

# REQUEST FOR SPECIAL TEMPORARY AUTHORITY

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**Puerto Rico Telephone Company, Inc.**

**File Number: 0393-EX-ST-2010**

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## **NARRATIVE STATEMENT**

Pursuant to Section 5.61 of the Commission's rules, 47 C.F.R. §5.61 (2009), Puerto Rico Telephone Company, Inc. ("PRT") hereby respectfully requests special temporary authority ("STA") beginning September 20, 2010 to March 20, 2011, to operate in the 698-710 / 728-740 MHz and 1720-1730 / 2120-2130 MHz bands for the purpose of evaluating the functionality and acceptability of broadband Long-Term Evolution ("LTE") equipment in various propagation conditions during a test (hereinafter, the "LTE test") to be conducted at a limited number of sites, identified below, in the San Juan metropolitan area in the Commonwealth of Puerto Rico. PRT is not seeking authority to perform a market study under this STA. Moreover, no fees will be charged to entities using the equipment during the proposed LTE test.

**The following information is provided in support of this request:**

**1) Applicant's Name, Address and FCC Registration Number (FRN):**

Puerto Rico Telephone Company, Inc.  
Address: P.O. Box 360998, San Juan, PR 00936-0998  
FRN: 0001731470

**2) Purpose of Operation and Need for STA:**

As the main telecommunications provider in Puerto Rico and the Caribbean, PRT is continually involved in efforts to advance the technologies and applications of its wireless network and to improve consumers' reception of its service. In Auction 73, PRT won the Lower 700 MHz A-block license (698-704 / 728-734) in the Puerto Rico-US Virgin Islands market (BEA174) and the Lower 700 MHz B-block license (704-710 / 734-740) in the San Juan-Caguas, PR market (CMA091).<sup>1</sup> In Auction 78, PRT won the B-block AWS license (1720-1730 / 2120-2130 MHz) in the Puerto Rico-US Virgin Islands market (BEA174).<sup>2</sup> Processing of PRT's applications for these licenses is pending before the Commission. Grant of the instant application for an STA will permit PRT to test and evaluate the functionality and acceptability of broadband LTE equipment in various propagation conditions in the 698-710 / 728-740 MHz and 1720-1730 / 2120-2130 MHz bands in the San Juan metropolitan area. PRT will also test potential transmitter locations in an effort to optimize network performance and improve the

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<sup>1</sup> See Puerto Rico Telephone Company, FCC Form 601, ULS File No. 003382234.

<sup>2</sup> See Puerto Rico Telephone Company, FCC Form 601, ULS File No. 0003574136.

quality of service to its wireless subscribers. Thus, the LTE test will be critical to PRT's deployment of 4G services in Puerto Rico in the near future.

**3) Dates of Operation:**

PRT proposes to conduct the LTE test from September 20, 2010 to March 20, 2011.

**4) Classes of Stations:**

PRT will use six fixed base stations to test the 700 MHz frequencies, eight fixed base stations to test the AWS frequencies, and a total of 40 mobile units operating in the San Juan Metropolitan Area. For the 700 MHz test, this area comprises a radius of 10 km centered at 18-24-31.9 N, 66-02-16.3 W. For the AWS test, this area comprises a radius of 13 km centered at 18-22-59.75 N, 66-9-52.83 W.

**5) Locations of Proposed Operations:**

PRT proposes to conduct the LTE test with no more than 13 transceiver sites. The transceiver sites are listed in the chart below.

Site Name	Address	Latitude	Longitude	Transmitter Height (m)	Ground Elevation (m)
Isla Verde CO	Carr. 187, Boca de Cangrejos Carolina, PR	18° 26' 32.0"	66° 1' 23.0"	12	1
Rio Piedras CO	Ave. Juan Ponce de León, Pda 35 #570, Hato Rey, PR	18° 24' 52.0"	66° 3' 21.0"	18	16
Trujillo Alto CO	Carr. 846, Km 1.1, Calle Aleli, Sector Pueblo Seco, Trujillo Alto, PR	18° 22' 13.0"	66° 1' 30.0"	15	10
Carolina CO	Carr. 190, Km 0.5, Sabana Abajo, Carolina, PR	18° 24' 0.00"	65° 59' 1.0"	18	3
Baldorioty CO	Calle Betances Esq. Ave. Baldorioty, PRT Santurce Este CO, Santurce, PR	18° 26' 48.0"	66° 3' 8.0"	11	0
Santurce CO	PRT Pda 15, piso 5, Calle Cerra #604, Santurce, PR	18° 27' 9.0"	66° 04' 45.0"	25	10
Bayamón CO	Calle #4 Esq. Carr. PR-167, Urb. Flamboyán Gardens, Bayamón, PR	18° 23' 35"	66° 9' 31"	12	10
Bayamón UIA	Carr. PR-830, Km. 1.5, Bo. Cerro Gordo, Bayamón, PR	18° 22' 9"	66° 10' 36"	35	47
Cataño	Calle Ramón B. Lopez, Esq. Ave. Las Nereidas, Cataño, PR	18° 26' 28"	66° 7' 32"	25	1
Guaynabo	Ave. Esmeralda #3, Urb. Luis Muñoz Rivera, Guaynabo, PR	18° 22' 19"	66° 6' 27"	31	32

