APPLICANT: LUCENT TECHNOLOGIES **FCC ID: AS5ONEBTS-05**

EXHIBIT 3: FCC REQUIRED INFORMATION (PART 2.1033)

The following information is presented in the content and format requested by the FCC:

Section 2.1033 (c)(1):

The full name and mailing address of the manufacturer of the device and the applicant for certification.

Manufacturer:	**Lucent Technologies** 6200 E Broad St Columbus, OH 43213-1569 U S
Applicant:	**Lucent Technologies** 101 Crawfords Corner Road, Holmdel, NJ 07733 Attention: Cynthia S. Donovan

Section 2.1033(c)(2): FCC Identifier AS5ONEBTS-05

Section 2.1033(c)(4):
Type or types of emission: 5M0F9W

Section 2.1033(c)(5): Frequency range Transmit: 1930–1990 MHz

Section 2.1033(c)(6):

Range of operating power values or specific operating power levels, and description of any means provided for variation of operating power.

Lucent Technologies' Broadband PCS UMTS-CDMA Transceiver System, which is incorporated into the UMTS Flexent® OneBTS™ W1900M (SD-2R521-01) wireless base station, is the subject of this application for authorization by the Federal Communications Commission under the new FCC ID: AS5ONEBTS-05. The UMTS1900 Transceiver System consists of the principle RF components: (1) Rubidium Reference Oscillator Module (OMR) 15 MHz, (2) UMTS-CDMA Radio (UCR1900), Model BNJ27B/BNJ27C, which was previously authorized by the Federal Communications Commission under FCC ID: AS5ONEBTS-04, (3) two parallel P2PAM power amplifiers per RF path, and (4) 20 MHz wide, low loss, Dual Duplex (DDpx) transmit filters covering the PCS A/D-Block 1930-1950 MHz, B/E-Block 1950 – 1970 MHz and F/C-Block 1970 – 1990 MHz, and (5) Test and Diagnostic Unit (TDU) used to monitor the output of the P2PAMs and feed it back to the UCR for processing and distortion cancellation. These components are considered as a system due to the DDpx filters providing RF feedback to the transceiver in the form of Closed Loop Gain Control (CLGC) to provide constant power with over temperature and Lucent's proprietary Digital Pre Distortion (DPD) technology which enables software to communicate between the transceiver, power amplifier and the transmit filter to achieve this goal.

This UMTS1900 Transceiver System is designed to operate in the Lucent Flexent™ OneBTS™ Broadband PCS UMTS/CDMA wireless base station. While it can operate for both UMTS and CDMA technologies, the subject of this request for certification is operation in the Universal Mobile Telecommunications System (UMTS) for a single 5 MHz UMTS carrier (5M0F9W). The UMTS feature was developed for the North America Region (NAR) deployment, and is also known as Wideband CDMA (W-CDMA). The transceiver can be converted from CDMA to UMTS (or UMTS to CDMA) by software alone, which can be performed at the installation site. There are no physical, hardware or circuit changes to the transceiver. The subject of this application is UMTS.

EXHIBIT 3: FCC REQUIRED INFORMATION (PART 2.1033) - continued

The maximum rated output power at the antenna terminal of 40 Watts (+46 dBm), 3-second average, per 5 MHz carrier. Power adjustment is software controlled , using a digital signal to set and adjust voltage variable attenuators in the UCR1900 transceiver. The dynamic range and the maximum attenuation is approximately 27 dB, which would provide the lowest power level of 79.4 mWatt (+19 dBm)

Section 2.1033(c)(7):

Maximum power rating as defined in the applicable part (s) of the rules.

The maximum power rating of the Lucent UMTS Flexent™ OneBTS™ W1900M (SD-2R521-01) wireless base station, the PCS UMTS-CDMA Transceiver System, is a maximum rated output power at the base station transmit antenna terminal of 40 Watts (+46 dBm), 3-second average, corresponding to a single 5 MHz UMTS carrier with QPSK modulation.

Section 2.1033 (c)(8):

The dc voltages applied to and the dc currents into the several elements of the final radio frequency amplifying device for normal operation over the power range.

