

DESCRIPTION OF APPLICATION

Pursuant to Sections 5.3(d) and (f) and 5.61 of the Commission's rules, 47 C.F.R. §§ 5.3(d) and (f) and 5.61 (2004), Nokia, Inc., hereby respectfully requests a special temporary authority ("STA") to demonstrate a prototype system for transmitting digital video signals to hand-held receivers incorporated into cellular telephones. Nokia proposes to conduct the demonstration using two, low power transmitters located within buildings at Las Vegas, Nevada, during the Computer Electronics Show ("CES") to be held during the period **January 5-8, 2006**.

In support of this request, the following is shown:

1) Applicant's Name, Address, and FCC Registration Number ("FRN"):

Nokia, Inc.
1401 K Street, N.W., Suite 450
Washington, D.C. 20005

FRN: 0009724881

2) Need for STA:

Nokia requires special temporary authority so that it may demonstrate its system during the trade show to industry analysts as well as to telecommunications providers, and other entities interested in incorporating the digital video technology into their offerings or operations. Nokia anticipated that the Las Vegas Convention Center staff would coordinate these activities, but last Friday was directed to seek FCC authority independently.

Grant of the STA will allow Nokia to demonstrate prototype equipment and obtain additional feedback during the trade show so that it may enhance the company's efforts to design, develop and improve its equipment to meet the communications needs of telecommunications providers and users. No unapproved equipment will be offered for sale or lease, or will be sold or leased, at CES inconsistent with FCC rules and regulations, however.

3) Nature and Purpose of Operation:

Nokia is a leading manufacturer of cellular telephones and is continually engaged in the design and development of a new and innovative communications equipment. The experimental authority requested herein will allow the company to test compliance and performance of the system, to demonstrate its operation and functionality to potential corporate purchasers and resellers, and to determine the system's acceptability.

As mentioned above, no unapproved equipment will be offered for sale or lease, or will be sold or leased, at CES inconsistent with FCC rules and regulations. Moreover, the transmissions are not intended for the general public, and the public will not be able to display or view the transmissions on conventional television receivers or cellular telephones. As such, the demonstration will not involve "broadcasting" as defined in Section 3 of the Communications Act, 47 U.S.C. § 153(5). Instead, the operations are designed to demonstrate a new mobile service intended to complement digital cellular telecommunications service provided to subscribers.

4) Location of Proposed Operation:

Nokia proposes to conduct its demonstration using a single base station transmitting at each of the two locations listed below. Operations will occur inside buildings in interior rooms without windows. Mobile operations will be receive-only and will occur within 0.2 kilometers of each of the base station locations.

Las Vegas Convention Center Las Vegas, NV North Latitude: 36° 07' 55" West Longitude: 115° 09' 04" Datum: NAD83	Sands Hotel Convention Center Las Vegas, NV North Latitude: 36° 07' 17" West Longitude: 115° 09' 54" Datum: NAD83
---	---

5) Equipment To Be Used:

The demonstration would be conducted using equipment that is currently manufactured for use overseas. Nokia is currently in the process of designing and developing equipment for use specifically in the U.S., but that equipment will not be available in time for CES. The equipment is approved for overseas use, however, and will be operated so as not to cause interference to U.S. operations, as discussed below.

Nokia will be able to complete its demonstration with two (2) prototype base station transmitters and not more than a total of 100 prototype receive-only mobile units during the demonstration. It will limit the power, area of operation, and transmitting times to the minimum necessary to demonstrate the equipment. If necessary, Nokia will seek separate and specific authority if more units were needed to conduct a particular experiment.

6) Frequencies Desired:

Nokia respectfully requests authorization to operate in the bands 470-476 MHz (Channel 14), 590-596 MHz (Channel 34), and 614-620 MHz (Channel 38). It does not expect ultimately to develop equipment to operate in these bands, however. It eventually plans to develop equipment to operate in spectrum above that authorized for broadcast television. It has chosen this spectrum only because the equipment available for the demonstration is designed for use overseas where these bands are authorized for digital video transmissions.

Nokia has selected spectrum for this operation that it believes is unlikely to cause harmful interference to either broadcasting stations or to land mobile stations authorized in the 470-512 MHz portion of the UHF television band. It has retained the engineering firm of Cavell, Mertz, and Davis, Inc., to conduct such studies. The firm has reviewed the allocations for television facilities (analog, digital, low power, Class A, and translator) in the Las Vegas area and identified the three channels listed above as potential candidate channels. Although Nokia would operate on only one of these bands, it has requested the three bands to provide it with flexibility to change frequencies should it receive interference from the operations of other exhibitors.

