

Exhibit A

Project Description:

Advanced Satcom-On-The-Move (SOTM) Phased Array X-band Antenna –

Lockheed Martin (LM) started an Internal Research And Development (IRAD) program in 2006 to develop a low cost, MMIC based, flat plate phased array antenna for SOTM tactical communications vehicles. This would replace the very expensive, high failure rate, and high profile steerable mechanical dishes currently used for tactical SOTM at X-band. This program builds on the advances that have been made in low cost RF MMICs in radar applications and steerable phased array techniques from satellite applications. It was decided to focus on X-band first because the high bandwidth X-band applications are the hardest, most expensive SOTM elements for ground mobile tactical applications. In 2006 and 2007 LM working with GE Research Labs under a Shared Vision program has developed the elements necessary to build the first test articles. In the 2008 IRAD program LM plans to test the performance of the antenna with several different modulation techniques (e.g. QPSK, NCW) in both static and mobile environments. These tests will involve transmitting various types of waveforms at X-band through commercial satellites (e.g. Xtar). The LM development testing will be conducted at LM's Gaithersburg, Md facilities. We hope to start static testing in July 2008. After successful static and mobile testing at Gaithersburg, LM also plans to offer the antenna mounted on a vehicle to various Government/Military facilities for demonstrations and testing. Several candidate locations are listed in this application.

- a) This is static and mobile testing of a new design for a flat-plate phased array antenna in X band.
- b) This testing requires new test capabilities on vehicles and facilities.
- c) Existing vehicles and facilities do not have the required test capabilities.