The dc voltage applied to the UMTS Flexent™ OneBTS™ W1900M (SD-2R521-01) wireless base station equipment frame is nominally +24 Vdc; the equipment is rated to operate over the range 19-30 Vdc, with a typical setting of 26.5 Vdc and a maximum input current of 75 Adc.

The nominal dc voltage and range of dc currents input to a single PCS UMTS Power Amplifier, P2PAM, of the Transceiver System is summarized as follows:

Nominal Input Voltage	Single P2PAM Power Amplifier Maximum Input Current	Single P2PAM Power Amplifier Minimum Input Current
+24.0 Vdc	20 Adc	7.6 Adc

Section 2.1033 (c)(8):

Tune-up procedure over the power range, or at specific operating power levels.

The Lucent UMTS Flexent™ OneBTS™ W1900M (SD-2R521-01) wireless base station PCS UMTS Transceiver System, subject of this request for Class II Permissive Change authorization under FCC ID: AS5ONEBTS-05, can not be "tuned-up" by the user. There are no user tune-up features. All tuning is performed by the manufacturer during, and as part of, the manufacturing process.

Section 2.1033 (c)(10)

A description of all circuitry and devices for determining and stabilizing frequency.

The Lucent UMTS Flexent™ OneBTS™ W1900M PCS UMTS Transceiver System is incorporated into a 5 MHz UMTS (W-CDMA) base station, designed to operate in the Broadband PCS frequency band. Frequency stability of the carrier frequency is achieved with an accuracy better than the rated ± 0.05 ppm by the 15 MHz reference frequency generated by a highly stable Rubidium oscillator module (OMR) plus proprietary phase locked loop circuitry (PLL).

EXHIBIT 3: FCC REQUIRED INFORMATION (PART 2.1033) - continued

Section 2.1033 (c)(10): **Description of circuitry and devices for suppression of spurious radiation**.

Spurious emissions radiated from the UMTS Flexent™ OneBTS™ W1900M (SD-2R521-01) wireless base station equipment frame are suppressed by implementing sound Electromagnetic Compatibility (EMC) design practices that extend from the circuit board level to the system level: 1) RF shielding on coaxial cables, 2) RF shielding "cans" mounted on the circuit packs, 3) effective grounding, 4) EMI suppression gaskets applied to the cabinet door, and 5) effective transmit and receive bandpass filters for the Broadband PCS frequency band. The Tx filters incorporated in this PCS UMTS Transceiver System are a 20 MHz wideband, low loss, Dual Duplex (DDpx) design with the combined frequency spectrums of: A/D 1930-1950 MHz, B/E 1950 – 1970 MHz, and F/C 1970 – 1990 MHz.

Characteristic Plot of the 20 MHz wideband, low loss, Dual Duplex (DDpx) filter showing the combined A/D frequency spectrum of 1930-1950 MHz for DX0 is:

