



Rolling Deck to Repository (R2R): Research Cruise Event Logger (Version 2.0)

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<http://www.rvdata.us/>

rvdata.us

Abstract

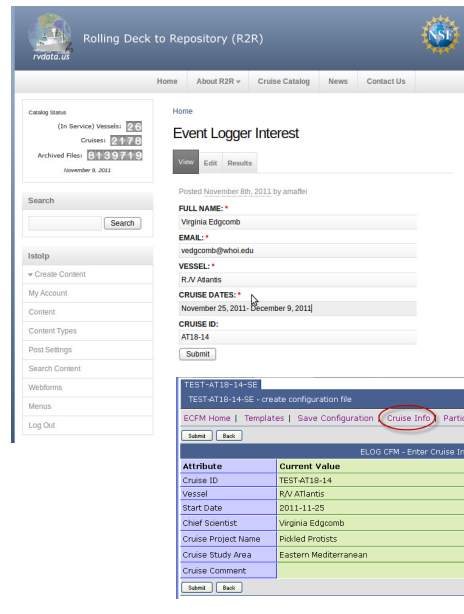
Scientific event logs are used by science parties to record scientific sampling events during a research cruise. Event logs are very important for documenting sampling events and associated metadata such as location, time, relative sequence, and related details. Event logging, done well, provides important documentation about scientific data collected and enables more efficient use of those data. A digital data event log that carefully employs terms in controlled vocabularies becomes even more valuable as a complement to related cruise data sets. However, such a tool is only effective if it is used.

Field testing identified several key factors that encourage use of science event logs: a scientist's ability to customize the event log to match the science implementation plan, sampling scheme, cruise personnel and instrumentation; the ability for the software to automatically add date, time and location data into an event entry and the ability to enter events quickly and from any location on the ship.

This presentation provides an overview of the current and future (version 2.0) Rolling Deck to Repository (R2R) research cruise Event Logger. This tool is built on top of the ELOG open-source distribution (<http://midas.psi.ch/elog/>). We provide a view of the full process, including: 1) pre-cruise customization and testing of the Event Logger by a chief scientist to meet the unique needs of a research cruise; 2) installation of the customized ELOG on an R2R NetBook delivered to a science party member; 3) use of the Event Logger by the science staff during the cruise; 4) post-cruise integration of the R2R Event Log into the official ship data distribution; and 5) incorporation into and accessibility via the R2R cruise catalog (<http://www.rvdata.us/catalog>) and data repositories such as the NSF funded Biological and Chemical Oceanography Data Management Office (BCO-DMO; bcodmo.org). A demonstration instance of the R2R Event Logger application, including a Web-based system for generating the custom configuration files (part of version 2 development) is available for examination, evaluation and feedback.

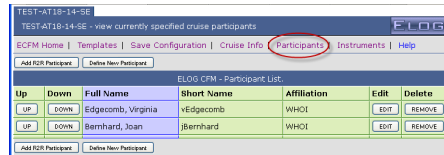
Pre-cruise customization

An ELOG configuration file can be customized by the science party to accommodate the proposed research on every cruise. The configuration file is created using a collection of controlled vocabularies for instruments, associated sampling actions and names of science party participants. At present the configuration file is created as a result of pre-cruise interviews. In the near future, a member of the science party will use the "Config File Maker Tool" to create the configuration file for their upcoming cruise. The customized configuration file along with scripts that integrate with and retrieve information from the ship's networked data system are then deployed to the vessel in advance of the cruise.

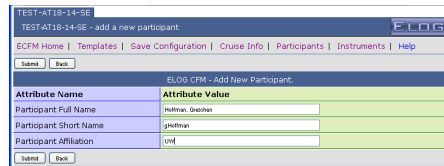
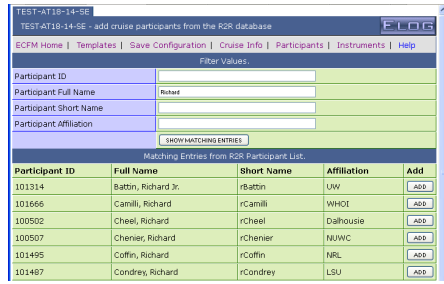


Initiate R2R ELOG Configuration

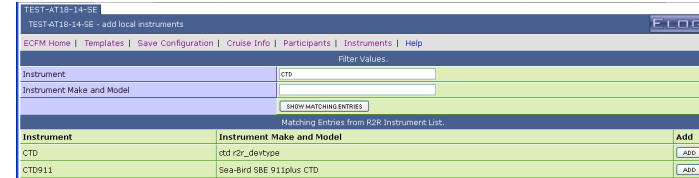
Add Cruise Participant Names



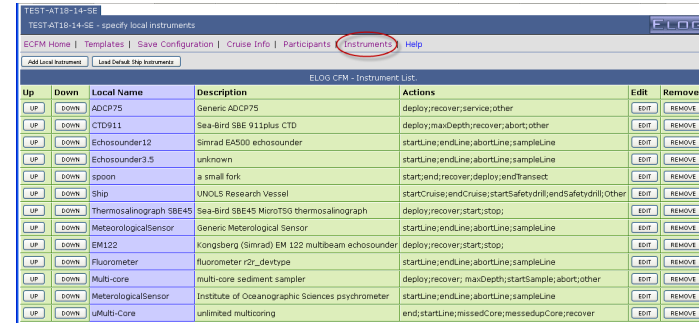
Cruise participant names and affiliations are selected from a controlled vocabulary.



