



Testimonial on AXYS Technologies Inc. FLiDAR 6M Floating Lidar System

In May 2013, National Cheng Kung University purchased a FLiDAR 6M (formerly WindSentinel) Floating LiDAR system from AXYS Technologies as the first floating LiDAR system for the Asian market. The FLiDAR 6M was selected for its flexibility and mobility that enables significant cost and time savings compared to constructing a meteorological tower. As an early launch customer for the FLiDAR 6M, NCKU worked with AXYS to identify ways to increase the robustness of the system. Improvements implemented from these early trials have further increased the reliability of AXYS current FLiDAR 6M offering. NCKU also conducted a rigorous validation assessment of the FLiDAR onshore against our WINDCUBE “Golden LiDAR” with excellent results which was published on the Taiwan Society of Ocean Engineering website (<http://www.tsoe.org.tw/downloads/thesis/2014H3.pdf>). This study concluded that “the floating LiDAR system has a great confidence in offshore wind resource assessment.”

The NCKU FLiDAR 6M was equipped with a LiDAR and a range of meteorological and oceanographic sensors including air temperature, relative humidity, barometric pressure, surface winds, directional waves, and water temperature. The system was also equipped with two web-cameras for security and situational awareness of the buoy. The data collected from the camera and various sensors was stored onboard the FLiDAR and transmitted in near-real time via redundant telemetry through the onboard AXYS WatchMan500 data management system. The FLiDAR 6M also included an innovative triple redundant power supply system that provides autonomous power year round to meet the power consumption of the extensive sensor, telemetry and onboard computer payload.

The FLiDAR 6M uses AXYS’ proprietary NOMAD hull and mooring which has been designed and engineered to withstand even the harshest weather and sea-state conditions. As an impressive testament to this capability, the NCKU FLiDAR 6M stayed on station and continued to capture LiDAR and other metocean data through 5 severe typhoons in September 2014, with wind speeds over 38 knots, and 8.5 metre maximum wave heights.

In addition to the supplying the FLiDAR 6M system and working with NCKU to improve the platform, AXYS also provided excellent ongoing service, both on site and remotely, and continued to support the system after the warranty had expired.

Sincerely,

A handwritten signature in blue ink that reads 'Ta-Hui Lin'.

Ta-Hui Lin
Director, Research Center for Energy Technology and Strategy
National Cheng Kung University