

This is a demonstration, test, and evaluation of an experimental cognitive 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 and city council members in the city of New Orleans. 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-1126478 and CNS-1012931.

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. Furthermore, this demonstration at a conference for wireless technology research will increase awareness of the platform and foster scientific discussion and inquiry.