

## **EXHIBIT 1**

### **Section 2.911(d) CERTIFICATION OF BASE STATION EQUIPMENT**

**August 12, 2011**

To Whom It may Concern:

This is to certify that the AS5ONEBTS-16 AWS Base Station, manufactured by Alcatel-Lucent is compliant with the requirements of the Code of Federal Regulations (CFR), Title 47, Part 27, Subpart C – Technical Standards.

Rudolf J. Pillmeier  
Technical Manager  
FCC Compliance Test Group  
Murray Hill, NJ

### **Section 2.911(d) QUALIFICATION OF ENGINEERS**

Walter Steven Majkowski is a Member of Technical Staff at Alcatel-Lucent's Global Products Compliance Laboratory. 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 thirty two years of EMC design and testing experience. Mr. Majkowski has previously filed over twenty eight different wireless products.

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

### **Section 2.911(d) CERTIFICATION OF TECHNICAL TEST DATA**

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

**Walter Steven Majkowski NCE**  
**FCC Wireless Compliance, CDMA Filing Lead**  
**Alcatel-Lucent USA Inc.**

**EXHIBIT 2**

**Section 2.1033 (c)(1, 2, 4-7) Information Of Manufacturer, Applicant, Identifier, Emission Types, Frequency Range, Operating Power Range And Maximum Power Rating**

**Section 2.1033 (C)(1) Name And Address Of Manufacturer And Applicant**

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

**Response**

Manufacturer: **Alcatel-Lucent USA Inc.  
Building 28-114H  
600-700 Mountain Avenue, P.O. Box 636  
New Providence, 07974-0636  
Attention: Rudolf J Pillmeier**

Applicant: **Alcatel-Lucent USA Inc.  
Building 28-114H  
600-700 Mountain Avenue, P.O. Box 636  
New Providence, 07974-0636  
Attention: Rudolf J Pillmeier  
Phone: 908 582 2810  
email: [Rudy.Pillmeier@alcatel-lucent.com](mailto:Rudy.Pillmeier@alcatel-lucent.com)**

**Section 2.1033 (c)(2) FCC Identifier**

**Response**

FCC Identifier: ASSONEBTS-16.

**Section 2.1033(c)(4) Type Or Types Of Emission**

**Response**

1M25F9W. 5M00F9W, and 3M00F9W

**Section 2.1033(c)(5) Frequency Range**

**Response**

1M25F9W.	Transmit: 2110-2155MHz.	Receive: 1710-1755 MHz.
5M00F9W	Transmit: 2110-2155MHz.	Receive: 1710-1755 MHz.
3M00F9W	Transmit: 2110-2155MHz.	Receive: 1710-1755 MHz.

**EXHIBIT 2 continued****Section 2.1033(c)(6) Operating Power Range And Adjustment**

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

**Response**

The AS5ONEBTS-16 AWS wireless base station is capable of producing a RF carriers at a mean power level from 0W up to 60W (+47.8dBm) maximum per 1.23 MHz bandwidth carrier at the antenna transmit terminal, 0-120W per port and 0-240W per sector. The carrier output power level of the AWS base station is determined by three principle RF components: MCR-1721B (Multi-Carrier Radio), 2100MHz 60W-IPAM (IMT Band Power Linear Amplifier Module) and AWS RF transmitting filter. The carrier output power level is adjustable digitally by controlling the variable attenuators in the MCR-1721B transceiver with software in a minimum of 0.1 dB step over 35 dB range. The transmitting filter may provide a RF feedback to the transceiver in the form of CLGC (Closed Loop Gain Control) and EDPD (Enhanced Digital Pre-Distortion) to provide a constant output power desired over temperature. The On/Off of the CLGC and EDPD features is controlled by software. The non-EDPD feature is only available for low power application. In addition, the RF power amplifiers, 60W-IPAM, may be removed from the base station as needed to provide a very low power output for in-building application.

**The above information has not changed.**

**Section 2.1033(c)(7) MAXIMUM POWER RATING**

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

**Response**

The mean power rating of the AS5ONEBTS-16 AWS base station for 1M25F9W emissions is +47.8 dBm (60W) maximum per carrier at the antenna transmit terminal, 120W per port and 240W per sector. Each RF transceiver in the AS5ONEBTS-16 AWS base station can transmit multiple carriers.

For 5M00F9W Emissions, the mean power rating of the AS5ONEBTS-16 AWS base station is a maximum of 46.81 dBm (48W) per carrier at the antenna transmit terminal, 96 W per port and 196 W per sector. Each RF transceiver in the AS5ONEBTS-16 AWS base station can transmit multiple carriers.

For 3M00F9W Emissions, the mean power rating of the AS5ONEBTS-16 AWS base station is a maximum of 46.81 dBm (48W) per carrier at the antenna transmit terminal, 96 W per port and 196 W per sector. Each RF transceiver in the AS5ONEBTS-16 AWS base station can transmit multiple carriers.

The use of post transmit filter combiners is applicable.

## EXHIBIT 4

### **Section 2.1033 (c)(8) Dc Voltages And Currents**

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

#### Response

The DC currents into and DC voltage applied to the final radio frequency amplifier in the MCR-1721B transceiver for normal operation are 450 mA and 5V which is generated from a 6.3V supply voltage through a voltage regulator.

The DC currents into and DC voltage applied to the RF power amplifier in the AWS base station for normal operation are 5~21.5A per amplifier and +26V.

**The above information has not changed.**

### **Section 2.1033 (c)(9) Tune-Up Procedure**

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

#### Response

There are no user tune-up features for the AWS wireless base station, the subject of this application. The AWS base station equipped with the MCR-1721B transceiver is factory calibrated for operating at various output power levels. The AWS wireless base station is also re-calibrated at the customer site and continuously monitors and adjusts the transceiver output power in order to operate at the proper power level.

**The above information has not changed.**

## EXHIBIT 6

### **Section 2.1033 (c)(10) Circuitry And Devices For Suppression Of Spurious Radiation**

A description of all circuitry and devices provided for suppression of spurious radiation.

#### Response

The Alcatel-Lucent AWS wireless base stations, subject of this application, were designed in adherence to the proper Electromagnetic Compatibility (EMC) guidelines extending from the circuit board level to the shelf and system levels to significantly suppress inter-modulation products, carrier induced harmonics and other spurious signals as well as the emissions radiated from them. The suppression of spurious radiation was achieved mainly by implementing the following two techniques:

1. Effective filtering in the RF path of the transceiver unit and band-pass transmit filters (external to the transceiver).
2. Proper grounding and RF shielding of the circuitry, circuit boards, cables, shelves and the frame.

**This information has not changed.**