EXHIBIT 2

Test Report Summary

Applicant: Nortel Networks

For Class II Permissive Change Certification on:

AB6NTL100AA

Test Report Summary for FCC Class II Permissive Change Equipment Authorization

FCC ID : AB6NTL100AA TDMA 800MHz Dual Mode Urban System

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Author:	Thomas Wong

1 Introduction

This test report is submitted in accordance with the FCC Rules and Regulations, Part 2, Subpart J, Sections 2.1046 through 2.1057 for equipment authorization of Nortel Networks' TDMA Dual Mode Urban for both indoor and outdoor systems. The 800MHz TDMA Dual Mode Urban system is intended for use in the Domestic Public Cellular Radio Telecommunications Service and is designed in accordance with the following standards:

• *CFR 47, Part 22, Subpart H, Domestic Public Cellular Radio Telecommunications Service*
• *CFR 47, Part 2, Subpart J, Equipment Authorization Procedures - Equipment Authorization*

1. Test Result Summary

Table 1 summarizes the measurement results for the DMU system.

Table 1: Test Results Summary

FCC Measurement Specification	FCC Limit Specification	Description	Results	Test(s) Conducted by	Remarks
2.1046	22.913	RF Output Power	Compliant	Nortel Networks	See Exhibit 2A
2.1047	22.915	Modulation Characteristics	Compliant	Nortel Networks	See Exhibit 2A
2.1047	22.915	Modulation Characteristics	Compliant	Nortel Networks	See Exhibit 2A
2.1047	22.915	Modulation Characteristics	Compliant	Nortel Networks	See Exhibit 2A
2.1049	22.917	Occupied Bandwidth	Compliant	Nortel Networks	See Exhibit 2A
2.1051, 2.1057	22.917	Spurious Emission at Antenna Terminals	Compliant	Nortel Networks	See Exhibit 2A
2.1053, 2.1057	22.917	Field Strength of Spurious Radiation	Indoor System – Compliant	Sanmina Canada ULC	See Exhibit 2B
2.1053, 2.1057	22.917	Field Strength of Spurious Radiation	Outdoor System - Compliant	Nortel Networks	See Exhibit 2A
2.1055		Frequency Stability	Compliant	Nortel Networks	See Exhibit 2A

2. Engineering Declaration

The 800MHz Dual Mode Urban system has been tested in accordance with the requirements contained in the Federal Communication Rules and Regulations Part 2 and 22.

To the best of my knowledge, these tests were performed in accordance with good engineering practices using measurement procedures consistent with industry or commission standards or previous Commission correspondence or guidance and demonstrate that this equipment complies with the appropriate standards. All tests (including tests performed by Sanmina Canada ULC) were conducted on a representative sample of the equipment for which type acceptance/certification is sought.

Report Prepared by

Thomas Wong
Regulatory Prime
Nortel Networks
Calgary, Alberta

Signature

April 3, 2002
Date

3. Type Acceptance Application Requirements

3.1 Name of Applicant

The applicant is Nortel Networks Inc.

3.2 Identification of Equipment

The equipment in this application for type acceptance is the Nortel's TDMA 800MHz Dual Mode Urban (DMU) system. The FCC ID number sought is ABNTL100AA.

3.3 Quantity Production

The TDMA 800MHz DMU system will be produced in quantity.

3.4 Brief Technical Description

The DMU system is a 800MHz AMPS/TDMA product designed for both high density, small/medium radius cells in areas where large traffic capacity is required and low density areas with relatively small radius. The DMU uses the existing TRU-II as the transceiver and a Multi-Channel Power Amplifier (MCPA) for its amplification stage. The TRU-II has been approved standalone under FCC ID AB6NTAX98AA/AB6NTAX98AAE3 and TRU III has been approved standalone under FCC ID AB6NTAW99AA/AB6NTAW99AAE3. The MCPA is an OEM component that was filed for standalone approval with FCC under FCC ID E675JS0042. A duplexer is used to provide rejection/filtering outside of the TX and RX passbands. The duplexer provides isolation of >105dB between the TX and RX paths.

3.5 Type of Emissions

The TDMA 800MHz DMU system is designed to operate in Analog and Digital Mode (Dual Mode).
30K0F3E - Voice transmission.
30K0F3E and 30K0F3D - Voice plus supervisory audio tone.
30K0F1D- Wideband Data.
30K0DXW - TDMA mode.

3.6 Frequency Range

The TDMA 800MHz DMU system will operate in the 824 to 894 MHz band, using 824 – 849 MHz for the transmitter and 869-894 MHz for the receiver. The channel separation is 30 kHz.

3.7 Range of Operating Power

The TDMA 800 MHz DMU system's range of operating RF power is 30.0 dBm (1W) to 47.0dBm (50 W) per carrier.

