

EXHIBIT A

Radio Technology Use at Tideland Signal Corporation

Tideland Signal Corporation provides Marine Aids to Navigation to the international Maritime industry. Of the many types of aids to navigation supplied are those intended to operate at ranges beyond the capability of classical optical or acoustical based aids. For these aids specifically, we are using radio frequency techniques.

The radio spectrum usage falls into three categories:

- ✓ 1. Marine Radar frequencies - 2900 MHz to 3100 MHz and 9300 MHz to 9500 MHz. *G, M, P: Maritime Radar*
2. UHF Radio frequencies - 450 MHz to 470 Mhz and ~~920 MHz to 960 MHz.~~ *G, M, P: Maritime Radar*
- ✓ 3. Satellite Communications - 1600 MHz and 2200 MHz *As need, def*

✓ The radar frequency bands are used in the development of marine radar beacon (racon) transponders. Racons are used to mark major sea lane obstructions or other points of significant interest on a ship's radar. As radar technology is continually advanced, we must advance the technology level of the radar beacon (racon).

The other aspect of the Aids to Navigation industry is the monitoring requirements to assure the appropriate authorities that the aids are properly functioning. Since most aids to navigation are placed in remote locations, the monitoring systems require long range communication links for which radio is the most appropriate. We currently use two primary radio links:

- ? 1. UHF (450 to 470 MHz and 920 to 960 MHz) radio for short range links and;
- ✓ 2. Satellite (INMARSAT C) for long range links. *where? don't int?*

We are currently developing an enhanced monitoring system which supports multiple remote aid to navigation sites which may communicate to the main monitoring and control site via different communication links including radio.