

Exhibit 1: Description of Program of Research and Experimentation

TV Band Service LLC (TVBS) respectfully requests the issuance of an experimental license using the equipment and operating parameters set forth in its application for an experimental license. Grant of this license will enable TVBS to conduct research and experimentation using vacant spectrum in the Television broadcast bands (TV White Spaces) for testing of TV White Spaces applications especially concerning how they could benefit local governments.

As noted TVBS seeks experimental authorization to operate in the area of Wilmington, North Carolina, with a radius of 30 miles around the center point located at 1223 North 23rd Street, Wilmington, NC 28405. Devices configured as fixed devices per the current TV White Spaces rules will be located within the area of operation specified in the license. During the experiment some of these devices may be moved within the area of operation but will only operate when stationary. During the experiment some may be configured to operate as personal/portable devices as defined in the FCC Report and Order.¹

Based on information provided by Spectrum Bridge Inc. (Figure 1) the license requests access to vacant channels between TV channel 7 and 51. Channels 7,8,17,18 permit the operation of devices at high power (4wEIRP) as requested in the license application. Other channels may be utilized using radios operating at low power (less than 100mw).

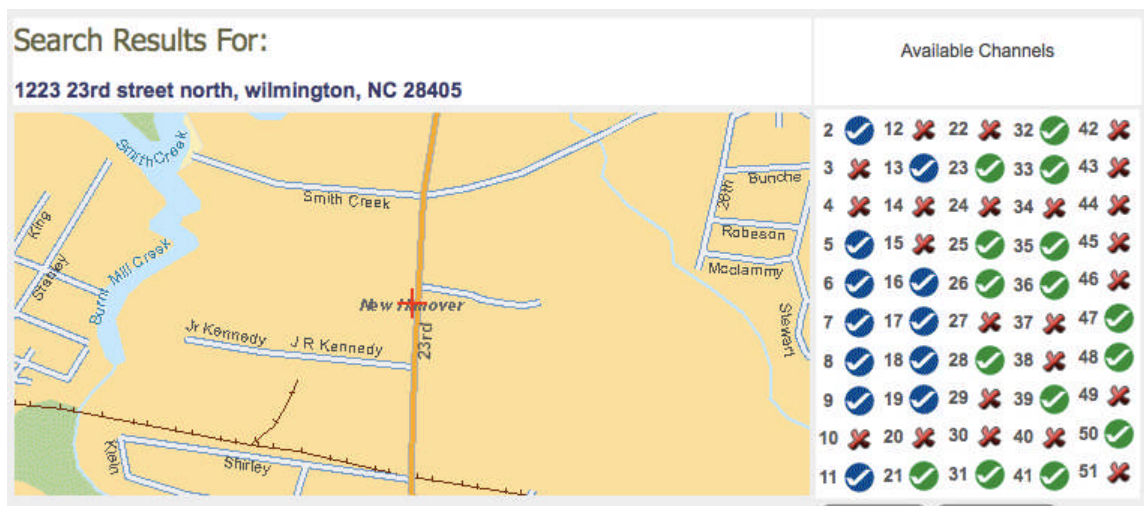


Figure 1

TVBS will provide and install all the necessary hardware and software to conduct these experiments. The intent is to evaluate the utility of TV White Space based communications for the problems described as “Smart City” applications.

¹ Second Report and Order, 23 FCC Rcd 16807 (2008)

In the city of Wilmington there exists a network that supports a range of applications including water and sewer system sensors, traffic and security cameras, community WiFi access and other city services. Some areas of the city are not connected to this network. Reasons include distance from the network, RF propagation issues, line of sight (LOS) and lack of bandwidth. The TV White Spaces spectrum can be utilized to help solve these problems.

The radios to be utilized in the experiments are provided by Spectrum Bridge Inc. Other equipment manufacturers may participate in the future. The equipment is the same type deployed under an existing FCC experimental license in Claudville, VA. A “fixed” base station is connected to the city network to provide broadband connection. The base station employs an omni directional antenna by default but may, if the topography requires it, utilize a directional antenna. Fixed client radios communicate to a base station using FSK modulation to provide network access for remote applications such as sensors, cameras and WiFi access nodes. The base station and client radios are in fact the same hardware device operating in two different software modes.

At a later date it is anticipated that other manufacturers’ equipment and additional applications will be added to the experiment. Any necessary modifications to the license will be made at that time.

It is the intention of TVBS to upgrade the radios to FCC-certified white space radios when the rules and certification process is complete.

The initial set of radios will be controlled by the White Space database provided by Spectrum Bridge Inc. Spectrum Bridge has agreed to provide TVBS and the FCC with any information required related to the operation of the Database.

These experiments are expected to facilitate the roll out of smart city and related applications in TV White Spaces without causing harmful interference to incumbent television stations. TVBS will not transmit on any channel or in a manner that impacts a TV Band user entitled to interference protection. As part of this process TVBS anticipates coordinating the operation of these experimental radios with the local affiliate of the Society of Broadcast Engineers to accommodate legal transient use of otherwise vacant TV channels.

TVBS expects the experiments it performs will have a reasonable promise of contributing to the development of the radio art and, in particular to the understanding and opportunities offered by TV White Spaces. It is further believed that these experiments will further the Commission goals to promote the development of new and innovative services in the TV White Spaces.