Exhibit 1: Description of Research and Experimentation

Microsoft Corp. respectfully requests the issuance of an experimental license using the equipment and operating parameters set forth in File No. 0133-EX-PL-2012. The goal of this application is to allow Microsoft's Research division ("MSR") to operate femtocell research platforms in order to gain operational experience and better understand the capabilities offered by them.

A femtocell (or Home NodeB in 3GPP terminology) is essentially a cellular tower and base station in the form factor of a small Wi-Fi access point. Ordinary cellular phones (User Equipment or "UEs" in 3GPP terminology) may connect to the femtocell and make voice or data calls. The femtocell may connect over an Ethernet backhaul to the Internet and the mobile operator's Home NodeB gateway, which provides access to the core of the mobile operator's network.

In conducting its research, MSR will explore development of software techniques using the mobile OS and/or mobile applications to create opportunities to improve the user experience and device performance when the UE communicates with a femtocell, and possibly take advantage of unique aspects of femtocells. Granting the requested operations will enable MSR to have the opportunity to advance the state of the art in computer science and wireless operations, and could lead to published findings in peer-reviewed, academic conferences and journals.

MSR plans to operate 3GPP Femtocell Reference Platform ("FRP") units from Qualcomm. At the radio layer, the Qualcomm FRP is no different than commercially-available femtocells that use Qualcomm chips. At higher software layers, the biggest difference is that the FRPs will connect to core network emulators instead of connecting to a Home NodeB gateway inside a commercial mobile operator. These core network emulators will run on PC servers, and the FRPs will connect to them via Ethernet. The FRPs will be configured to advertise a particular test mobile network to particular UEs. These UEs will be standard, commercially-available 3GPP cellular phones with SIM cards that allow them to connect to the FRPs.

MSR will operate the FRPs in a computer lab in a building in the interior of the Microsoft campus in Redmond, WA. MSR intends to operate the FRPs at the following frequency ranges identified in the application: 1850-1885 MHz, 1930-1965 MHz, 824-835 MHz, and 869-880 MHz. The output power of the FRPs is 17 dBm, and MSR plans to connect the FRP to a standard pig-tail antenna. MSR anticipates that there will be no impact on public users of mobile networks in the region. Several factors will ensure the risk of harmful interference is negligible: (1) the low transmit power of the FRPs; (2) the location of the FRPs inside an R&D building on the Microsoft campus; (3) the fact that FRPs will behave just like commercial femtocells in detecting and avoiding frequency channels that are currently in use; and (4) the FRPs' ability to automatically adjust their transmit power to limit impact on other UEs connected to neighboring macrocells.

MSR has already contacted the current licensed operator of these frequency ranges in the relevant geographic region and provided an overview of the proposed operations. The operator has tentatively agreed to coordinate to enable these experiments. Accordingly, Microsoft contemplates that coordination with the licensee will be a condition of the license, and Microsoft intends to limit

operations to the coordinated frequencies. MSR has proposed an experimental license duration of 24 months, at the end of which MSR may request a renewal subject to the consent of the FCC and continued coordination with the spectrum operator.