

Google Inc. respectfully requests the issuance of an experimental license to operate, as described in this application, fixed and mobile equipment, to permit Google to conduct research and experiments in vacant spectrum within the television broadcast bands at 512-602 MHz and 620-698 MHz ("white spaces"). The experiments will enable Google to perform technical demonstrations of equipment and techniques, and to test equipment in connection with its production and approval. Google believes the experiments have a reasonable promise of contributing to the development, expansion, and utilization of the radio art, including by promoting the development of innovative wireless applications and services for the benefit of private, commercial, and government users of spectrum, consistent with the Commission's goals for the white spaces.

Google will conduct research and experiments of fixed and personal/portable devices within the white spaces to determine the potential utility and feasibility of such operations and technology. Google requests authorization within the geographic coordinates of its Mountain View, California campus. *Google plans to operate up to three fixed base stations at 4W per 6 MHz channel available, with a radius of operation of 5 miles (8.05 km), and up to 50 mobile stations at 100 mW per 6 MHz channel available.* Google will not transmit on any spectrum licensed for incumbent broadcast television operations, and operations will be performed in accord with the power limits, antenna requirements, emission limits, and interference avoidance methods adopted by the Commission in Unlicensed Operations in the TV Broadcast Bands, ET Dkt. 04-186, Second Report and Order and Memorandum Opinion and Order, 23 FCC Rcd. 16807 (2008) and Second Memorandum Opinion and Order, 25 FCC Rcd. 18661 (2010).