3.8 Complete Circuit Diagrams

The DMU 800MHz system comprised of an existing transceiver TRU-II and TRU III, which was approved standalone under FCC ID AB6NTAX98AA/AB6NTAX98AAE3 and AB6NTAW99AA/ AB6NTAW99AAE3 respectively. The schematic diagrams for the TRU-II and TRU III were included with its filing. The MCPA is an OEM component that was also filed for standalone approval with FCC under FCC ID E675JS0042. This system is a re-packaged with existing component which already been filed with additional high power MCPA. The circuit diagram of other components can be found in Dual Mode Urban cellsite filing; FCC ID AB6NTFC01AD.

3.9 Tune-up Procedure

The tune-up tests will be performed as part of the factory testing on the product. This procedure includes power output levels, spurious emissions, and occupied bandwidth. There are no user adjustments that will have any effect on these settings to the product.

3.10 Circuit Description for Frequency Determining and Stabilizing

All RF frequencies are derived from the master oscillator which is external to the transceiver. The master oscillator employs up to two independent crystal oscillators, each in its own temperature controlled oven. Failure of an active oscillator automatically causes a switch-over to the standby unit with an oscillator alarm indication. The master oscillator has a frequency stability of +/- 0.25ppm. The master oscillator is common to all transceivers in the DMU 800MHz system. Each transceiver contains a 130.56 MHz IF LO and an RF LO which operates at 130.56 MHz lower than transmit frequency. The LOs are generated respectively by an IF synthesizer and a RF synthesizer which are phase locked to the master oscillator. The synthesizers contain a lock detect circuit configured to remove the transceiver from service should the synthesizer lose lock with the master oscillator.

3.11 Circuit Description for Suppression of Spurious Radiation

Spurious radiation is suppressed through filtering in the RF transmit section. Multiple SAW filters are included in the TX chain to suppress out of band spurious emissions. A duplexer is always included in the transmit path.

3.12 Circuit Description for Limiting Modulation

Modulation is limited by a digital device in the TRU which instantaneously clips the voice modulating signal (after compression and pre-emphasis). The clipped voice signal is filtered to remove high frequency components and fed to an FM modulator. The deviation limiting circuit is implemented digitally and has no user adjustments.

3.13 Circuit Description for Limiting Power

The output is regulated by an automatic level control (ALC) within the TRU. The ALC power detector is calibrated during manufacturing. The calibration factors are stored in a micro controller within the TRU and are protected by a checksum. If the calibration factors become corrupted the transceiver is automatically taken out of service. The MCPAs also have their own built in power control circuit. Once the tuning procedure completed at the field with the proper input levels then the MCPAs will be locked in to that set output power. If the out put power exceed the tolerance level due to any other variance the cell site will be shut down by the MCPAs.

4. Test Method and Test Result

4.1 Tests performed by Nortel Networks

All the measurements of the test data here were at the antenna port (output of the duplexer).

RF Power Output with TRUII Radios

The maximum measured RF output power in digital mode was 46.79 dBm.

The maximum measured RF output power in analog mode was 46.82 dBm.

RF Power Output with TRUIII Radios (digital mode only)

The maximum measured RF output power in digital mode was 47.21 dBm.

Modulation Characteristics

Conforms to the specification. Please refer to the test report in Exhibit 2A for details.

Occupied Bandwidth with TRUII Radios

The maximum measured occupied bandwidth in digital mode was 24.25 KHz.

The maximum measured occupied bandwidth in analog mode (voice and SAT) was 12.5 KHz.
The maximum measured occupied bandwidth in analog mode (SAT only) was 12.5 KHz.
The maximum measured occupied bandwidth in analog mode (voice only) was 20.5 KHz.
The maximum measured occupied bandwidth in analog mode (wide band data) was 21.5 KHz.
The maximum measured occupied bandwidth in analog mode (compandor on) was 24.75 KHz.
The maximum measured occupied bandwidth in analog mode (wide band data & SAT) was 21.5 KHz.

Occupied Bandwidth with TRUIII Radios (digital mode only)

The maximum measured occupied bandwidth in digital mode was 25.0 KHz.

Spurious Emissions at Antenna Terminals

The minimum pass margin with TRUII in either analog or digital mode is 11.42 dB

The minimum pass margin with TRUIII in digital mode is 14.08 dB

Frequency Stability

Conforms to the specification. Please refer to the test report in Exhibit 2A for details.

Radiated Emission Test Results of the Outdoor System

There were no radiated emissions present within 15 dB of the FCC limit of 73.9 dBmV/m at 10 meters from the TDMA 800 MHz DMU outdoor enclosure system.

Please refer to the Exhibit 2A for all test setups and results in details provided by Nortel Networks.

4.2 Tests performed by Sanmina Canada ULC

Radiated Emission Test Results of the Indoor System

The minimum pass margin: 18.55 dB for V-Pol
6.39 dB for H-Pol

Please refer to the Exhibit 2B for all test setups and results in details provided by Sanmina Canada ULC.