

NARRATIVE STATEMENT

Pursuant to Sections 5.1, 5.51 and 5.61 of the Commission's rules, 47 C.F.R. §§ 5.1, 5.51 and 5.55 (2006), Motorola, Inc. ("Motorola"), respectfully requests experimental authority beginning **February 1, 2008**, to test and demonstrate prototype devices under development for operation in the 57-64 GHz band. Operations will be limited to two locations, in Phoenix, Arizona, and Lake Mary, Florida.

Also, as explained in the accompanying exhibit, Motorola respectfully requests expedited treatment of its application so that it may commence experimental operations no later than the scheduled start date of February 1, 2008.

Purpose of Operation:

Motorola is actively involved in the research and development of hardware and software solutions associated with communications systems that would operate in the 57-64 GHz band in compliance with the current regulations as well as the pending FCC services rules for this band.¹ In particular, Motorola is researching the capabilities and functionality of different antenna configurations (including their propagation modeling, predictive channel equalization, and beam forming characteristics) to increase spectrum capacity. Motorola's objective is to be able to offer a timely FCC-certified solution to the marketplace. The tests are intended to facilitate evaluation of the use of the band for various applications, as well as testing prototype solutions for the band.

Motorola will not perform a market study under this experimental license, however. As discussed in greater detail below, Motorola does not propose to market, sell, or lease prototype equipment to end users. Moreover, no fees will be charged to entities evaluating the equipment during this test. After the experimentation ceases, Motorola will recall and recover all devices.

Proposed Locations:

Motorola proposes to conduct experimental testing in Phoenix, Arizona, and Lake Mary, Florida. Specifically, the tests in Phoenix will be performed within 50 km of 33° 30' 17" N, 112° 3' 38" W. The tests in Lake Mary will be performed within 10 km of 28° 44' 47" N, 81° 21' 45" W. Motorola requests an experimental license within these boundaries to operate at its various test sites and buildings in those two areas. The experimental system will deploy equipment at a maximum of four sites at each of these locations.

¹ See *Revision of the Commission's Rules Regarding Operation in the 57-64 GHz Band*, 22 FCC Rcd 10505, *Notice of Proposed Rulemaking* (rel. June 01, 2007).

Technical Specifications:

Frequency Band: 57-64 GHz
Modulation: OOK/BPSK/QPSK
Bandwidth/Emissions Designators: 100MA1D, 100MA1F, 100MG1D, 100MG1F, 500MA1D, 500MA1F, 500MG1D, 500MG1F, 1G25A1D, 1G25A1F, 1G25G1D, 1G25G1F, 2G25A1D, 2G25A1F, 2G25G1D, 2G25G1F, 2G50A7D, 2G50A7F, 2G50G7D, 2G50G7F, 3G75A7D, 3G75A7F, 3G75G7D, 3G75G7F, 5G00A7D, 5G00A7F, 5G00G7D, 5G00G7F, 7G00A7D, 7G00A7F, 7G00G7D, and 7G00G7F.
Motorola seeks to employ various modes of modulation and bandwidth. As the modulation bandwidth is scaleable, other emission modes may be utilized, but in no event will the emissions extend beyond the frequency bands requested. All power levels will comply with the limits relating to human exposure to radiation. The modulations are listed above, the bandwidth can range from 100MHz to 7GHz. Motorola will comply with the measures described below under "Restrictions on Operation" to avoid interference.

