

**EXHIBIT A**

**EXPERIMENTAL PROGRAM**

## **Equipment Description**

The SeaTel 1.0 m antenna system is designed to automatically acquire and track a designated satellite. This antenna system uses a 1.0 m antenna mounted on a stabilized platform and associated control electronics.

The control electronics will steer the antenna to the point in space where the satellite is assumed to be given data input by the user and from flux-gate compass, GPS, and navigation systems data. The control electronics then attempt to acquire and lock on to a designated beacon signal on the satellite downlink.

Once locked on to the satellite, the combination of the stabilized platform and control system feedback will maintain antenna pointing at the satellite.

Upon receipt of a valid signal from the VSAT hub earth station, the VSAT remote communications system equipment on the barge will transmit a time division multiplexed signal back to the network hub station and thereby complete the 2-way communications circuit.

The remote VSAT earth stations will transmit return signals to the hub according to a specified burst schedule. The remote VSATs will employ QPSK modulation with rate 3/4 FEC and concatenated Reed-Solomon coding.

## **Experimental Program**

The proposed program of experimentation is designed to allow ViaSat to test and verify the performance of its LinkStar VSAT product in the Maritime Mobile Satellite Service (MMSS).

The test program consists of, but is not necessarily limited to, the following:

- Verification of remote antenna pointing and tracking
- Verification of remote terminal modem and RF performance while in motion
- Verification of system capacity under various load conditions
- General system performance benchmarking and modeling

## **Contribution To The State Of The Art**

The ViaSat, Inc. LinkStar product is currently in production for use in the Fixed Satellite Service (FSS). ViaSat, Inc. desires to test this product for usage in the Maritime Mobile Satellite Service (MMSS). Once successfully tested and ready to be sold as a consumer VSAT product in this new service, the LinkStar product will open up new avenues for safety, security, and general communications improvement to vessels in the MMSS market.

- Users can transmit current location and vessel status back to fleet management.
- The use of satellite insures that the vessel will be within communications range regardless of current cell site availability or VHF radio coverage range.
- Users may have access to the Internet and the full suite of associated applications and services.