



Scientific Earth Drilling Information Service for the Integrated Ocean Drilling Program

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The Integrated Ocean Drilling Program (IODP) is preparing for the challenge of managing data from three scientific drilling platforms, operated by US, Japanese and European science operators, each using different data management systems. This includes organizing and distributing data to clients outside the program, developing interfaces with external global data and metadata catalogues, and making IODP data effectively searchable for data discovery, mapping and visualization applications. To meet the needs of integrating data from a web of distributed operator databases and providing easy and seamless top-down access from the larger cyberspace infrastructure, IODP will develop the Scientific Earth Drilling Information Service (SEDIS), that will be a unique entry point for finding all IODP data, as well as legacy data from previous scientific ocean drilling programs (ODP, DSDP). The first phase will consist of a central metadata catalogue based on the ISO 19115 standard and ISO 19139 for its XML implementation, which will allow for easy construction of interfaces to access the IODP metadata and data sources. This requires that each contributor to SEDIS provides metadata structured according to a common schema currently being devised by an IODP task force. SEDIS will harvest metadata from different contributors using open access protocol such as the Open Archive Initiative Protocol for Metadata Harvesting (OAI-PMH). It will also make use of open source components for its web server, database and mapping tools such as Apache, MySQL, eXist or XIndice and University of Minnesota MapServer respectively. Initially, SEDIS will harvest metadata about drilling and logging data from multiple IODP contributors and in subsequent phases it will gradually include more data types and information such as Expedition Publications and advanced data search, visualization and mapping tools. In the future, SEDIS will also allow relevant external data providers to provide metadata, information and data access. Other Geoscience metadata catalog services could also

participate in this system, by either making their metadata available and/or by harvesting IODP metadata. The first phase of SEDIS is expected to be online in 2007. IODP Management International Inc. is supported by NSF OCE 0432224.