

This is a demonstration, test, and evaluation of an experimental software radio platform designed and built by Rice University researchers to enable telecommunications experimentation in the unlicensed TV-band white spaces. This experiment will demonstrate and test over-the-air transmission and reception of high-speed wireless video and data in a highly challenging urban deployment scenario.

The goal of this demonstration is to test the utility of the developed system and measure its performance for the purpose of further refinement of the technology and experimental collaboration with researchers. These results and a demonstration of the capabilities of this experimental platform will be available to the public and motivate further research in this area. The hardware being tested was developed under NSF grants CNS-1314822, CNS-1126478, CNS-1012831.

A state-of-the-art communications and research platform developed using state-of-the-art components and design techniques, the submitted radio devices are intended to enable spectrum sharing on any channel and utilizing any modulation type. This radio system is part of an ongoing research effort to improve the efficiency and utilization of new radio access technologies and similar equipment or facilities do not currently exist. This demonstration and test is critical to the ongoing development of enabling technologies and techniques.

The experiment will consist of two stationary antennas whose location has been specified in the form. Besides the stationary antennas, we will have 8 mobile antennas. The position of the mobile antennas is not fixed. However, they will operate within the rectangular region shown in the “DirectionalAntennaNew.jpeg” file. The co-ordinates of the corner points have been specified. The mobile antennas will transmit data to the stationary antennas.