

APPLICANT: Lucent Technologies, Inc.

FCC ID: AS5ONEBTS-05

Lucent Technologies
Bell Labs Innovations



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**Subject: Application for Class II Permissive Change under
FCC ID: AS5ONEBTS-05, Covering a Broadband
PCS UMTS Transceiver System for Operation with
a 5 MHz UMTS/W-CDMA Carrier.**

Mr. Sid Sanders, President
Timco Engineering, Inc.
849 N. W. State Road 45, P. O. Box 370
Newberry, Florida 32669

June 8, 2004

Dear Mr. Sanders:

The Lucent Technologies' Broadband PCS UMTS-CDMA Transceiver System was initially authorized by the Federal Communications Commission (FCC) under FCC ID: AS5ONEBTS-05, Grant Date: 08/14/03, covering the PCS frequency blocks A and D: 1930-1950 MHz. The purpose of this Class II Change Request is to add the additional PCS frequency blocks B, E, F and C in order to obtain authorization for the complete PCS spectrum 1930 – 1990 MHz. No changes were made to the RF components in the system, nor to the cabinet (i.e., equipment enclosure). The only new components are the B/E and F/C transmit filters.

The UMTS1900 Transceiver System, subject of this change request, is designed to operate in the Lucent UMTS Flexent® OneBTS™ W1900M (SD-2R521-01) Wireless Base Station. This Universal Mobile Telecommunications System (UMTS) operates with a single 5 MHz carrier (5M0F9W) set to a maximum power level at the antenna terminal of 40 Watts (3-second). The 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 (KS-24671-L6) power amplifiers per RF path, (4) 20 MHz wide Dual Duplex (DDpx), low loss, transmit filters covering the PCS frequency blocks: A/D 1930-1950 MHz; B/E 1950 – 1970 MHz, and F/C 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 (1) the DDpx filters providing RF feedback to the transceiver in the form of Closed Loop Gain Control (CLGC) to provide constant power over temperature, and (2) 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.

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. UMTS functionality for the UCR1900 transceiver was developed in accordance to the guidelines of the ETSI TS 25.141 V4.1.0 (2001-06) standard: "Universal Mobile Telecommunications System (UMTS); Base Station Conformance Testing (FDD) (3GPP TS 25.141 version 4.1.0 Release 4)". The measurement exhibits attached to this application demonstrate full compliance with both FCC Part 24 Subpart E – Broadband PCS and with ETSI TS 25.141, following the procedural requirements specified in FCC Part 2 Subpart J – Equipment Authorization Procedures. The data summarized below is in the form presently used by the Commission's Radio Equipment List, Equipment Acceptable for Licensing.

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Manufacturer	Lucent Technologies
Equipment Identification	AS5ONEBTS-05
Rules Part Number	Part 24, Subpart E – Broadband PCS
Frequency Ranges	Transmit 1930–1990 MHz
Output Power	40 Watts (+46 dBm) 3-second average at the Tx antenna terminal
Frequency Tolerance	± 0.05 ppm
Emission Designator	5M0F9W

Attached are the FCC Form 731 (Application for Equipment Authorization – Radio Frequency Devices) and the required measurement data and exhibits specific to this request for Class II Permissive Change authorization of the PCS UMTS Transceiver System base station. The technical contact at Lucent Technologies will comply with any request for additional information should the need arise. The attached exhibits are assembled and presented in the sequence recommended by Timco Engineering, in accordance with the *Table of Contents* attachment. For brevity, measurement data and exhibits that were submitted with the initial application and are on file with the FCC and are unchanged will not be repeated and re-submitted.

The following exhibits were included in the initial *Request for Confidentiality* and continue to remain confidential. Since they are unchanged, they will not be re-submitted.

Exhibit 5:	Internal Photographs
Exhibit 7:	Operational Description (Theory of Operation, Functional Description)
Exhibit 8:	Block Diagrams
Exhibit 9:	Schematic Diagrams
Exhibit 11:	UMTS Flexent® OneBTS™ Macrocell +24V Indoor Operation, Administration and Maintenance
Exhibit 13:	Parts List, if Applicable

Sincerely,

Rudolf J. Pillmeier
Technical Manager
FCC/EMC Compliance Test Group
Whippany, NJ

Att.

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APPLICANT: LUCENT TECHNOLOGIES

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Exhibit 4: External Photographs

Exhibit 5: Internal Photographs - LUCENT TECHNOLOGIES CONFIDENTIAL

Exhibit 6: Test Set Up Photographs

**Exhibit 7: Operational Description (Theory of Operation, Functional Description) -
LUCENT TECHNOLOGIES CONFIDENTIAL**

Exhibit 8: Block Diagrams - LUCENT TECHNOLOGIES CONFIDENTIAL

Exhibit 9: Schematic Diagrams - LUCENT TECHNOLOGIES CONFIDENTIAL

Exhibit 10: Test Report

**Exhibit 11: UMTS Flexent® OneBTS™ Macrocell +24V Indoor Operation,
Administration and Maintenance –
LUCENT TECHNOLOGIES CONFIDENTIAL**

Exhibit 12: Tuning Procedure, if Applicable

Exhibit 13: Parts List, if Applicable LUCENT TECHNOLOGIES CONFIDENTIAL