HARRIS CORPORATION
EXPERIMENTAL SPECIAL TEMPORARY
AUTHORITY APPLICATION
1.7 GHz EXPERIMENT
AUSTIN, TEXAS AREA
MAY 2005-AUGUST 2005

DESCRIPTION OF EXPERIMENT

Combined Response to Questions 4 and 5.

Harris Corporation ("Harris") is requesting Special Temporary Authority ("STA") to permit operation of the equipment specified in section 8 of this application. At the conclusion of the experimental tests contemplated herein, the equipment is intended to be used by the United States military.

The purpose of this STA request is to evaluate and demonstrate a high data rate wireless communication network centric radiofrequency link from an aerial node to a ground node. The mobile antenna will be located in a helicopter and will communicate with a fixed antenna located on the ground at the geographic coordinates specified in the antenna section of the application. The fixed antenna will be located on the roof of the Ticom Geomatics building and will be approximately two feet off the highest point of the building, which is 58 feet. Both antennas will operate nondirectionally. Various scenarios will be employed. A theoretical link budget will be generated to predict the practicality and feasibility of the communication system under test, given the scenarios and ranges required.

The technology being tested does not consist of commercial off-the-shelf (COTS) devices; rather, the devices being used are highly experimental. The demonstration will include transmission of encrypted information. The level of encryption protection required by the Armed Forces is only available in the SecNet-11 card, which utilizes the 802.11-b technology/waveform operating in the 1.7 GHz band. To date, there are no COTS frequency converters that will handle this scenario. Encrypted frequency conversion is one of the areas included within the Harris study, and the study is in the very earliest stages of pre-product development.

As indicated in the separate attachment, there are no frequency interference issues presented by Harris' proposed experimental operations. The attachment shows that there are no existing licensees within a 50 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.

Harris submits that this is an important project for the United States Armed Forces, and that a grant of this experimental request is necessary in the public

interest because the proposed operations will forward national security interests by assisting in the advancement of the tactical capabilities of the U.S. Armed Forces.

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