TELEDYNE RD INSTRUMENTS
A Teledyne Technologies Company

Major Enhancement to DVS!

October 29, 2009

We are pleased to announce the roll-out of a number of improvements to the DVS (Doppler Volume Sampler) package, including:

1. Installation of a new heading, pitch, roll sensor developed here at Teledyne RD Instruments. In addition to being capable of much higher data rates than the existing compass/tilt, this compass can be equipped with angular rate gyros with which we will be testing methods to remove lateral accelerations encountered in strumming environments in the coming months.

2. Early feedback from the user base has led us to drop the "sampling" strategy we developed for the DVS where each measurement consisted of as many measurements of all variables as could be taken in one second. The goal was to obtain high precision measurements quickly so that DVS could save power by spending significantly more time sleeping. However, many DVS to date have been deployed in relatively shallow water where the wave activity necessitates multiple measurements anyway – negating the advantage of the sampling strategy devised. We are therefore moving over to our more traditional measuring strategy where each ping consists of a single measurement of all variables ("Mode 1" for those familiar with RDI Workhorse operation). For those who are still interested in the highly precise one second measurements, the new compass is fast enough to support that even with the adoption of our traditional sampling strategy.

3. We can now interface to the Sea-Bird MicroCat CTD. The MicroCat is triggered at the start of an ensemble, and one value of conductivity, temperature and depth is recorded with that ensemble. We support both pumped and non-pumped MicroCats, but the MicroCat must have its own power supply.

4. DVS equipped with Inductive Modem Modules (IMMs) will now also have an external connector capable of external power and RS232 communications. This change will make calibrating the compass much easier.

5. DVS can now optionally be configured for RS422 communications for long cable runs.

All of these changes to DVS are rolling out simultaneously on all new DVS, and we are pleased to announce that we will be creating an upgrade package to for all existing systems to also allow them access to these new capabilities.

And lastly, Teledyne RDI has been working with Doppler, Ltd. To develop and test a Lithium Hybrid battery pack for the DVS. This pack has proven to contain 3-4 times the energy capacity of our standard alkaline pack. It will be UN certified for international shipping, and we will be rolling it out soon.