More importantly, Nokia will coordinate with the Society of Broadcast Engineers ("SBE") and receive its approval before operating on any of these bands. Indeed, the firm of Cavell, Mertz, and Davis, Inc., has already contacted the SBE representative and initiated the coordination process on behalf of Nokia. It will also share its studies with the SBE local coordinator for the Las Vegas area.

By way of example, Cavell, Mertz, and Davis, will conduct an interference analysis with respect to the proposed operations in the TV bands. The proposed station will be constructed to confine out-of-channel emissions within the "simple" mask specified in Section 74.794 of the FCC's rules, 47 C.F.R. §74.794 (2004). This analysis will be based upon the Commission's CDBS database information and an interference study per FCC OET Bulletin 69. Nokia will also study environmental considerations to ensure compliance with Section 1.1306 of the

FCC's rules, 47 C.F.R. § 1.1306 (2004), and, in particular, the human exposure requirements set forth in FCC OET Bulletin No. 65.¹

This analysis is intended to show that there are no operational, full power co-channel or adjacent channel TV stations on the channels that Nokia seeks to use within the interference range of the proposed demonstration that require protection. The results of these analyses, which will show the co-channel and adjacent channel full power TV stations in relation to the proposed operation, will be shared with the SBE representative.

Moreover, operation under this experimental STA will occur only on a limited number of channels within the band. It is anticipated that only one or two such channel pairs will be used at each site.

7) Power Levels and Type of Emissions:

The peak transmit power (TPO) is 200 milliWatts. The peak effective radiated power (ERP) is 2.0 Watts.

The transmissions will utilize the digital video broadcast –handheld (“DVB-H”) modulation technique for a portable video technology intended to transmit video, audio and data to handheld devices. DVB-H modulation techniques differ from the 8-VSB modulation techniques employed for over-the-air digital television broadcasting.

The transmit channel emission designator is 6M00G2D, DVB-T COFDM. See *Digital Video Broadcasting (DVB); Transmission System for Handheld Terminals (DVB-H)*, European Telecommunications Standards Institute EN 3020304 V1.1.1; November, 2004.

Other emission modes and modulation techniques may be utilized, such as QPSK, but in no event will the emissions extend beyond the frequency bands requested. Moreover, Nokia requests a waiver of the station identification requirements set forth in Section 5.115 of the Commission's rules, 47 C.F.R. § 5.115 (2004).

¹ Although OET Bulletin 69 specifies procedures for quantifying interference caused by 8-VSB facilities, laboratory tests have shown little difference between the desired-to-undesired ratios of DVB-T COFDM (to both NTSC and 8-VSB) and 8-VSB. See the VSB/COFDM Project (NAB and MSTV) “Investigation of VSB Improvements” December 2000. Adjustments in the OET Bulletin 69 computer program were made to consider use of the “simple” emission mask.

8) Overall Height of Antenna(s) Above Ground:

The transmitter antennas will not, under any circumstances, extend more than 6 meters above the ground. No antennas will be mounted in a fashion that will require approval under FAA and FCC rules and regulations.

9) Restrictions on Operation:

Nokia does not propose to market, sell, or lease prototype equipment to end users in conjunction with this test. Moreover, no fees will be charged to entities using the equipment during this test. After the experimentation ceases, Nokia 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, Nokia will seek separate and additional authority from the agency.

Nokia also recognizes that the operation of any equipment under experimental authority must not cause harmful interference to authorized facilities. Should interference occur, Nokia will take immediate steps to resolve the interference, including if necessary arranging for the discontinuance of operation.

In addition, Nokia will advise entities using the equipment that permission to operate has been granted under experimental authority issued to Nokia, that such operation is strictly temporary, and that the equipment may not cause harmful interference. Nokia proposes to label the equipment or associated written information as follows:

FCC STATEMENT

Permission to operate this device has been granted under experimental authority issued by the Federal Communications Commission (FCC) to Nokia, Inc., is strictly temporary and may be cancelled at any time. Operation is subject to the condition that it not cause harmful interference. This device has not been authorized as required by the rules of the FCC. 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.

10) Public Interest Statement:

Nokia submits that issuance of a license is in the public interest, convenience, and necessity. Grant of a license will permit Nokia to develop innovative equipment that will accommodate the public safety and homeland security communications needs of users.

11) Contact Information:

Company Contact:

Leo R. Fitzsimon
Director, Government & Industry Affairs
Nokia, Inc.
1401 K Street, N.W., Suite 450
Washington, D.C. 20005

Telephone: (202) 887-5330
Facsimile: (202) 256-0432
leo.fitzsimon@nokia.com

Legal Contacts:

David Hilliard
Kurt DeSoto
Wiley Rein & Fielding LLP
1776 K Street, N.W.
Washington, DC 20006

Telephone: (202) 719-7000
Facsimile: (202) 719-7207
dhilliard@wrf.com
kdesoto@wrf.com

WRFMAIN 12412285.1