Antenna Data: Motorola proposes to operate a maximum of four temporary fixed sites at each location. The following data include representative as well as the maximum power levels associated with the proposed antenna configurations:

Antenna #1:	
Gain	23 dBm
Beamwidth	12 deg
EIRP	40 dBm (10 W)
ERP	37.85 dBm (6.1 W)
TPO	17 (dBm) (50 mW)
Antenna #2:	
Gain	37 dBi
Beamwidth	2.5 deg
EIRP	64 (dBm) (2510 W)
ERP	61.85 (dBm) (1530 W)
TPO	27 (dBm) (500 mW)
Antenna #3:	
Gain (dBi)	45 dBi
Beamwidth (deg)	1 deg
EIRP (dBm)	72 (dBm) (15.85 kW)
ERP (dBm)	69.85 (dBm) (9.66 kW)
TPO (dBm)	27 (dBm) (500 mW)

Equipment To Be Used:

Motorola proposes to deploy a limited number of units. It expects that it will be able to complete its experimentation and demonstration with a maximum of four temporary fixed sites at each location. Motorola will also limit the power, area of operation, and transmitting times of these units to the minimum necessary to evaluate the equipment.

Antenna / Antenna Structure Heights:

Motorola will comply with all FAA and FCC rules and regulations regarding the installation and operation of antennas. The antennas to be deployed under this authority will not extend more than six meters above the ground or, if mounted on an existing building, will not extend more than six meters above the building.

Restrictions on Operation:

Motorola understands that the FCC permits companies to conduct a number of tests without an STA. For example: (1) companies may enter into agreements and contracts to manufacturer products before they are approved; (2) manufacturers to sell—but not deliver— unapproved products on a conditional basis to wholesalers and retailers; and (3) entities may operate certain types of equipment to (a) test compliance; (b) demonstrate equipment at trade shows and other exhibitions with appropriate notices displayed; and (c) evaluate product performance and customer acceptability at the manufacturer's facilities or at certain non-residential sites during the developmental, design and pre-production stages. See Marketing Rule Revisions, § 2.803; Part 15 Revisions, 6 FCC Rcd 1683, 1685 (1991).

Notwithstanding these general rules, the FCC requires parties to seek authorization to use unapproved devices that will be operated at residential locations. Such authority may be granted under the FCC's experimental rules set forth in Part 5 of the Code of Federal Regulations, 47 C.F.R. Part 5 (2005), provided that: (1) participants are advised that the service or device is granted under experimental authority and is strictly temporary; and (2) the devices are owned by the licensee. Accordingly, this application seeks experimental authority to conduct experimental operations at residential locations as permitted under these rules.

Motorola does not propose to market, sell, or lease prototype equipment to end users or conduct a market study in conjunction with this test. Moreover, no fees will be charged to entities using the equipment during this test. After the experimentation ceases, Motorola will recall and recover all devices that do not comply with FCC regulations. If any different treatment becomes necessary during the course of its experimentation, Motorola will seek separate and additional authority from the agency.

Motorola also recognizes that the operation of any unapproved devices must not cause harmful interference to authorized facilities. It does not anticipate that such interference will occur, as the prototype equipment will operate at low power. Should interference occur, however, Motorola will immediately take reasonable steps to resolve the interference, including if necessary discontinuing operation. To that end, Motorola would advise entities using the equipment that permission to operate the equipment has been granted under experimental authority issued to Motorola, is strictly temporary and may be canceled at any time. For example, Motorola proposes to label the equipment or user information conspicuously as follows:

FCC STATEMENT
Permission to operate this device has been granted under experimental authority issued by the Federal Communications Commission to Motorola, Inc., is strictly temporary, and may be canceled at any time. This device has not been authorized as required by the rules of the Federal Communications Commission. This device is not, and may not be, offered for sale or lease, or sold or leased, until authorization is obtained. Thus, the user does not hold a property right in the device and may be required to return the device.

If any devices are physically too small for this label to be affixed in a position where the label can be seen with the card installed, Motorola proposes to include the required statement in the product documentation and to label the device "Prototype – Not for Sale."

Last, the equipment will utilize Transmit Power Control ("TPC") capabilities, which will serve to control the radiofrequency power to the minimum required to support communications on the channel for the particular path involved.

Public Interest:

Motorola submits that issuance of an STA is in the public interest, convenience, and necessity, as it will permit Motorola to develop innovative equipment that will accommodate the communications needs of its customers and, ultimately, their end-users.

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