Global Multi-Resolution Topography (GMRT)
Synthesis Update

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GMRT Overview
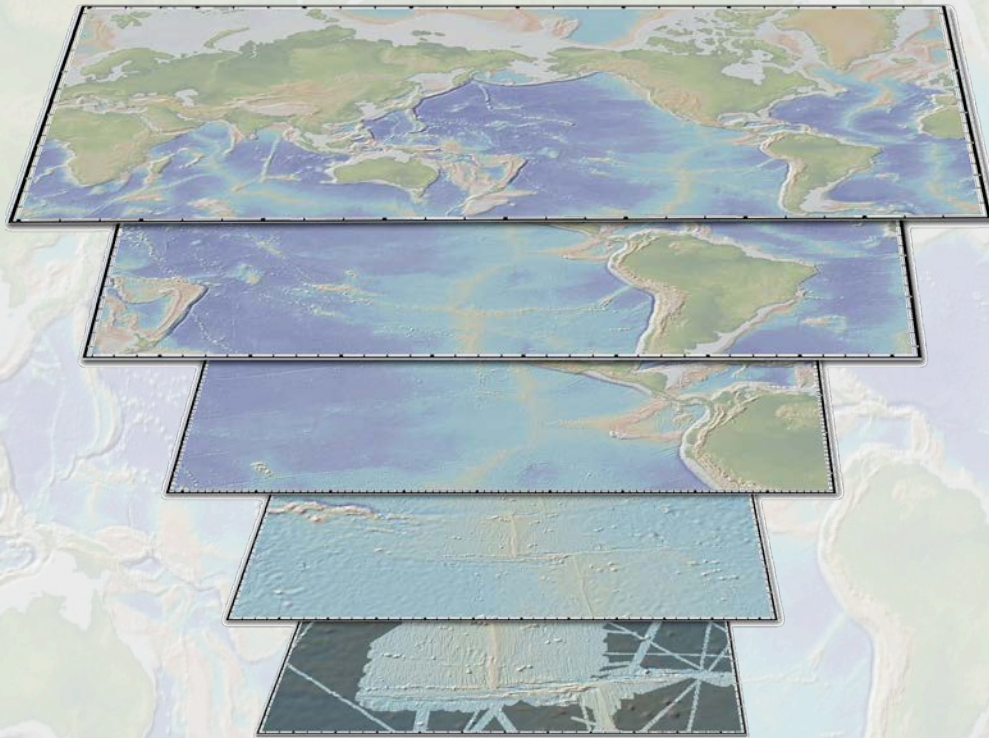
Global coverage

100m swath data

- User experiences seamless transition between resolutions based on chosen zoom level
- Access provided through multiple interfaces to images & grids
- Attribution to data contributors (CruiseID, Chief Sci, dates etc)
- Content continually expanding (2 scheduled releases/year)

GMRT Components

Global & Regional
Grids (>= 500 m res.)
e.g. GEBCO_08, IBCAO

Contributed
Grids (< 500 m res.)