Site Name	Address	Latitude	Longitude	Transmitter Height (m)	Ground Elevation (m)
Sierra Bayamón	Carr. #2, Bo. Hato Tejas, Sierra Bayamón, Bayamón, PR	18° 23' 55"	66° 10' 6"	31.2	30
Roosevelt 1513	Ave. Franklin D. Roosevelt #1513, Sector Caparra, Bo. Pueblo Viejo, Guaynabo, PR	18° 24' 42"	66° 6' 7"	44.2	10
Hato Tejas	Callejón Morales, Calle Olivo, Bo. Hato Tejas, Urb. Sta. Teresita, Bayamón, PR	18° 24' 25"	66° 10' 52"	39	67

**6) Equipment To Be Used:**

The 700 MHz LTE test will utilize Nokia Siemens Networks Flexi RF Head 730 at six of the transceiver sites and Ericsson RBS 6201 for the AWS test at eight of the sites. PRT expects that it will be able to complete the LTE test with approximately forty (40) mobile/portable units.

**7) Frequencies Desired:**

PRT requests authorization to operate non-Federal Government frequencies in the 698-710 / 728-740 MHz and 1720-1730 / 2120-2130 MHz bands in the San Juan metropolitan area. No broadcast TV stations are currently operating in those frequencies in Puerto Rico. PRT recognizes that the operation of any equipment under experimental authority must not cause harmful interference to authorized facilities. Should interference occur, PRT will take immediate steps to resolve the interference, including, if necessary, arranging for the discontinuance of operation.

**8) Power Levels:**

All power levels will comply with the limits set forth in the FCC's rules, including those relating to human exposure to radiation.

The mobile/portable units to be deployed are configured to operate with a transmitter power output ("TPO") and a peak effective radiated power ("ERP") of 200 mW. The transmitters will operate at various power levels as specified in the Station Location portion of the Application for Special Temporary Authority accompanying this Narrative Statement. For the 700 MHz test, the maximum power level from the transmitters will not exceed a TPO of 30 W and a peak power level of 432 Watts ERP. For the AWS test, the maximum power level from the transmitters will not exceed a TPO of 60 W and a peak power level of 1544 Watts ERP.

PRT will reduce the actual power levels to the minimum power needed for successful completion of the LTE test.

**9) Type of Emission, Modulation Technique, and Bandwidth Required:**

PRT proposes to operate using Orthogonal Frequency Division Multiplex Access (OFDMA) modulation for downlink transmissions and Single Carrier Orthogonal Frequency Division Multiplex Access (SC-OFDMA) modulation for uplink transmissions. The primary emission designator is 10M0F9W. Other emission modes may be utilized, but in no event will the emission designator extend beyond the frequency bands requested. The bandwidth is 10 MHz for downlink and 10 MHz for uplink.

**10) Overall Height of Antenna(s) Above Ground:**

The fixed base station transmitter antennas will be located at the sites specified in Item 5 above with the coordinates specified therein and the accompanying application form. Attached is an Antenna Exhibit showing the installation of each proposed antenna system. No antennas will be mounted in a fashion that will require approval under FAA and FCC rules and regulations, as confirmed by studies using the FCC's TOWAIR calculator (included with the Antenna Exhibit).

**11) Other Matters:**

Public Interest. PRT submits that issuance of the STA is in the public interest, convenience and necessity. Grant of the STA will permit PRT to test and evaluate the functionality and acceptability of broadband LTE equipment, which will enable PRT to deploy 4G services in Puerto Rico in the near future.

**12) Contact Information:**

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In the unlikely event interference concerns should arise during the period of authorization for this experimental license, please contact:

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Puerto Rico Telephone Company  
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In accordance with the FCC's Fee Schedule, electronic payment for \$60.00 (Fee Type Code "EAE"), and a completed FCC Form 159 have been filed in accordance with the FCC's fee filing program.