

Exhibit 1: Purpose of Experiment

a. Complete program of research and experimentation including description of equipment and theory of operation

Facility and position.

Intellectual Ventures Management, LLC (IVM) is applying for an experimental license to operate a directed RF energy transfer system indoors at 14360 SE Eastgate Way in Bellevue, Washington, a laboratory facility (the "Facility") leased by its affiliates. IVM is a privately held US company specializing in creating and building an invention marketplace, and incubating new technology.

The desired experiment would be conducted in the open spaces of the Facility [REDACTED].

Experimental system(s).

The directed RF energy transfer system consists of a CW signal generator, RF power amplifier, an experimental directional transmitter antenna, and an experimental receiver with one or more RF-to-DC converting circuits (rectifiers). The experimental transmitter antenna will be a large-aperture antenna designed and configured to produce three-dimensional focusing (RF power density concentration) within the radiative near-field of the antenna. One experimental transmitter antenna ("Transmitter Antenna A") is a static printed circuit board (PCB) patterned as a two-dimensional reflectarray, with fixed beam profiles. A second experimental transmitter antenna ("Transmitter Antenna B") is a linear-array tunable antenna of the Metamaterial Surface Antenna (MSA) type, with beam profiles dependent upon the configuration of the antenna. A third experimental antenna ("Transmitter Antenna C") is a static reflectarray custom-made from 3D-printable dielectrics and a conducting sheet.

Theory of transmitter operation.

Transmitter Antenna A (Exhibit 2a)

[REDACTED]

Transmitter Antenna B (Exhibit 2b)

[REDACTED]

Transmitter Antenna C (Exhibit 2c)

[REDACTED]

Other parts of the experimental system.

REDACTED

[REDACTED]

Other equipment used includes handheld power meters, spectrum analyzers and probe antennas, which facilitate the measurements of absolute and relative power density levels.

Interference mitigation.

[REDACTED]

b. The specific objectives sought to be accomplished

[REDACTED]

c. How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion, or utilization of the radio art, or is along a line not already investigated

[REDACTED]