

ZAI  
Experimental STA Request  
October 7, 2010  
File number: 0491-EX-ST-2010

## **EXHIBIT 1:**

### SIGNAL DESCRIPTION

This request seeks authority to test and demonstrate prototype equipment that uses the time modulated UWB technology developed by Time Domain Corporation ("Time Domain"). The device to be exercised is a Hit Avoidance Sensor (HAS) application demonstrator. The HAS is a laboratory evaluation device that is used for test and evaluation purposes only. The HAS is not a device to be marketed.

This device generates a signal that is position modulated. The position of the modulated pulse employed by this device varies randomly in time so as to produce a spectrum that approximates Gaussian noise. If an emission designator were to be applied to this device, we believe that 2G50P0N would be descriptive of the signal as modulated. The nominal center frequency is 4.4 GHz. The radiated power of the device is below the general limits set forth in Part 15 subpart F Ultra Wide Band Operations Rules. We believe we are compliant under the ground penetrating radar technical requirements under section 15.509.