Letters of Intent: Endeavour
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An On-line Relational Database Supporting two RIDGE Integrated Study Sites: The East Pacific Rise 9°-10° N and the East Lau Spreading Center

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NOTE1: This pre-proposal relates to both the EPR and Lau RIDGE ISS sites.
NOTE2: I am going to be at sea from July 21 - August 31 please direct all communications to Margo Edwards, margo@hawaii.edu

ABSTRACT: In 2001 the national RIDGE community voted to concentrate research efforts on three Integrated Study Sites (ISS) including the East Pacific Rise (EPR) between 9° and 10 N and the East Lau Spreading Center (ELSC). The 9°-10° N site was chosen to represent a fast-spreading mid-ocean ridge (MOR) system in part because the region has been extensively studied; the ELSC was chosen to represent a typical backarc spreading center. Digital data for the two sites are becoming available that will facilitate interdisciplinary studies and data mining for the regions; however, the diversity, volume, and complexity of multidisciplinary datasets makes the establishment and maintenance of a centralized database run by a single group problematic. The key to developing and maintaining a unified community database for an ISS lies in building and supporting a general organizational structure that can link databases distributed throughout the World Wide Web. We propose to develop permanent ISS relational databases for the EPR and ELSC sites that will provide the ability to locate specific types of raw and processed data, metadata, and contact and reference information. The overarching goal of this website is to promote collaborative research and multidisciplinary studies and thereby foster new scientific insights for each ISS. The proposed on-line databases would serve as a resource, allowing the RIDGE community to review and integrate information so that they could attend meetings with problems or questions involving extant data or write papers with supporting data that would be otherwise difficult or time-consuming to locate and access. The website would help to foster collaboration and standardize methods of data access, styles of data presentation and analysis and the quality of supporting metadata.

The proposed project expands upon two substantial, existing geological and geophysical data archives presently available at the University of Hawaii. We propose to increase the diversity and flexibility of the present on-line archives by providing links to other databases and incorporating additional data. Additional data and metadata we propose to incorporate or link to include acoustic, photographic, geophysical, geochemical, and biological data, as well as compilations of cruise listings and metadata, and outreach and educational resources. Building upon the protocols developed for the Endeavor Observatory Web site and following the guidelines developed at the MG&G Data Management Workshop and the mandate of the RIDGE2K ISS meetings, we will incorporate into the proposed relational database a transparent interface that promotes fast and accurate data integration and analysis. We envision the development of the permanent ISS on-line relational database as a three-year project with the first year devoted to incorporating existing data sets and achieving diversity and flexibility of the search and integration capabilities. In the second and third years we will address the continuing improvement and ongoing maintenance of the distributed database. The overarching goal of the proposed work is to create diverse, and continually improving, resources containing a wide variety of easily accessible information that will promote scientific collaboration and research.