LDEO 100-m
compilation* (ping
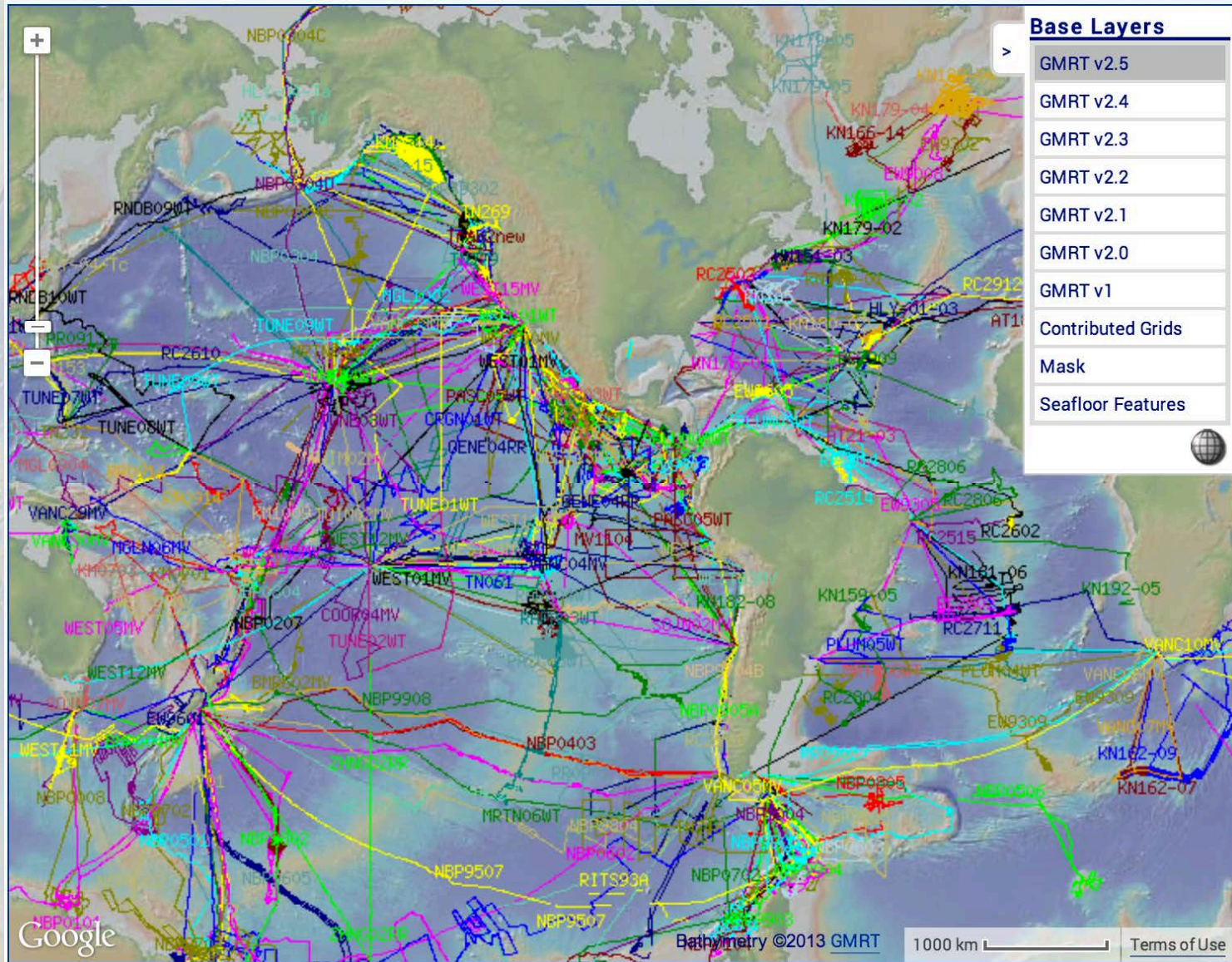files in public domain)
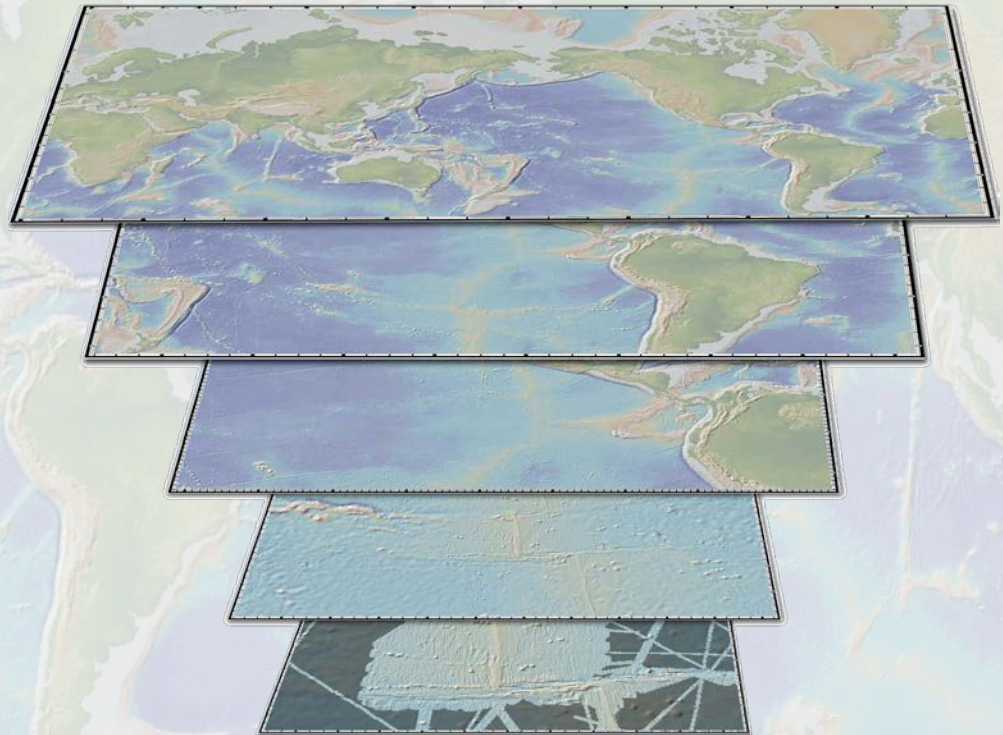
LDEO team performs QC of ping files

