

## **Engineering & Computational Research**

### **Neptune High Definition Video Project**

The purpose of high definition video capture and transmission is to provide very high quality video support for scientific projects, live video transmission for public outreach and the ability to visually inspect instrumentation and cables for maintenance purposes. It is anticipated that the video cameras will be mounted on AUV/ROVs.

The first phase of the project will concentrate on reducing the network bandwidth requirement, designing a miniature camera with extremely low light level capability and investigating the possible use of stereoscopic vision. If the outcomes of the first phase warrant, the second phase would involve building the camera and underwater housing, integrating it into the AUV/ROV, connecting it to the network and providing features such as pan, tilt, stereo lens convergence and lens antifouling.