

Rolling Deck to Repository (R2R) Program

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Report to UNOLS Council

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Following endorsement by Council in October 2009 and NSF Memorandum in December 2009, R2R is now scaling up to fleet-wide operation. Currently 13 of 21 in-service UNOLS vessels (*Atlantis*, *Barnes*, *Walton Smith*, *Sharp*, *Kilo Moana*, *Knorr*, *Langseth*, *Melville*, *Oceanus*, *Point Sur*, *Revelle*, *Thompson*, *Wecoma*) are submitting cruise data to R2R, as well as several additional NSF-supported vessels (e.g. USCGC *Healy*, SSVs *Seamans* and *Cramer*). A total of 1395 cruises are currently cataloged online with basic metadata, file inventories, and track maps. Our goal is to bring the remaining in-service UNOLS vessels online before the 2010 RVTEC meeting.

R2R development activities are proceeding on multiple fronts. A database of underway instrument systems (type, make, and model) has been populated for in-service vessels, supporting development of a "breakout template" for each vessel that automatically maps instrument systems to data directories. Original cruise data distributions are now routinely deposited at NOAA for secure/long-term deep storage, and a planning meeting for documentation and dissemination of public-released data will be held in Boulder in May. Code for automated assessment of navigation data and publication of standard navigation products has been written and tested. A protocol for near-real time transfer of surface meteorological and thermosalinograph data from ship to shore is under development, with pilot work underway on *Atlantic Explorer* and *Wecoma* - building on experience from the existing SAMOS systems on *Atlantis*, *Knorr*, and *Oceanus*. A prototype shipboard event logging application was demonstrated at the 2009 RVTEC meeting and will be tested on *Knorr* in October 2010, with parallel development of a fleet-standard log file format.

R2R has presented results and solicited feedback at recent or upcoming venues including the 2009 RVTEC annual meeting (plenary discussion and breakout workgroups), 2009 AGU Fall Meeting, 2010 Ocean Sciences Meeting, and 2010 International Conference on Marine Data and Information Systems. R2R team members have met in-person with marine office technical staff from 9 of the 15 current UNOLS operating institutions, including recent or upcoming visits to Moss Landing (December), Oregon State (February), and Rhode Island (April).