A/D DDpx Passband Characteristics

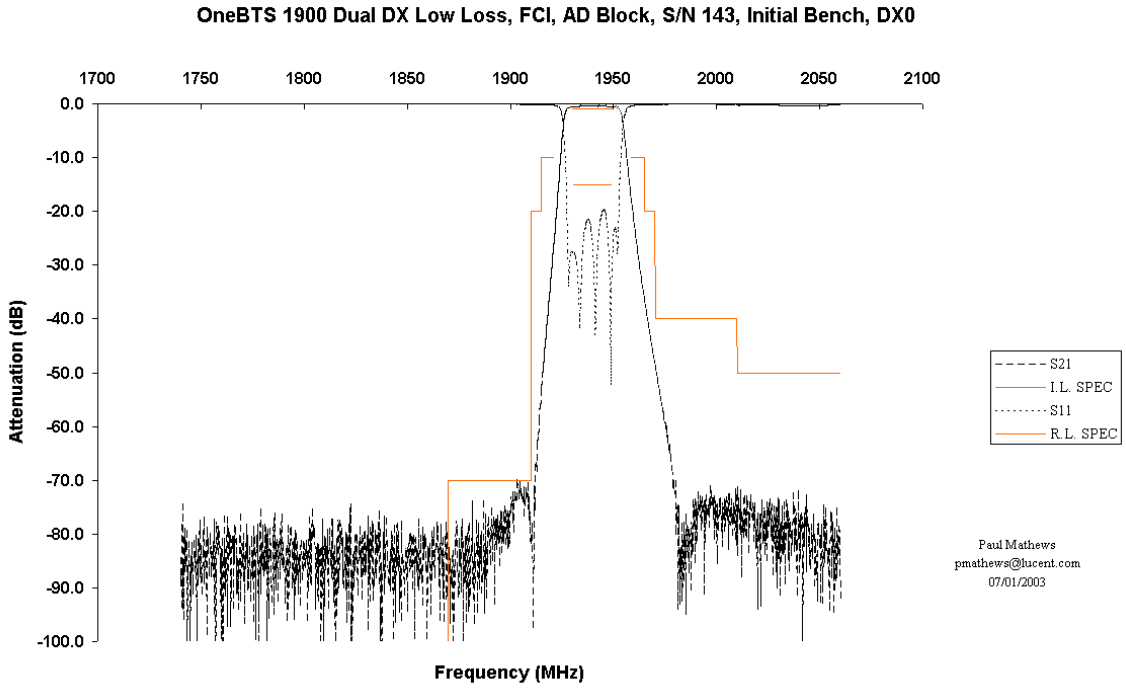

EXHIBIT 3: FCC REQUIRED INFORMATION (PART 2.1033) - continued

Characteristic Plot of the 20 MHz wideband, low loss, Dual Duplex (DDpx) filter showing the combined A/D frequency spectrum of 1930-1950 MHz for DX1 is:

A/D DDpx Passband Characteristics

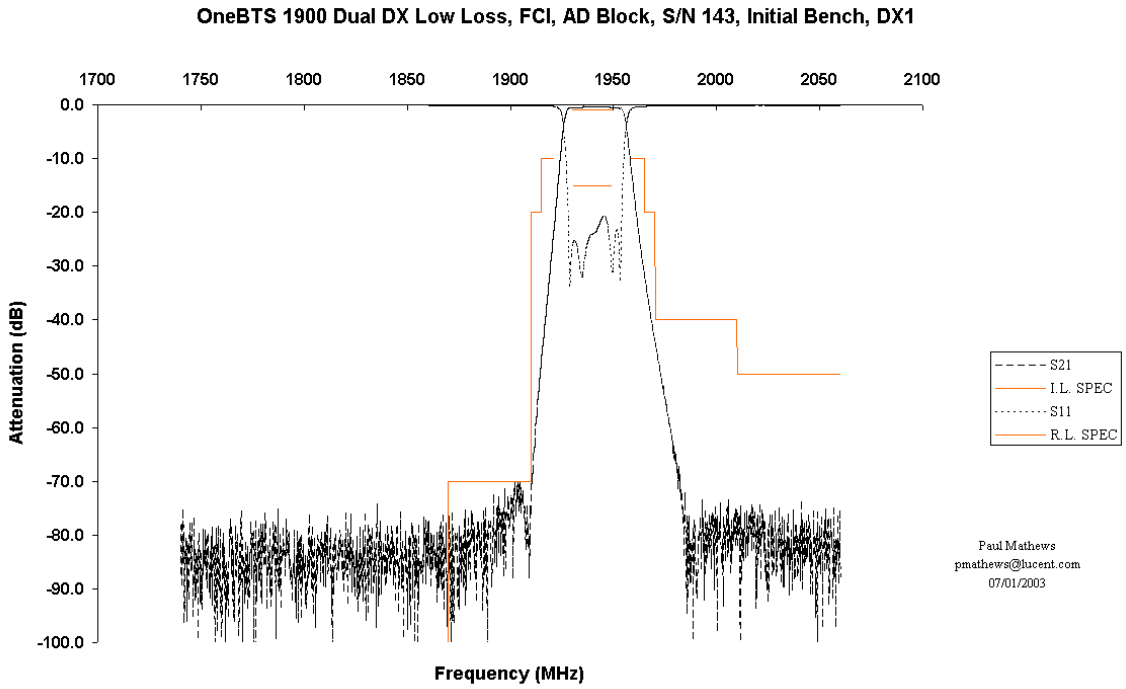

EXHIBIT 3: FCC REQUIRED INFORMATION (PART 2.1033) - continued

Characteristic Plot of the 20 MHz wideband, low loss, Dual Duplex (DDpx) filter showing the combined B/E frequency spectrum of 1950-1970 MHz is:

