## **EXHIBIT 1**

## PROGRAM OF RESEARCH AND EXPERIMENTATION

Cellco Partnership d/b/a Verizon Wireless ("Verizon Wireless") hereby requests an experimental short term authorization ("STA") to use the 3.7 – 3.8 GHz band in portions of PEA008 Dallas, TX. Verizon Wireless plans to use this STA to co-develop different mobile devices with equipment manufacturer partners. The 100 MHz sought under this STA is a subset of the recently auctioned flexible use C-Band and ultimately will be part of Verizon Wireless's post clearing assignments. Verizon Wireless's request is temporary, expiring nine months from grant.

Testing under the STA will occur both outdoors and indoors, and all transmissions will be controlled at the locations provided in the application. 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 21° vertically and 120° horizontally. The equipment will be mounted in the same orientation as existing antennas used by Verizon Wireless.

Additional technical parameters are specified in the accompanying Form 442. 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)
Cedar Hill, TX	30/150/270
Colleyville, TX	30/210
Dallas, TX	0/240
Fort Worth, TX	330/100/210
Denton, TX	70/185
Grand Prairie, TX	330/90/210
Fort Worth, TX	10/160/260
North Arlington, TX	0/110/230
Plano, TX	0/120/240
Scurry, TX	320/210
Fort Worth, TX	0/120/240
Lewisville, TX	120/240
Mansfield, TX	10/130/250
Denton, TX	10/110/280
Southlake, TX	30/240
Wylie, TX	330/100/210
Wylie, TX	0/120/240

Site	Horizontal orientation of antennas
	(in degrees)
Ennis, TX	330/90
Plano, TX	0/120/240
Grapevine, TX	0/120/240
Fate, TX	15/135
Southlake, TX	0/240
Southlake, TX	0/120/240
Lake Worth, TX	0/120/240
Duncanville, TX	20/120
Lancaster, TX	120/240
Rockwall, TX	0/240
Plano, TX	120/240

Site	Vertical orientation of antennas (in degrees)
Grand Prairie, TX	8,12,10
North Arlington, TX	0,8,8
Southlake, TX	6,8
Ennis, TX	8,10
Lake Worth, TX	8,8,6

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. In the unlikely chance that those licensees experience interference, Verizon Wireless will immediately cease interfering operations. And while Verizon Wireless expects this testing will end once the earth stations have successfully cleared Phase 1 (100 MHz of the A-Block), Verizon Wireless will cease operations in the areas which are part of the A-Block clearing phase upon notice by a new licensee that they plan to initiate operations in the relevant area.