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NARRATIVE STATEMENT

Pursuant to sections 5.51 and 5.53 of the Commission's rules 47 CFR 5.51 and 47 CFR 5.53, FiSci Technologies, LLC, respectfully requests an experimental authorization to operate in the 3.55 to 3.70 GHz band, commonly known as the CBRS band, for the purpose of conducting various tests which will allow FiSci Technologies to efficiently design and deploy LTE networks using currently available LTE network equipment operating in the CBRS band.

A. PURPOSE OF OPERATION AND NEED FOR EXPERIMENTAL LICENSE

FiSci Technologies, LLC ("FiSci"), is a Madison, WI, based company focused on providing internet connectivity to "unconnected" and underserved areas across North America and the world. Within the United States, FiSci Technologies is currently testing LTE equipment made by Baicells Corporation to evaluate its suitability for providing economical broadband access to rural areas across the US.

With this experimental authorization proposal, FiSci Technologies proposes to deploy two test sites in a rural area of Kentucky for the purpose of performing multiple tests related to propagation characteristics of the CBRS spectrum, along with testing the integration of Baicells equipment with spectrum assignment systems (SAS) that form the framework of the CBRS channel assignment process.

B. LOCATION OF PROPOSED OPERATIONS

FiSci is currently building two sites in Whitesburg, Kentucky, to support the proposed testing. Whitesburg is a rural community in Eastern Kentucky with a population of approximately 2000 people. Whitesburg is a mountainous area, with elevation changes as much as 400 feet AMSL across the city proper. The terrain profile Whitesburg offers FiSci a perfect environment to study propagation characteristics of the CBRS band in a terrain environment common to many underserved areas of the US.

C. OPERATIONAL SPECIFICATIONS

1. Equipment

The LTE base station equipment used for the purpose of testing is FCC approved equipment manufactured by Baicells Technologies. CPEs will also be provided by Baicells, with three models being used for testing,

including a newly developed FCC approved indoor CPE that eliminates the need for customer premise installation.

2. Effective Radiated Power

The Baicells Nova 9 base station will operate per spec with 2 Watts conducted power output, with power adjustments made as necessary to stay within permitted ERP limits.

3. Antennas

FiSci will be using commercially available antennas made by KP Performance, Inc. The two sites currently being planned will use two different models of antennas, with two different beamwidths at the two sites. Use of both built-in electrical downtilt, and mechanical downtilt, will be used as part of the coverage/propagation testing process.

D. SUMMARY OF PLANNED TESTING

The proposed experimental authorization will involve multiple test plans, including but not limited to:

1. SAS Integration and Testing

Use of a Spectrum Access System is the foundation of operation in the CBRS band. FiSci is planning to partner with Federated Wireless, a pioneer in the development of SAS architecture for use in the CBRS band, to test and better understand functionality of the SAS and how it affects both network performance and impacts network design.

2. Propagation Testing

Whitesburg, KY offers a challenging RF environment for providing wireless broadband coverage. Data collected during this testing will provide long-term benefit as FiSci designs and deploys networks in other rural communities, many of which offer this same type of terrain challenges.

3. Testing of Intra and Inter Cell Interference Mitigation Methods

Efficient use of spectrum resources will be key to successful deployments within the CBRS band. The use of interference mitigation methods within the LTE architecture, and understanding how they interact with SAS functionality, will allow FiSci to gather insightful information that will allow for highly efficient and economical network designs.

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4. Evaluation of Customer Premise Equipment

FiSci will use 3 different models of CPEs as part of their testing. Two of the CPEs are typical devices used in fixed broadband installations, installed outdoors. The third model to be tested will be an indoor model, allowing FiSci to collect real time data related to in-building propagation characteristics of CBRS frequencies.

The CPEs will be installed and used at selected locations within the proposed coverage area of the two test sites.

All 3 models are FCC approved CPEs, and currently available from Baicells.

E. RESTRICTIONS ON OPERATIONS

FiSci recognizes that all operations under this proposed experimental operation are on a non-interfering basis, and agrees to cease operations upon notification of any suspected harmful interference. FiSci will have full remote connectivity to all operational equipment, allowing it to cease operations quickly in the event of any suspected interference.

F. PUBLIC INTEREST STATEMENT

FiSci Technologies submits that issuance of an experimental license as requested is in the public interest, convenience, and necessity. Granting of this license will allow FiSci to continue their mission of providing low cost easily accessible broadband connectivity to underserved areas across the US and North America.