

SIO7 database makeover.

*Adam Wspanialy¹, Lallan Prasad Gupta¹, Sean Toczko¹, Yukari Kido¹, Kan Aoike¹

1. Japan Agency for Marine-Earth Science and Technology

The main motivation for the SIO7 database makeover is to distribute the borehole/sample collected science data required by the International Ocean Discovery Program (IODP) and its predecessors' expeditions of the D/V Chikyu in an integrated, user-friendly, clear and FAIR (findable, accessible, interoperable, reusable) manner. The current solution although allowing for a mass download of collected data exhibits major shortcomings that make the use of such a wealth of data extremely difficult. It also makes it difficult for further correlation and analysis between boreholes.

Here we present our comprehensive new database model for scientific/drilling data storage, which aims at providing a high degree of data availability for efficient post-analysis utilising internet-based technology. The suggested data model proposes the web-based User Interface (UI) and Application Programmers Interface (API) are independent of the actual storing database. The web-based UI in the form of drop-down lists, maps with hole locations and searches gathers all the necessary information through API calls from the database at start-up time. The UI application will also have the capability to request data via SQL queries. These queries will not access the database directly. Instead, they will be sent to a database front-end that would handle the actual communication with the database engine.

Keywords: IODP, Chikyu, Database, FAIR, SIO7, SQL