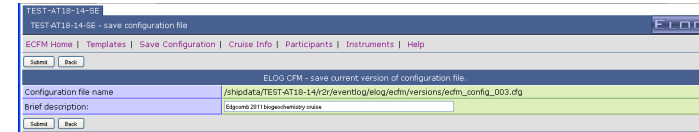
Add Instrument Names



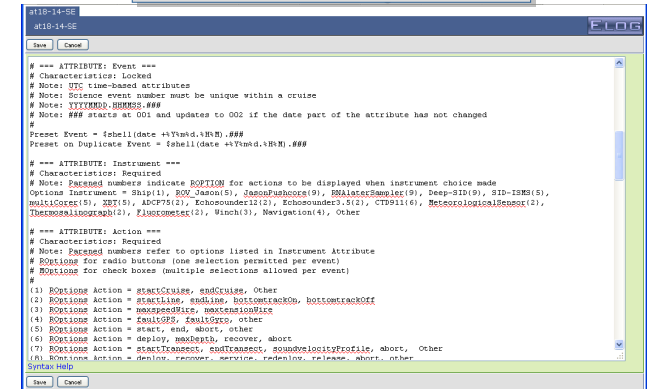
Instruments can be selected from a controlled vocabulary, or new instruments can be defined and added to build the cruise-specific instrument list.



Save the Configuration



Final Customized Configuration File



During the cruise

Sampling events are recorded during the cruise. New events (see below) can be entered using a browser client running on any device having access to the ship's network.

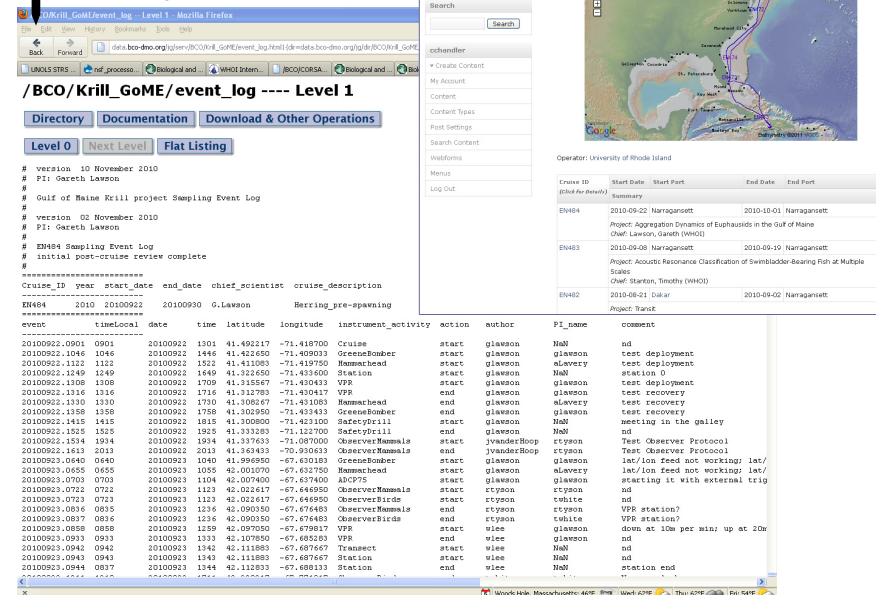


Events can be recorded using an iPad (above). Observers on the flying bridge use a laptop to record events during EN484 (photo by Peter Wiebe, WHOI).

The full log of sampling events can be viewed during the cruise.

Cruise catalog at R2R rvdata.us

Final event log as a data set



The event log can become a data set at ocean research data repositories such as the NSF funded Biological and Chemical Oceanography Data Management Office (bcodmo.org).

2011 CRUISES

Ship Name	R2R Cruise ID	Chief Scientist	Affiliation	Type of Cruise
R/V Aegeao		Amy Bower	WHOI	KAUST
R/V Atlantis	AT18-06	Peter Lemmond	WHOI	EM122 Trials
	AT18-12	Scott Nooner	LDEO	Geodetic Surveys/ Jason
R/V Knorr	KN200-02	Dave Hebert	URI	Hydrographic Survey
	KN204-03	Craig Lee	UW	Hydrographic Survey
R/V Cape Hatteras	CH0511	Jim Ledwell	WHOI	LatMix: lateral mixing/dye/floats
R/V Endeavor	EN494	Tom Sanford	URI	LatMix: lateral mixing/dye/floats
R/V Oceanus	OC471-04	Craig Lee	UW	LatMix: lateral mixing/dye/floats
Shore Server	SS-000001	Cindy Sellers	WHOI	LatMix: lateral mixing/dye/floats
R/V Melville	MV1108	Peter Lonsdale	SIO	Multibeam
	OC473	Gareth Lawson	WHOI	CTD/MOC
R/V Oceanus	OC475	Bob Weller	WHOI	OOI/CGSN Mooring
	OC476-01	Steven Manganini	WHOI	CTD/Moorings
R/V Thomas Thompson	TN268	Deb Kelley	UW	OOI/RSN Cable Ops

It Takes a Team
Students
Technicians
Researchers
Data Managers

