Federal Communications Commission
Office of Engineering and Technology
Equipment Authorization Division
Application Processing Branch

7435 Oakland Mills Road
Columbia, MD 21046

Global Product Compliance Laboratory
MH 5A-115, Alcatel-Lucent
600, Mountain Avenue
Murray Hill, NJ 07974-0636

February 16, 2012

Dear Examiner:

This request is for FCC Class II permissive change Certification of Alcatel-Lucent "LTE **9442 RRH2X40-AWS**", **FCC ID: AS5BBTRX-02** henceforth it is referred "RRH". The RRH is a radio, amplifier and filter combination cabinet system which uses the 3GPP standards Long time Evolution (LTE) technology for use in Domestic Miscellaneous Wireless Communication Services (WCS). The RRH was originally certified for operations in 5MHz and 10 MHz bandwidths. This class II filing is operation of RRH in 20MHz bandwidths. The RRH will be operated henceforth in 5MHz, 10MHz and 20 MHz bandwidths.

Similar to original filing, this application for the RRH under FCC ID: AS5BBTRX-02**,** is for operation in the domestic WCS band with a LTE signal. The data summarized below is in the form presently used by the Commission's Radio Equipment List.

Manufacturer	**Alcatel-Lucent**
Equipment Identification	**AS5BBTRX-02**
Rules Part Number	**27.53 (h)**
Frequency Range	**2110-2155 MHz (A, B, C, D, E and F Blocks)**
Output Power	**+3 dBm (.002W) to +46dBm (40W) Varied by Software**
Frequency Tolerance	**+/- 0.001 ppm**
Emission Designator	**18M93F9W for 20 MHz Bands, 9M45F9W for 10 MHz Bands and 4M72F9W for 5 MHz Bands**

The RRH, under FCC ID: AS5BBTRX-02 is designed to be operated and marketed as RF cabinet system. Each of the RRH contains two identical Transceiver paths and ports. Each transceiver ports outputs 40W maximum of at the External antenna connector (EAC) port. The RRH will be typically operated in Multiple and input and Multiple output (MIMO) mode using multiple antennas. Each Transceiver path is supported by its own RF path filter. The RRH were evaluated total of two transceiver ports. During all antenna port conducted emissions, the transceiver ports were randomly selected for each of the tests. The RRH will be marketed in indoor/outdoor cabinets.

The RRH is designed operate at large number of sub-carriers which are modulated with QPSK, 16QAM, and 64QAM formats. The RRH was evaluated and data is provided for all three modulation formats.

(a) QPSK
(b) 16QAM
(c) 64QAM

The actual power level delivered by the **RRH** to transmit antenna is under the software control of the Mobile Switching Center of the local Cellular system.

The **RRH /AS5BBTRX-02** is designed and manufactured by Alcatel-Lucent.

List of exhibits attached with this submission is indicated in the following page of this cover letter.

The attached exhibits contain the technical data, and the required statements and documents for Product Certification. The technical contact at Alcatel-Lucent will comply with any request for additional information should the need arise.

Sincerely,

Dheena Moongilan
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List of Exhibits

	COVER LETTER
	Cover Letter
	Product Configuration – Explained in test reports
	Letter for Confidential Treatment – Not applicable
	ATTESTATION STATEMENT
Section 2.911 (d)	***Qualifications and Certifications**
Section 2.1033 (c) (1,2)	***Manufacturers, FCC Identification**
Section 2.1033 (c) (4-7)	**Emissions, Frequency Range, Power Level**
	USERS MANUAL
Section 2.1033 (c) (3)	***Users Manual**
Section 2.1033 (c) (9)	**PARTS LIST/TUNE-UP PROCEDURE**
	***Tune-Up Procedure**
Section 2.1033 (c) (13)	***OPERATIONAL DESCRIPTION**
	Description of Modulation System
Section 2.1033 (c) (10)	**SCHEMATICS**
	Schematic
Section 2.1043 (b) (2)	***Block Diagrams**
Section 2.1033 (c) (11) and 2.925 (a) (1)	***ID LABEL/LOCATION INFORMATION**
Section 2.1033 (c) (12)	***EXTERNAL PHOTOS**
	INTERNAL PHOTOS
Section 2.1033 (c) (12)	***Internal Photos**
	TEST REPORT
Section 2.1033 (c) (8)	***Measurement of DC Power**
Section 2.1033 (c) (14)	**Listing of Required Measurements**
Section 2.1046	**Measurement of Radio Frequency Power Output**
Section 2.1047	**Measurement of Modulation Characteristics**
Section 2.1049 and Section 24.238 (b) and 27.58 (g)	**Measurement of Occupied Bandwidth**
Section 2.1051	**Measurement of Spurious Emissions at Antenna**
Section 2.1053	**Field Strength of Spurious Radiation**
Section 2.1055	**Measurement of Frequency Stability – Not required**
Section 2.1057	**Frequency Spectrum to be Investigated**
	Test Instruments Used for Test – See Test Reports
	RF Exposure Information
Section 24.51 (c)	**Human Exposure – Not performed**
	*** Same as original filing no additional information submitted**