# Exhibit 2 QUALIFICATIONS and CERTIFICATIONS

January 08, 2009

### Section 2.911 (d) QUALIFICATION OF ENGINEERS

Section 2.911 (d) Technical test data shall be signed by the person who performed or supervised the tests. The person signing the test data shall attest to the accuracy of such data. The Commission may require such person to submit a statement showing that he is qualified to make or supervise the required measurements.

Walter Steven Majkowski is a Member of Technical Staff at Alcatel-Lucent Bell Laboratories. He holds a BSEE from New Jersey Institute of Technology and was trained in the FCC testing procedures. Mr. Majkowski is the Lead engineer for the filing of CDMA Wireless Base station products at Alcatel-Lucent. Mr. Majkowski is a NARTE certified EMC engineer, Certificate number EMC-001859-NE, and has at least twenty nine years of EMC design and testing experience. Mr. Majkowski has previously filed over twenty two different wireless products.

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

### Exhibit 2 continued

### SECTION 2.911 (e)(g) CERTIFICATION OF TECHNICAL TEST DATA

Section 2.911(e) The signatures of the applicant and the person certifying the test data shall be made personally by those persons on the original application; copies of such documents may be conformed. Signatures and certifications need not be made under oath.

**Section 2.911(g)** Signed, as used in this section, means an original handwritten signature; however, the Office of Engineering and Technology may allow signature by any symbol executed or adopted by the applicant with the intent that such symbol be a signature, including symbols formed by computer-generated electronic impulses.

I hereby certify that the technical test data are the results of tests performed or supervised by me.

Walter Steven Majkowski NCE Member Technical Staff Whippany Compliance Laboratory

## Exhibit 3 FCC REQUIRED INFORMATION

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. UMTS-CDMA 9341 RRH 40W 1900 MHz System

### Manufacturer: Alcatel-Lucent USA Inc.

600-700 Mountain Av P.O. Box 636 Murray Hill, NJ 07974-0636 USA

| Applicant: | Alcatel-Lucent USA Inc.              |
|------------|--------------------------------------|
|            | Rudolf J. Pillmeier                  |
|            | Technical Manager                    |
|            | FCC/EMC Compliance Test Group        |
|            | Whippany, NJ 07983                   |
|            | Email: rpillmeier@alcatel-lucent.com |
|            | <b>Phone:</b> (973) 386-3837         |

The **AS5ONEBTS-18** will only be marketed under the Alcatel-Lucent trademark.

Section 2.1033(c)(2): FCC Identifier

### AS5ONEBTS-18

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

4M10F9W<br/>1M25F9W(This designator remains as previously filed for the 1930-1990 MHz spectrum)<br/>(This new designator is applicable for the 1930-1990 MHz spectrum)

The 4M10F9W emissions designator was previously authorized at the 40 Watt total RF power level. The 1M25F9W emissions designator will be operated at the previously authorized 40 Watt total RF power level for one through seven carriers.

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

# The product was previously authorized over the 1930 to 1990 MHz Frequency range. There is no change to frequency range.

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.

The range of power control is 30 dB. The output power can be adjusted downward from its maximum rated power level of 40 W / 46.02 dBm to its minimum power level of 0.04 W / 16 dBm. The output power is under continuous software control. This performance is applicable to all emissions designators.

### (This performance is unchanged from the previous filing)

Alcatel-Lucent. - Proprietary Use pursuant to Company Instructions.

### Exhibit 3 FCC REQUIRED INFORMATION continued

Section 2.1033(c)(7): Maximum power rating as defined in the applicable part (s) of the rules.

The maximum power rating of Alcatel-Lucent's wireless *UMTS-CDMA 9341 RRH 40W 1900 MHz System* at the transmit antenna terminal, is 40 Watts (+46 dBm). This is the 3-second average limited by the Aggregate Overload Control (AOC) algorithm. The total composite power for either a single carrier or multiple carriers is 40W.

Section 2.1033 (c)(10): A description of all circuitry and devices for determining and stabilizing frequency.

Alcatel-Lucent's wireless *UMTS-CDMA 9341 RRH 40W 1900 MHz System*, incorporating the Future Technology Radio (FTR 1900) is designed to operate in the Broadband Personal Communications Service over the 1930-1990 MHz frequency spectrum. The frequency is determined by the up-conversion of digital baseband signals to IF frequencies. Frequency stability of the carrier frequency is far better than the required  $\pm$  0.05 ppm. The system uses an external reference GPS disciplined 15 MHz reference frequency generated by a high stability Crystal Oscillator Module (OMA) plus proprietary phase locked loop (PLL) circuitry. The GPS receiver and external reference Crystal Oscillator Module are resident in the *9234 Base Station d2U Distributed* Base Band Unit (BBU) which supports the *9341 RRH 40W 1900 MHz System for CDMA operation*.

**Section 2.1033(c) (10)** A schematic diagram and a description of all circuitry and devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation, and for limiting power.

### Schematic diagram

A set of schematic diagrams for the *UMTS-CDMA 9341 RRH 40W 1900 MHz System* was included in the original filing under **FCC ID: AS5ONEBTS-18** and have not changed.

A complete description of the circuitry and devices provided for suppression of spurious radiation, for limiting modulation in the *UMTS-CDMA 9341 RRH 40W 1900 MHz System* was included in the original filing under FCC ID: AS5ONEBTS-18 and have not changed.

(This data is unchanged from prior filings)

## **Exhibit 4 FCC REQUIRED INFORMATION Active Device Drive Levels, Tune Up Information**

### 2.1033(c)(8,9) Active Device Drive Levels

**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 Alcatel-Lucent's wireless *UMTS-CDMA 9341 RRH 40W 1900 MHz System* operates from either nominally -48 VDC or +24VDC. Internal voltages and currents are unchanged from those provided in the initial filing.

Section 2.1033 (c)(9): Tune-up procedure over the power range, or at specific operating power levels.

Alcatel-Lucent's *UMTS-CDMA 9341 RRH 40W 1900 MHz System*, the subject of this request for certification under FCC ID: AS50NEBTS-18, 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

### (ALCATEL-LUCENT PROPRIETARY INFORMATION)