## EXHIBIT 1

## PROGRAM OF RESEARCH AND EXPERIMENTATION

Cellco Partnership d/b/a Verizon Wireless ("Verizon Wireless") plans to co-develop different mobile devices with OEM partners. Verizon Wireless hereby requests an experimental authorization to use the 3.7 – 3.8 GHz band in portions of Minneapolis, MN and Bridgeville, PA areas on a temporary basis. The 100 MHz sought under this STA is a subset of the recently expanded flexible use C-Band in the ranges of 3.7 to 3.98GHz range, which will be auctioned at the end of the year. Verizon Wireless's request is temporary, expiring one year from grant.

Testing will occur outdoors, and all transmissions will be controlled at the locations provided in the application. Verizon Wireless will use a total of three Ericsson and three Samsung transmitters, with eight mobile devices shared across all of the test areas. The fixed base stations and mobile terminals will employ directional, beamforming antennas and will have a maximum antenna elevation as described in the application. The base station antenna has a half-power beam width of approximately 9.5º vertically and 65 º horizontally. The equipment will be mounted in the same orientations outlined in the application. The following table provides detail with the orientation of antennas where multiple values cannot be entered into the Form 442.

| **Site** | **Horizontal orientation of antennas (in degrees)** |
|---|---|
| Location #1 | 50, 320 |
| Location #2 | 140 |
| Location #3 | 190 |
| Location #4 | 260, 350 |

Additional technical parameters are specified in the accompanying Form 442.

Verizon Wireless has identified the nearest Earth Stations and will coordinate operations under the STA with those Earth Station licensees to avoid any potential disruptions to their operations. If those licensees do experience interference, Verizon Wireless will cease interfering operations. In addition, while Verizon Wireless expects this testing will end prior to the winning bidders of Auction 107 initiating operations, Verizon Wireless will cease operations upon notice by a new licensee that they plan to initiate operations in the relevant area.