

New IODP data access: Scientific Earth Drilling Information Service (SEDIS)

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Since the beginning of the IODP program a great effort has been made to implement an information system benefitting all involved partners in IODP (USIO, CDEX; ECORD) and the scientific community.

The IODP is preparing for the challenge of managing data from three scientific drilling platforms, operated by:

- US Implementing Organization (USIO) <http://www.iodp-usio.org/>
- Japanese Center for Deep Earth Exploration (CDEX) <http://www.jamstec.go.jp/chikyuu/eng/index.html>
- European Consortium for Ocean Research Drilling (ECORD) science operators (ESO) <http://www.ecord.org/>

Each implementing organization (IO) uses a different data management system and database:

- JANUS and new database to be released in 2008 (USIO)
- ExpeditionDIS and PANGAEA (ESO)
- J-CORES (CDEX)

The core of the information system will be a searchable inventory of core, logging, and legacy data from IODP and previous drilling programs (DSDP, ODP). Metadata will be provided by the three IOs, one logging data archive, and possible further data providers relevant to the context of IODP.

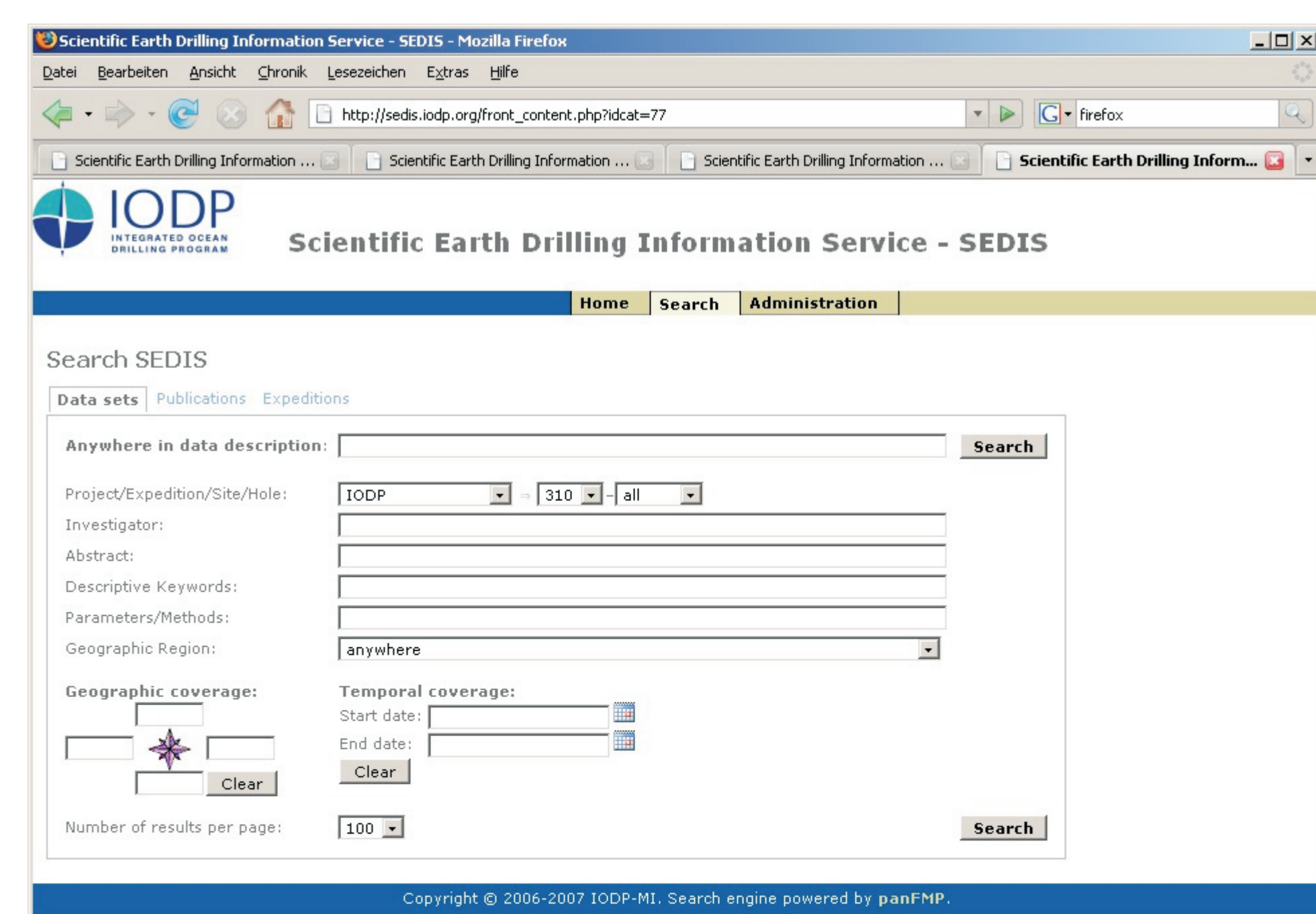
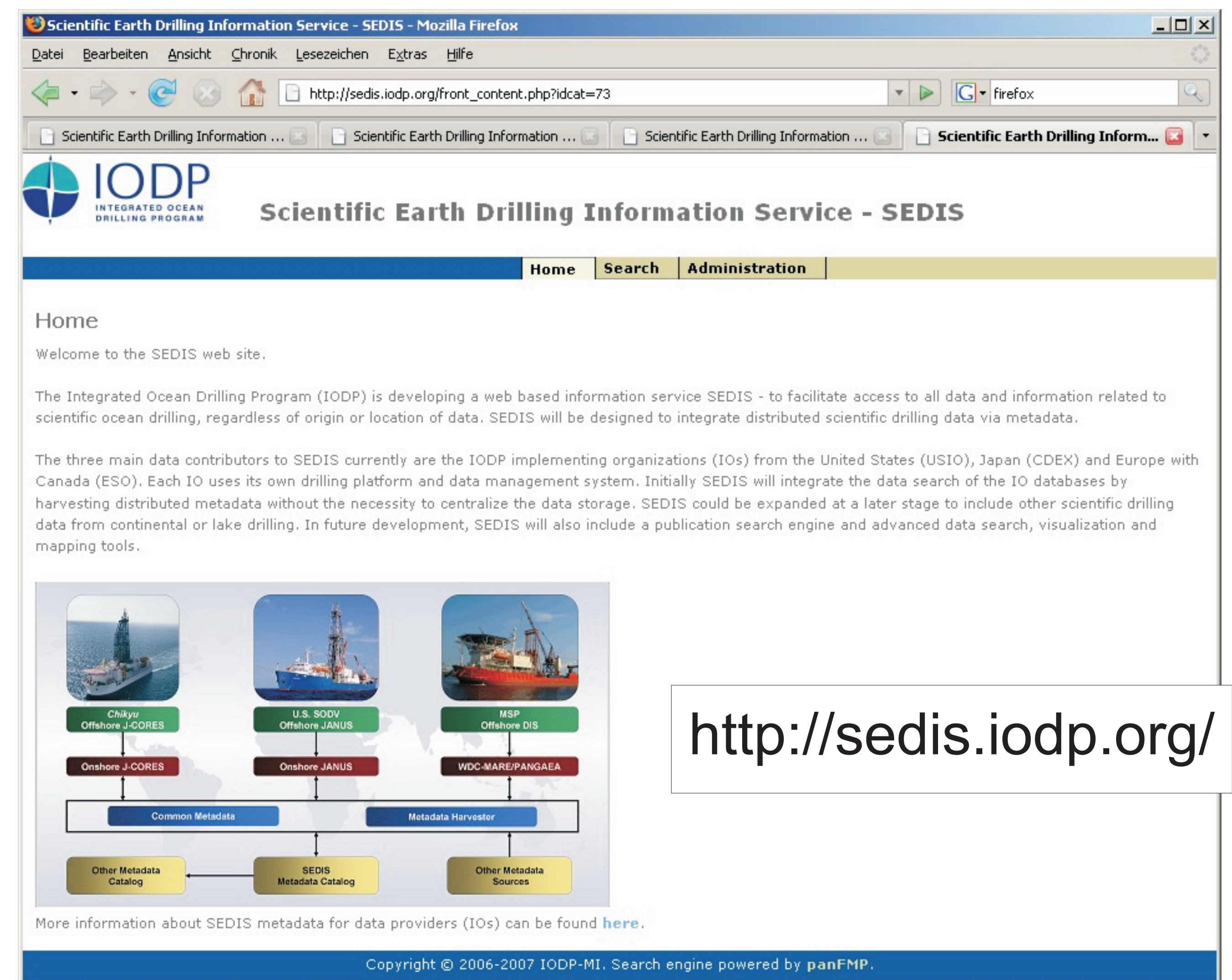
SEDIS will be developed in three phases:

Phase I [finished]: Metadata portal for data discovery and harvesting (see Information query and Expedition catalogue screen shots). Metadata will be provided by the IOs

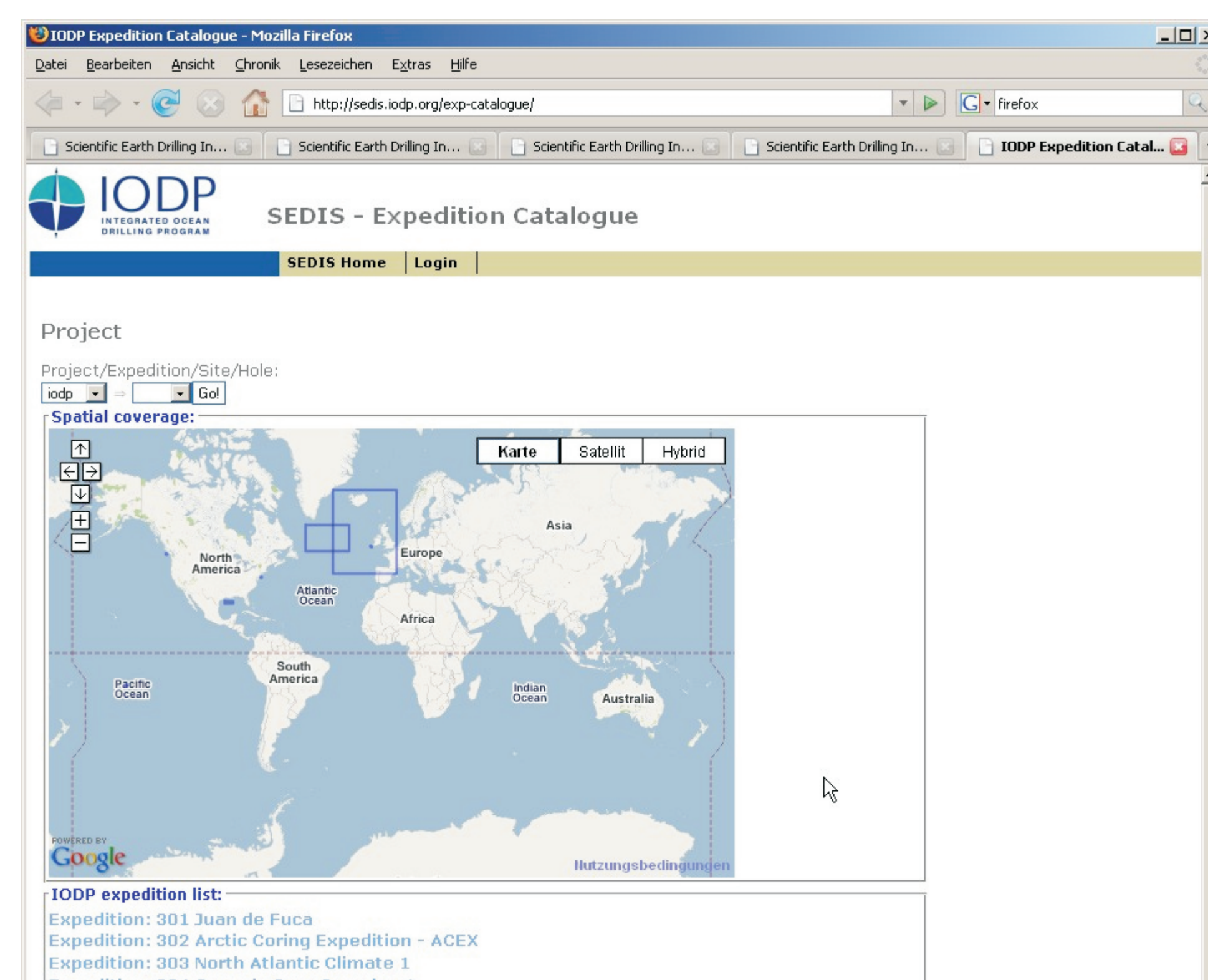
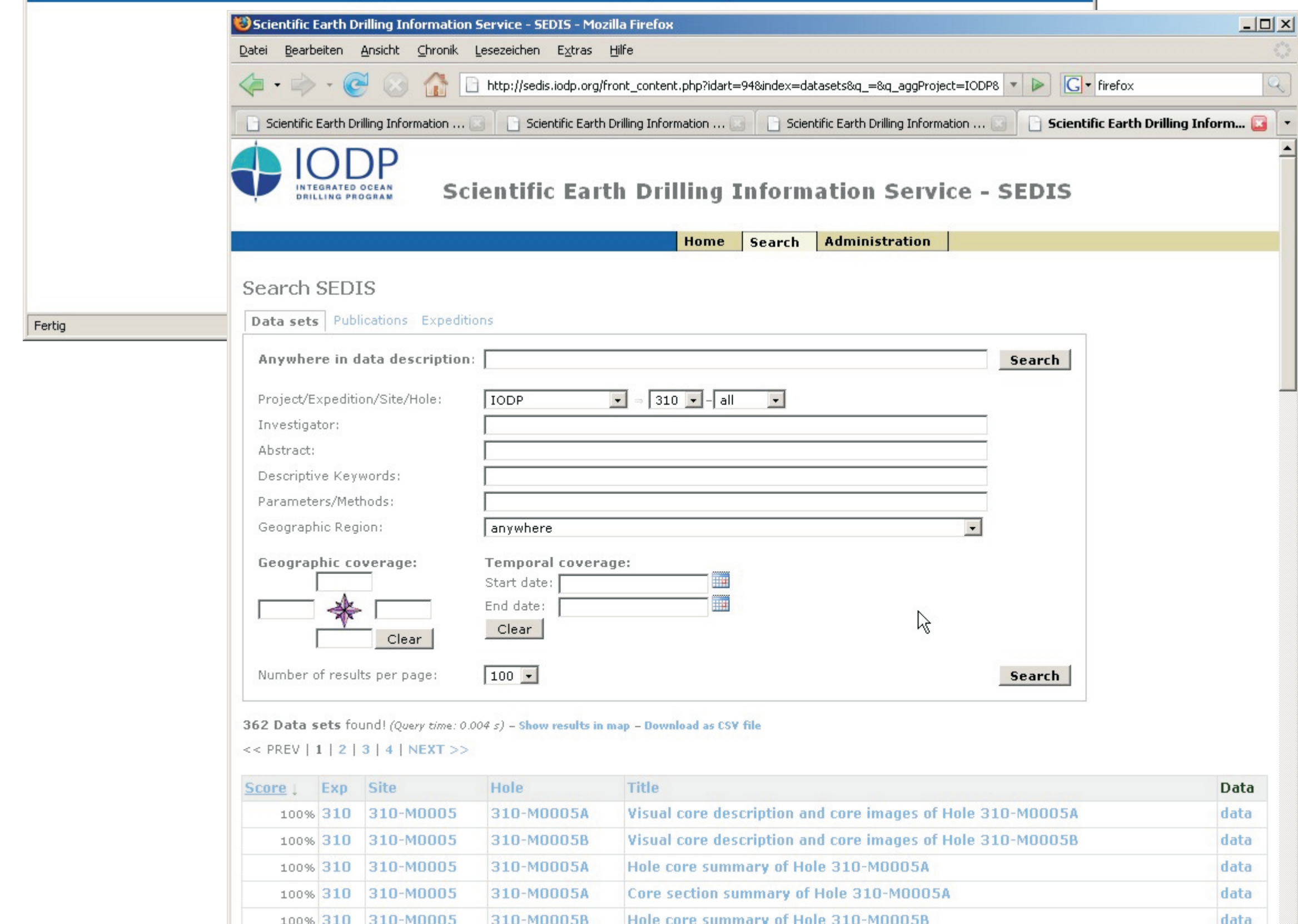
Phase II [in progress]: Search database for publications, reports, minutes, citations and possibly post-expedition research

