

NARRATIVE STATEMENT

Pursuant to sections 5.51 and 5.53 of the Commission's rules 47 CFR 5.51 and 47 CFR 5.53, Fresno County Superintendent of Schools ("FCSS"), respectfully requests an experimental authorization to operate in the 3.65 to 3.70 GHz band, for the purpose of conducting various tests which will allow FCSS to evaluate the feasibility of deploying their own wireless broadband network to provide broadband services to students within the Orange Center Elementary School District.

A. Purpose of Operation and Need for Experimental License

FCSS is working with the Orange Center Elementary School District to address the lack of affordable broadband within the School District. The challenge faced is one of affordability; virtually all (96%) of the households within the targeted area are classified as low income. The fact that the District provides free breakfast/lunch/dinner to 100% of the student population speaks to the need for affordable, or even free, broadband service within the District. Currently, the school district estimates that 80% of its student population does not have home internet access.

Broadband connectivity provided by FCSS and Orange Center Elementary School District would allow such things as:

1. Student access to Orange Center Elementary School District student portal, which provides learning tools such as Reflex Math, Brain pop, Kahn Academy, and Discovery Learning, among others.
2. Student access to Google Classroom for curriculum management and access to assignments.
3. Parental access to tools such as the student grading system, student handbook, teacher contact info, district calendar, etc.

It is a given that access to such tools will enhance the student learning experience; the FCSS's mission is to determine the best solution for providing that access.

FCSS is currently evaluating use of the 3.65 GHz band as a potential means for providing wireless broadband connectivity to these students. Granting of this experimental application will allow FCSS to deploy one test site, and determine if eventual use of CBRS spectrum is a viable solution for broadband delivery within this district and extending to others within the FCSS purview.

B. Location of Proposed Operations

FCSS's proposed tower location is located east of South Cherry Avenue, and north of East Central Avenue, coordinates latitude 36-40-59.5 and longitude 119-46-50.7, ASR registration number 1290189. The use of the existing tower eliminates any need to build a new structure, or secure a lease on a tower owned by a third party, allowing FCSS to proceed with testing in an expedient manner.

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 two models being used for testing. One model will be an 11 dBi outdoor CPE device, and the second model a newly developed FCC approved indoor CPE that eliminates the need for customer premise installation. FCSS

expects the majority of testing to be done using the outdoor CPE, but would like to evaluate the feasibility of indoor CPEs in some instances.

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 EIRP limits.

3. Antennas

FCSS will be using commercially available antennas made by KP Performance, Inc. The planned design for the test site utilizes four (4) model KP-3DP65S-45 in a four-sector configuration.

D. Summary of Planned Testing

The proposed experimental authorization will allow FCSS to complete testing as detailed below:

1. Coverage and Throughput at 3.6 GHz

FCSS will measure both usable coverage of the proposed site, along with throughput. These tests will be performed using both types of CPEs as noted in this narrative.

2. Performance of Indoor versus Outdoor CPE

Use of the Baicells indoor CPE would eliminate the time and expense of installation of the more typical outdoor CPE. Testing will be done at multiple locations to evaluate the performance of the indoor CPE versus the outdoor CPE, so a determination can be made as to whether there are enough student households within the coverage area of the proposed site where the indoor CPEs perform in a satisfactory manner warranting use of these CPEs in a long-term deployment.

The performance of the outdoor CPE will be evaluated in comparison to the indoor CPE, and also evaluated for ease of installation at the typical student residence.

E. Restrictions on Operations

FCSS 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. FCSS 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

FCSS submits that issuance of an experimental license as requested is in the public interest, convenience, and necessity. Granting of this license will allow FCSS to determine the benefit and feasibility of a much larger broadband network deployment using CBRS spectrum, with a focus on serving the needs of students who do not currently have viable broadband options.