

Exhibit 1

Experiment Description:

- a) The complete program of research and experimentation proposed including description of equipment and theory of operation.*

The Next Generation Surface Movement Radar Improved (NGSMRi) system is a single radar sensor providing primary surface surveillance. The NGSMRi system consists of the following 3 subsystems: Antenna subsystem (12 to 21 foot spinning antenna with Motor Controller, associated waveguide, and cables); Transceiver subsystem (9.0 – 9.2 GHz X-Band RF at the input to Gigabit Ethernet at the output) and; Radar Data Processor subsystem (19" rack of COTS equipment, primarily redundant servers & Ethernet switches).

The system operates with the Antenna subsystem as an RF emitter and detector. The Transceiver subsystem handles all RF conversions, waveform generation and signal processing. The Radar Data Processor subsystem accepts digital target data from the transceiver, performs signal and data processing, and relays the data for display.

- b) The specific objectives sought to be accomplished:*

Develop a new version of the surface movement radar to support market demands for a higher performance, lower cost system that is fully compliant to the European Organization for Civil Aviation Equipment (EUROCAE) Minimum Performance Standards for Air Traffic Management (ATM) Surface Movement Radar (SMR) document ED-116.

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

This next generation system will provide: Equivalent high performance of existing system (redundant & solid state) with reduced footprint, greater installation flexibility, increased reliability, and lower equipment, installation and life cycle costs; System will be fully compliant to FAA & International Standards for Airport surface movement radar; can support large airports or adapted to serve as a gap filler and/or smaller airports; Easier installation; Supports both Indoor & Outdoor configurations (without need for a shelter; provides Gigabit Ethernet to indoor processor).