Phase III [planned]: Advanced data search, data conversion (ASCII, Excel, ESRI shape, ...), and visualization tools (e.g 'GeoMapApp')

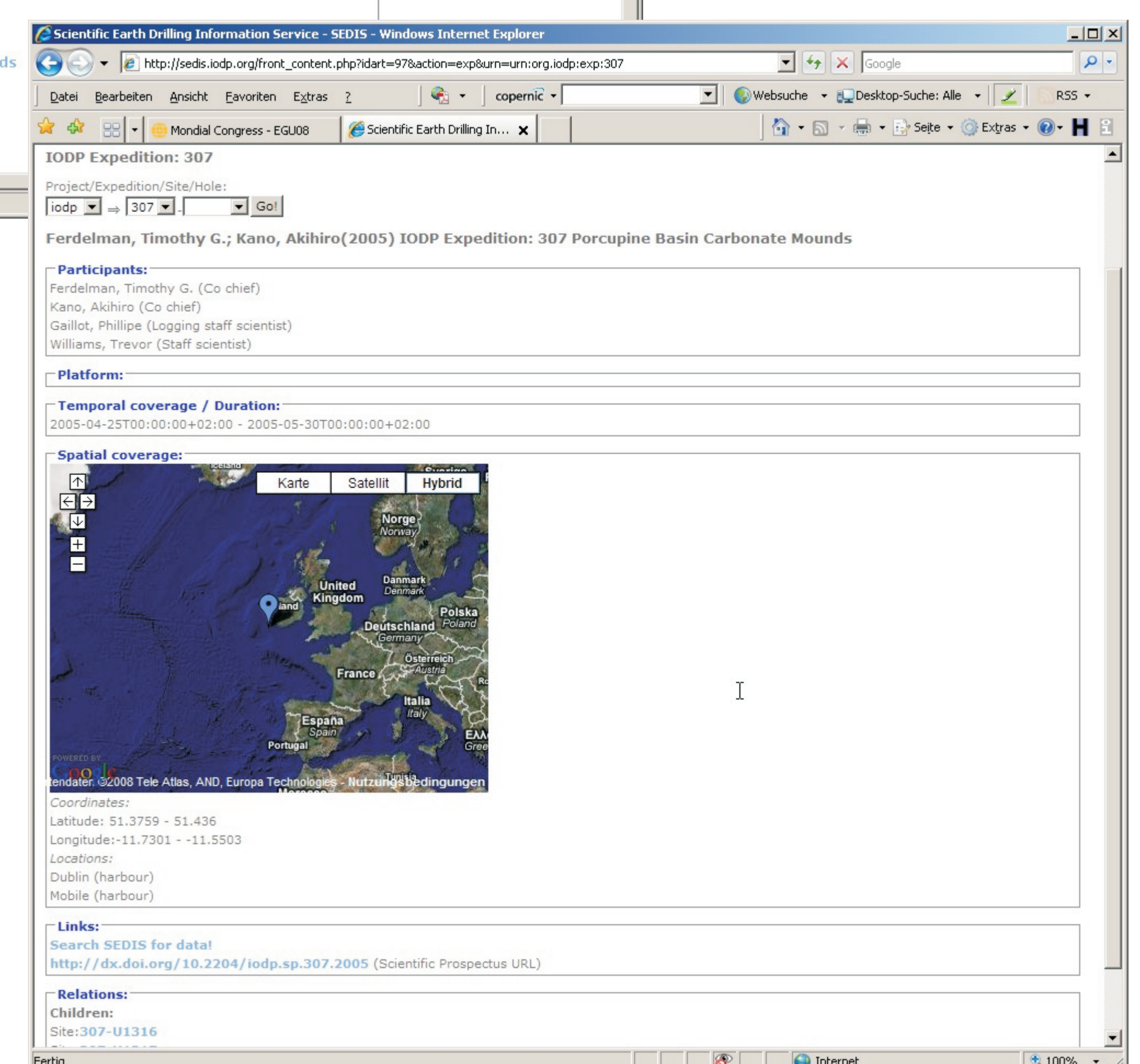
SEDIS uses international standards for metadata, data exchange and transfer and is based on open source components (panFMP, see Technical background).



Information query



Expedition catalogue



panFMP - PANGAEA Framework for Metadata Portals

panFMP is a generic and flexible framework for building geoscientific metadata portals independent of content standards for metadata and protocols. Data providers can be harvested with commonly used protocols (e.g., *Open Archives Initiative Protocol for Metadata Harvesting*) and metadata standards like Dublin Core, DDI, or ISO 19115. The new Java-based portal software supports any XML encoding and makes metadata searchable through Apache Lucene. Software administrators are free to define searchable fields independent of their type using XPath and/or XSL Templates. In addition, by extending the full-text search engine (FIS) Apache Lucene, we have significantly improved queries for numerical and date/time ranges by supplying a new trie-based algorithm, thus enabling high-performance space/time retrieval in FIS-based geo portals. The harvested metadata are stored in separate indexes, which makes it possible to combine these into different portals. The portal-specific Java API and web service interface is highly flexible and supports custom front-ends for users, provides automatic query completion (AJAX), and dynamic visualization with conventional mapping tools.

panFMP is maintained at sourceforge.net and uses services including and using panFMP! There are currently no official releases available because development is still in progress. If you want to start, you can use our [daily development snapshots](#) that are available directly from this homepage.

Technical background

<http://www.panfmp.org/>