2013 Accomplishments

- Two Data Releases
  - GMRT v2.4 (+40 cruises) – *April 2013*
  - GMRT 2.5 (+42 cruises) – *Oct 2013*
- Improvements to workflow for prioritizing new data
- Enhanced Web Pages
  - Revised map interfaces
  - Enhanced attribution
  - More info about compilation and components

Improved Attribution Interface

Improved Attribution Interface
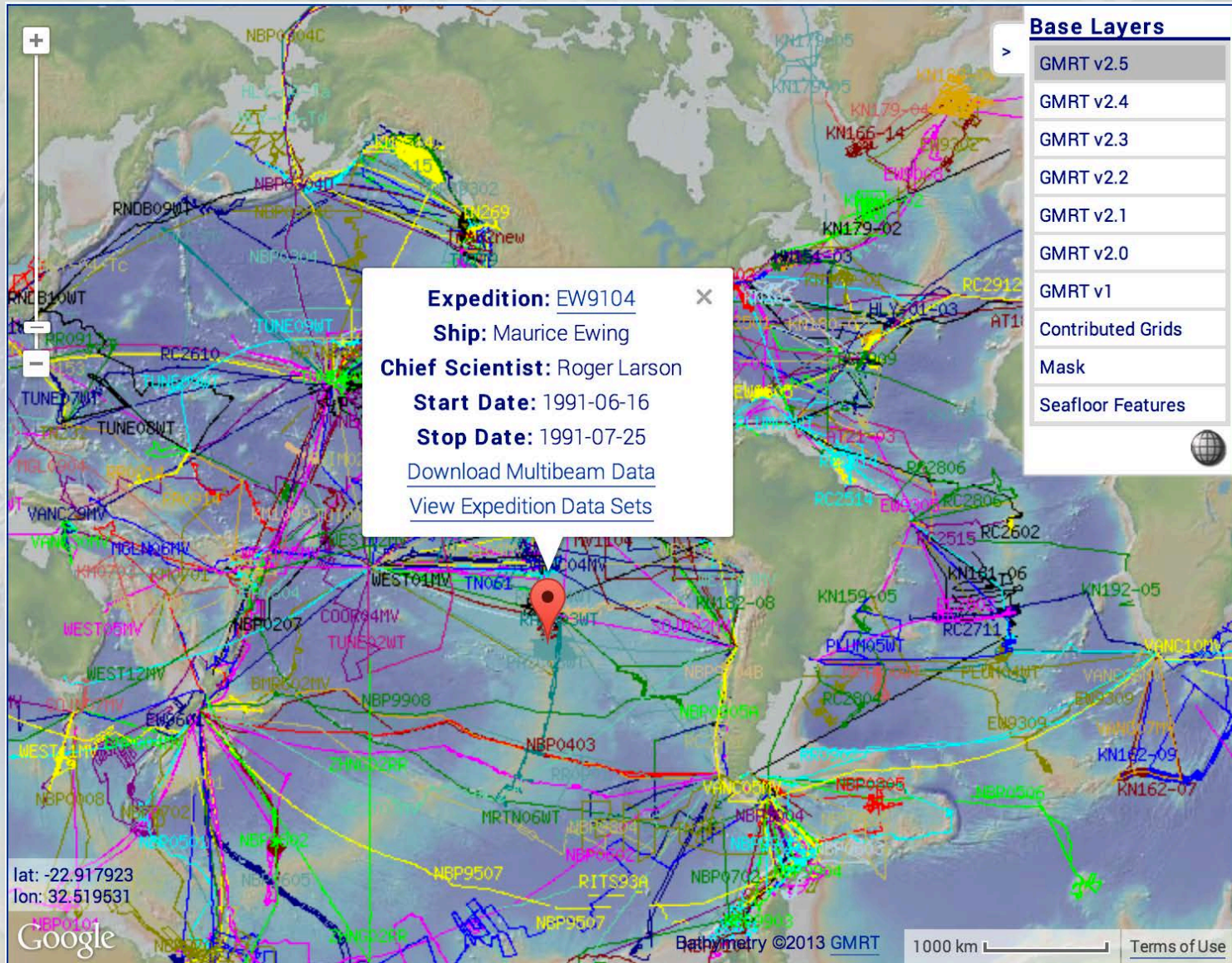
Enhanced Attribution Info

More Info about GMRT

About GMRT

Portal Links

- Portal Home
- **About GMRT »**
- What's New
- