GEBCO VISUAL LIBRARY

Proof of Concept

The GEBCO Visual Library is a conceptual model that could incorporate, in the broadest sense, all oceanographic and hydrographic research compiled from various sources and allows it to be geo-referenced in an easily accessible and familiar visual interface. Google Earth, a freely-available virtual globe, was chosen as the platform due to its user-friendliness to a global community of varying educational backgrounds.

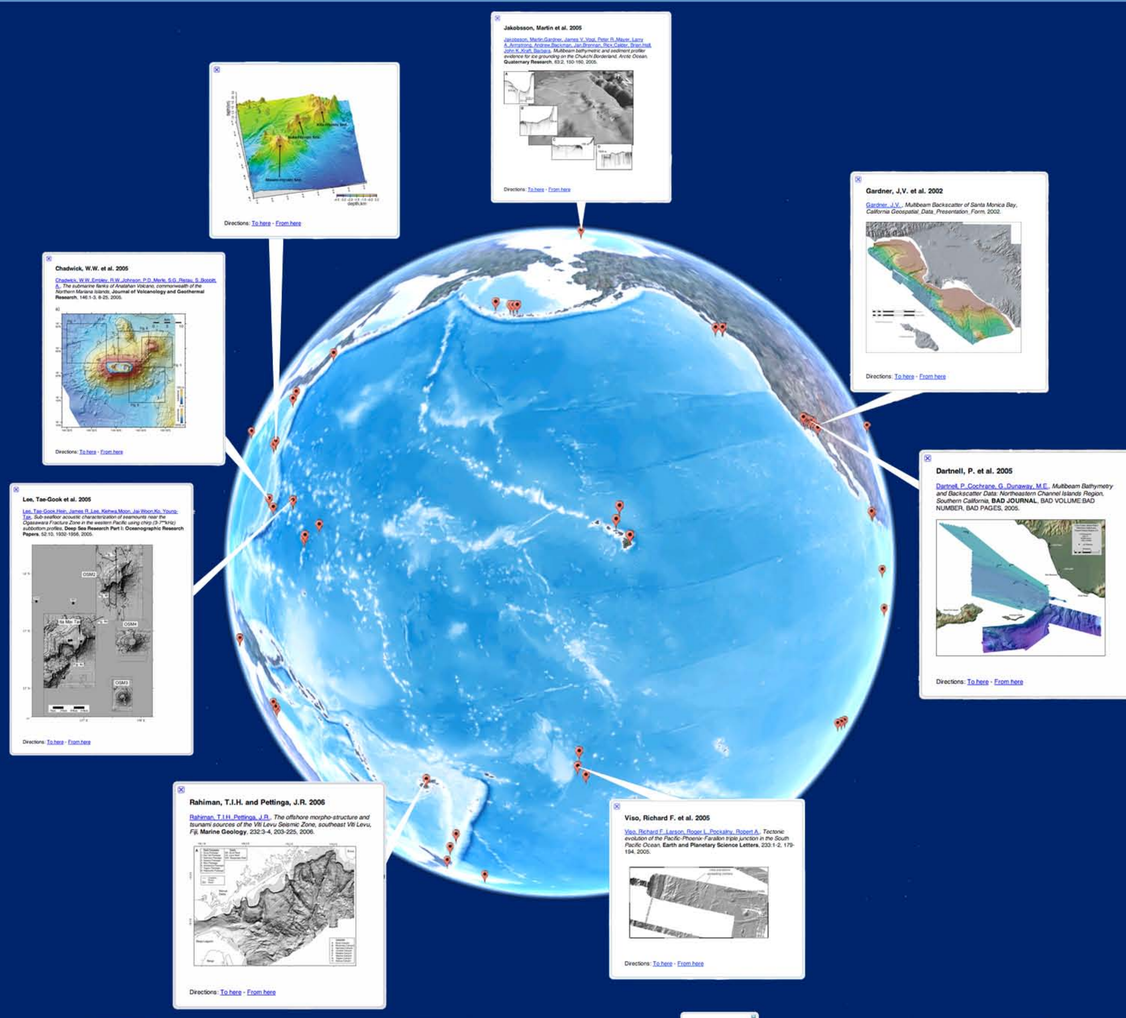
The objective is to provide the user with as much scientific information as possible for any chosen location within the global oceans. The initial conceptual model has concentrated on multibeam bathymetry only. Data is presented in the form of an image of the bathymetric data with figure caption, research publication reference, and abstract. Information is positioned using Google Earth "thumbtacks" displayed over the GEBCO world chart. These "thumbtacks" can be selected to provide pop-up windows, which display the embedded bathymetric image together with the other contents mentioned above.

The GEBCO Visual Library is envisioned to be a resource that will facilitate the dissemination of oceanographic information amongst an interdisciplinary international community with diverse requirements.

CONCEPT:

The GEBCO Visual Library is a conceptual model which aims to effectively and efficiently:

- **Provide a visual and accessible interface which will facilitate the organisation, dissemination and preservation of bathymetric data and associated metadata using Google Earth, a widely used and familiar software throughout the world;**
- **Provide a link between available bathymetric survey data and user in a geo-referenced framework which overlies the current General Bathymetric Chart of the Ocean draped within Google Earth. This interface may provide the platform to supply the viewer gazetteered undersea feature names at relative zoom levels;**
- **Allow for the ease of identification of the relative densities of existing survey data of oceanic areas, emphasising the scarcity of oceanic data and the need for further studies;**
- **Encourage interdisciplinary collaboration among individuals, institutions, coastal states, and organizations, allowing for development of new products that could be widely used in science and education, and would help users identify the needs of various user communities;**
- **Promote capacity building by allowing bathymetric data to be easily located and identified within third world countries, which often lack the resources required for in depth literature reviews & research.**



GEBCO world sheet draped over Google earth

POTENTIAL:

- **The visual library can be expanded to include all oceanographic research, with unlimited options, such as other hydrographic survey tools, habitat mapping, fisheries data, all earth and life science research**
- **Searches by bounding box will allow the location of all geo-referenced research within the selected area to be identified; filters will facilitate the perusal of this data**
- **In time, the bathymetry images could be overlain onto Google Earth, scaled and located in their proper geographic location**
- **Scientific publishers could request locational information from authors, thereby automatically updating the visual library with the central location of images from new publications**
- **Archiving of all data sources and possible URL link to original download resource via web browser**
- **Regular updates**
- **Interaction with new technology, such as Google's Geo search or Wikipedia, which can interrogate the Endnote database and display results directly.**
- **Promote education and training in ocean mapping science for all coastal states by providing a readily accessible resource. This should stimulate the flow of data and ensure that it is incorporated into an international knowledge base.**