B/E DDpx Passband Characteristics

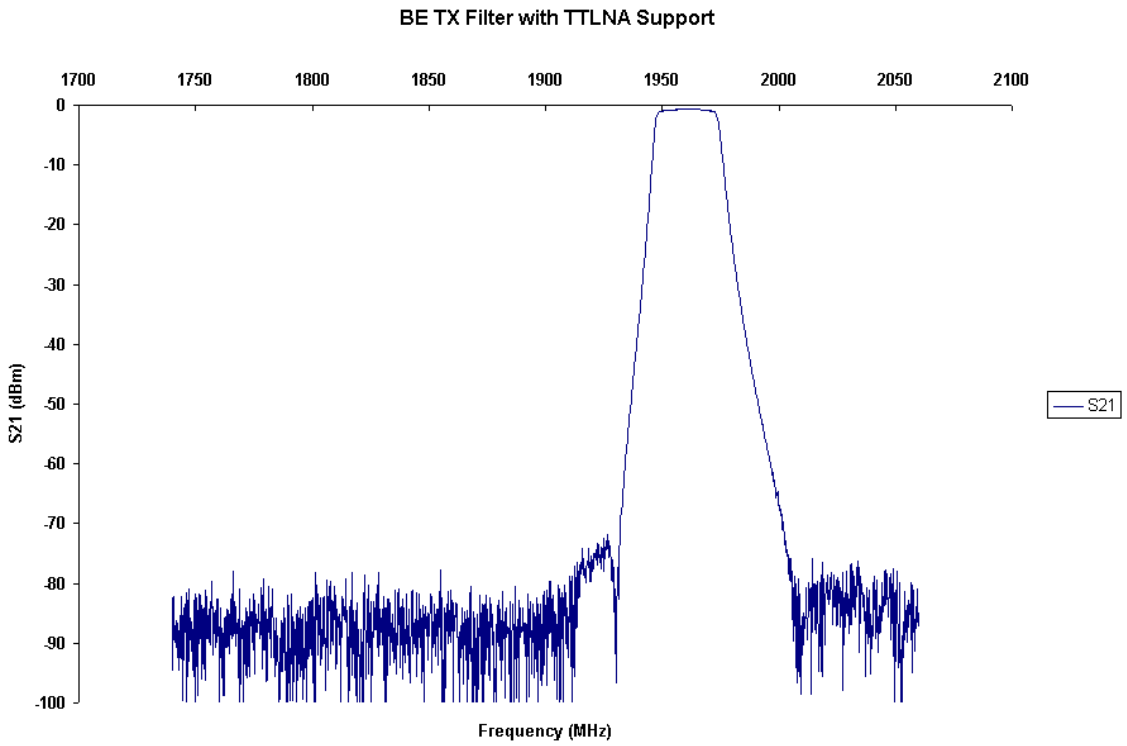

EXHIBIT 3: FCC REQUIRED INFORMATION (PART 2.1033) - continued

Characteristic Plot of the 20 MHz wideband, low loss, Dual Duplex (DDpx) filter showing the combined F/C frequency spectrum of 1970-1900 MHz is:

