

Exhibit 1: Description of Research and Experimentation and Request for Expedited Processing

Massachusetts Institute of Technology (MIT) respectfully requests the issuance of an experimental license using the equipment and operating parameters set forth in the accompanying application. Grant of this license will enable MIT to conduct research and experimentation regarding use of vacant spectrum in the television broadcast bands (i.e., the “white spaces”). See *generally Unlicensed Operations in the TV Broadcast Bands; Additional Spectrum for Unlicensed Devices, Below 900 MHz and the 3 GHz Band*, Second Report and Order and Memorandum Opinion and Order, 23 FCC Rcd 16807 (2008) (adopting rules to allow unlicensed radio transmitters to operate in vacant television broadcast spectrum). In particular, MIT seeks to conduct research to demonstrate the potential of white spaces-based networks to enable improved wireless applications and services.

Because the Second Report and Order contemplates innovative new uses for vacant broadcast spectrum, MIT’s experiments will have a reasonable promise of contribution to the development of the radio art. MIT intends to publish results of its experiments in academic conferences and give presentations in Universities and community events. Moreover, MIT will extend invitations to academic researchers to view MIT’s experiments, and intends to work closely with researchers to fine tune networking protocols and systems as applicable. As these experiments will further the development of innovative white spaces applications that will benefit consumers, MIT respectfully requests expedited processing of its application to help realize this goal in the near future.

As noted in MIT’s application, MIT seeks experimental authorization within the area of its main campus in Cambridge, MA, with a radius of operation of 4 km. MIT’s experiments will use both geo-location and spectrum sensing techniques. In addition, MIT will not transmit on any television channel in which there is an incumbent licensee. MIT contemplates coordination of spectrum use with an entity designated by the Commission, such as the Society of Broadcast Engineers, and will limit operation to coordinated frequencies.