ISM frequencies from 2421-2449 MHz. The experiment will consist of a fixed antenna atop the Sears Tower in Chicago communicating with a receive-only antenna approximately 40 kilometers from the transmitting site. The operating equipment is compliant with Part 15 rules beyond a 3.8 kilometer radius, and thus Applicant has limited its STA request to the area within 3.8 kilometers of the transmitting location on the Sears Tower.

The purpose of the proposed experimental operations is to evaluate the applicability and feasibility of the Harris SecNet 11 secure wireless local area network (LAN) products as the basis for a governmental, national security and/or Department of Defense secure Internet Protocol datalink in a high multipath urban environment. A high multipath environment is needed in order to test “worst case scenarios” to ensure that the secure wireless LAN will work in such environments. The height of the fixed transmitting antenna is necessary in order to secure a clear line of sight with the receive-only antenna. A theoretical link budget will be generated to predict the practicality and feasibility of the communication system under test.

As shown in the separate attachment, the Commission’s database indicates that there are no frequency interference issues presented by Harris’ proposed experimental operations. The attachment shows that there are no active licensed operations in the 2421-2449 MHz band within a 30 kilometer radius of the proposed site of the fixed antenna. Harris acknowledges that any experimental use of the frequency band is on a non-interference basis.

The testing performed in non-government spectrum is required because there is currently no equipment designed to operate on federal government spectrum that is sufficiently robust to meet required government operations. Thus, Harris intends to utilize non-governmental spectrum for testing equipment that will ultimately be operated on Federal Government spectrum by the United States Armed Forces, assuming that the technology for doing so becomes available. Other performance-based tests will be conducted using the federal government 1.8 GHz band. (See separate Harris application 0271-EX-ST-2006, filed April 27, 2006).

Harris submits that a grant of this experimental STA request will serve the public interest because the proposed operations will forward national security interests by improving the communications capabilities of the United States Government.