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To whom it may concern:

In March 2011 we purchased a 1.8 metre diameter WatchMate data buoy from AXYS Technologies Inc. under a project funded by the US Environmental Protection Agency and supported by the US National Oceanic and Atmospheric Administration (NOAA). This buoy was chosen based on its ability to survive extreme marine conditions. It was outfitted with a variety of sensors and telemetry devices, including a TRIAXYS directional wave sensor, an air temperature sensor, dual wind sensors, and a water temperature sensor. Data from these sensors was collected by the WatchMan500 controller and sent to shore hourly by Iridium satellite telemetry. A 45 metre inverse catenary mooring was provided to help keep the buoy in place. In addition to the supply of the above buoy system, AXYS also provided 3 days of on site training at their Sidney facility, and assisted in the delivery of the buoy to the Institute of Ocean Sciences (IOS) in Sidney B.C., where it was loaded onto the Canadian Coast Guard Icebreaker *Sir Wilfred Laurier* for deployment.

The WatchMate buoy was deployed to the harsh Bering Strait region near Alaska from July 2011 until recovery in the middle of October 2011, carried out by the NOAA charter vessel *Westward Wind*. During this time the buoy provided a very high data return rate (99%). It also survived some very harsh marine conditions, including 9 metre waves and 40 knot winds. The WatchMate buoy has now been removed for the winter season, necessitated only because this is a region of sea ice formation. However, the provision of real-time data in this data-sparse region rapidly attracted a number of users, who valued the data for marine safety, and it is expected to be deployed to these waters again in summer 2012. All in all, our project was considered very successful.

We were very impressed with how AXYS operates, from the initial systems requirements discussions right through to recovery of the buoy. We found them to be very open, honest and flexible in meeting our needs. For example, we requested an additional loop of Amsteel to aid recovery; this was attached to the buoy on the spot. We were particularly impressed that it came through the 9m wave event without interruption to data transmission or damage to the wave sensing systems, the most critical aspect of this mission. We can highly recommend the WatchMate buoy as a high performing and reliable scientific instrument.

We are available for further comment or discussion as required.

Sincerely,

Dr. David Atkinson
Assistant Professor
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