Texzon Technologies, LLC
Request for Part 5 Experimental
Special Temporary Authority
ELS File No. 1234-EX-ST-2016

NARRATIVE STATEMENT

Pursuant to Sections 5.3(d) and (f) and Section 5.61 of the Commission's rules, 47 C.F.R. §§ 5.3(d), (f), 5.61 (2016), Texzon Technologies, LLC ("Texzon") hereby respectfully requests special temporary authority ("STA") from October 10, 2016 to April 10, 2017, to operate in the 100 kHz and 51 MHz bands for the purpose of testing prototype equipment. Texzon is developing systems for the excitation of terrestrial electromagnetic surface waves (Zenneck surface waves, not Norton ground waves) with the ultimate intent of more efficient broadcast signaling without the current issues associated with ionosphere skip interference. The equipment to be used is experimental and proprietary and is entirely of a prototype nature.

Testing will be done under the control of the General Radiotelephone Operator License (GROL) held by:

Kenneth Corum
FRN: 0003674447
Granted 03-18-2009
File Number:0003778069
Serial Number: PG00026528

A. Purpose of Operation and Need for STA:

Texzon is a startup technology company focused in the fields of energy storage and distribution. The focus of the company is in the development of new technology that will allow for more efficient and effective power management and delivery in a safe, environmentally-conscious and reliable manner. The experimental authority requested herein will allow the company to test the functionality of prototype equipment and validate the science of the terrestrial electromagnetic surface wave for use in signaling. The testing will also allow for recording of precise field strength measurements at the requested frequencies using low frequency spectrum analyzers and calibrated antennas. Importantly, Texzon believes such testing will be non-radiating – which will limit the interference effects to any other party in the spectrum bands under test.

The system under test will be used to demonstrate the science and an application of Zenneck surface waves and is a precursor to a larger demonstration of this new signaling technology. The STA is needed to tune and test the demonstration apparatus. Once tuned, Texzon will be able to provide measurement data and better define the parameters necessary for future experimental licenses.

B. Location of Proposed Operation:

Texzon proposes to conduct its experimental testing initially at a location in Texas. The transmission unit will be fixed and non-radiating. Texzon researchers will be using off-the-shelf commercial grade crystal controlled and PLL signal generators along with commercial grade high power amplifiers (Class A, AB, C, and D). The approximate reference coordinates (in Datum: NAD83) of the fixed location is:

Approx. 32° 9'14.07"N, 96°56'40.08"W

C. Technical Specifications:

1. Frequencies Desired

Texzon will be testing at this location on two different frequencies, 100 kHz and 51 MHz. To conduct a series of measurements over a frequency range, Texzon requests authorization to use spectrum from 80 to 120 kHz for the 100 kHz testing, with 100 Hertz of bandwidth and 50 to 52 MHz for the 51 MHz testing, also with 100 Hertz of bandwidth.

2. Effective Radiated Power

Texzon anticipates that the testing will be non-radiating. To conduct the testing, the RF power necessary to maintain the voltage to produce local fields required to launch a high velocity propagating surface wave will be utilized. The testing will not exceed 10 kW of RF input power to the surface wave launching probe at 100 kHz and 6 kW of RF input power to the surface wave launching probe at 51 MHz. The intent is to produce a surface wave without producing any Norton ground wave radiation.

3. Modulation and Emissions

Texzon proposes to utilize a continuous wave signal with 100 Hertz of bandwidth. The emission designator would be H100N0N.

4. Antenna Information

While the testing should be non-radiating, the surface wave launching probe will be between 50 feet and 80 feet above ground level for the 100 kHz testing and between 5 and 12 feet above ground level for the 51 MHz testing. No probes will be mounted in a fashion that will require approval under FAA and FCC rules and regulations.

5. Equipment To Be Used

Texzon expects to conduct its demonstration with a single test probe at the above referenced fixed location. This probe and any receiving devices are

prototype equipment developed by Texzon. Texzon will limit the power, area of operation, and transmitting times to the minimum necessary to gather the needed scientific measurements of this new technology.

D. Protection Against Causing Interference:

Texzon has requested authority to operate in the 100 kHz and 51 MHz bands. The 100 kHz band is a primary radiolocation band for the LORAN radionavigation system as well as being available for other radiolocation and power line carrier use on a secondary basis. The 51 MHz band is a primary Amateur Radio Service band. Texzon understands that it must accept any interference from any users of these bands and that all operations by Texzon will be on a secondary basis. Texzon has established a point of contact identified below with "kill switch" authority should any interference occur to primary licensed services. Should interference occur, Texzon will take immediate steps to resolve the interference, including, if necessary, arranging for the discontinuance of operation.

E. Restrictions on Operation:

Texzon is not seeking authority to perform a market study under the requested STA. Moreover, no fees will be charged to entities using the equipment during this test. Entities will be advised in accordance with Section 2.803 of the Commission's rules, 47 C.F.R. §2.803, that any unapproved devices which have not been authorized as required by the FCC are not being offered for sale or lease, or sold or leased, until authorization is obtained.

F. Public Interest:

Texzon submits that issuance of an STA as requested is in the public interest, convenience, and necessity. Grant of an STA will help Texzon to develop and test innovative equipment that will allow for more effective and efficient power management and distribution.

G. Contact Information:

Technical Contact and "Stop Buzzer/Kill Switch:"

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