

Exhibit No. 1

Areas of operation of mobile transmitter:

Phoenix International Corporation - 1441 44th Street Northwest, Fargo, North Dakota
46° 53' 48" North Latitude, 96° 51' 45" West Longitude

Illini Technology - 3430 Constitution Drive, Springfield, Illinois
39° 45' 33" North Latitude, 89° 41' 24" West Longitude

John Deere Product Engineering Center - Waterloo, Iowa
42° 28' 48" North Latitude, 92° 25' 12" West Longitude

Exhibit No. 2

(a) The program of experimentation will develop and refine a low-power RADAR sensor for the measurement of vehicle true ground speed. The sensor has the advantage over traditional measurement systems of being unaffected by wheel slippage, tire wear affecting wheel diameter, and other factors.

The sensor uses a digital signal processor (DSP) to analyze the signals transmitted and received by a phased-array "patch" antenna coupled to a low-power microwave transmitter. The sensor operates by directing a beam of microwave energy at the ground and comparing the frequency of the signal that is reflected back from the ground with the frequency that was transmitted. If there is movement of the sensor relative to the ground, the reflected frequency will be different than the frequency of the transmitted signal, due to the Doppler effect. The difference between the transmitted and received (reflected) frequencies is proportional to the vehicle speed. The sensor will output a digital frequency that is proportional to ground speed, one pulse per centimeter of travel. The sensor will also output a signal to indicate direction of travel (forward or reverse).

The program will involve testing the sensor on a mobile test platform over a variety of ground surfaces, including, but not limited to, soils, concrete, asphalt, and aggregate paving materials.

(b) The objectives of the program are to develop and refine the electronic hardware, enclosure, and signal processing algorithm for optimum accuracy and reliability of the speed sensor.

(c) The program of experimentation is intended to develop a radio-based sensor for speed measurement which is more accurate and reliable than is currently available to the consumer. The sensor will cost less than currently available sensors and be affordable to more consumers.