F/C DDpx Passband Characteristics

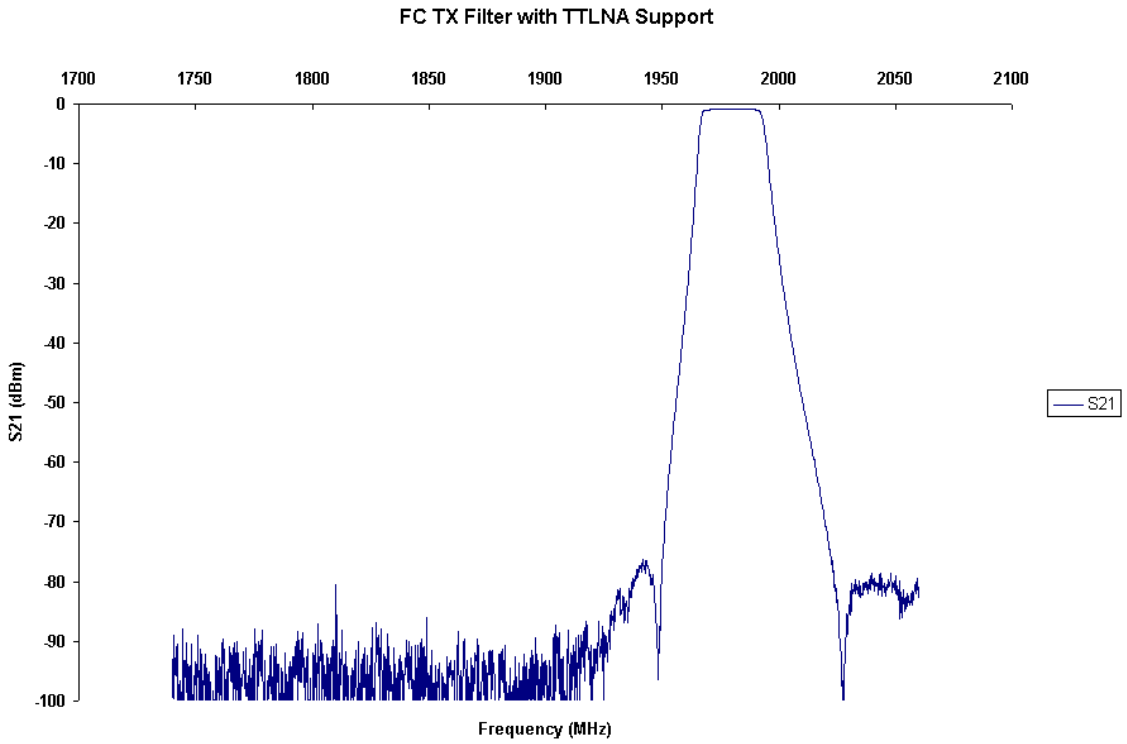

EXHIBIT 3: FCC REQUIRED INFORMATION (PART 2.1033) - continued

Section 2.1033 (c)(10): Description of Circuitry and Devices for Limiting Modulation, and for Limiting Power.

The Lucent UMTS Flexent™ OneBTS™ W1900M, PCS UMTS-CDMA Radio (UCR1900), BNJ27B/BNJ27C, previously authorized under FCC ID: AS5ONEBTS-04, is a 5 MHz UMTS (W-CDMA) base station transceiver designed to operate in the Broadband PCS frequency band. It is the transceiver which comprises this PCS UMTS Transceiver System, that is the subject of this application for Class II Permissive Change authorization. Modulation limiting is described in the documents that must be held as confidential. This confidential document is the same document that was submitted to and is currently on file with the Federal Communications Commission for the initial equipment authorization grant for AS5ONEBTS-04.

Power control of the RF output from the UCR1900 transceiver is accomplished by software, which controls a microprocessor that sends digital signals to a 10 dB voltage variable attenuator, that is used for output power adjustment. The transmitter can be disabled through firmware which sets the RF attenuator to maximum loss and thus disables the final RF amplifier stage. A complete description is provided in the exhibits that are required to be held as confidential. This confidential document is the same document that was submitted to and is currently on file with the Federal Communications Commission (FCC) for the initial equipment authorization grant for AS5ONEBTS-04.

Section 2.1033 (c)(13): Description of the modulation system.

The Lucent UMTS Flexent™ OneBTS™ W1900M PCS UMTS-CDMA Radio (UCR1900), BNJ27B/BNJ27C, previously authorized under FCC ID: AS5ONEBTS-04, is a 5 MHz UMTS (W-CDMA) base station transceiver designed to operate in the Broadband PCS frequency band. It is the transceiver which comprises this PCS UMTS Transceiver System, that is the subject of this application for certification.

This 5 MHz UMTS (W-CDMA) base station transceiver is designed for QPSK modulation, with an emission designator 5M0F9W. The modulation process is fully described in the documents that must be held as confidential. This confidential document is the same document that was submitted to and is currently on file with the Federal Communications Commission (FCC) for the initial equipment authorization grant for AS5ONEBTS-04.