

DESCRIPTION OF EXPERIMENTAL PROJECT

Public Wireless, Inc.
File No. 0288-EX-PL-2012

The applicant, Public Wireless, Inc., is a developer of small cell wireless technology that solves coverage and capacity problems for mobile operators. It holds equipment authorizations for devices in the Cellular Radio Telephone Service (Part 22H) and Narrowband Personal Communications Service (Part 24D). Its Equipment Authorization identifier is V7D.

This application seeks authority to develop new equipment and systems for maximizing use of the television broadcast band for broadband services ("White Spaces"). Part 15H of the Rules currently authorizes broadband operation on vacant TV channels, but it is limited in scope because current techniques would interfere with TV broadcasting if too close to an operating TV station. Public Wireless believes that significant advancements in the art are possible, including those made possible with currently available cognitive radio technology. Using FDD-LTE modulation schemes, it plans to explore two-way broadband communication without a fixed separation between uplink and downlink channels (no predefined pairing scheme), two-way operation within a single 6 MHz television channel, and even co-channel and adjacent-channel operation with a channel used by a television broadcaster through coordination of signals and antenna pattern design.

Public Wireless will coordinate all operations in advance with the local broadcast licensee of the frequencies requested in this application, which have been chosen because part of the program is to develop techniques for operating TVBDs on channels that are currently foreclosed from TVBD operation. The broadcaster has been contacted and has already agreed to cooperate with the experimental program. A condition on the license requiring such coordination and cooperation will be accepted.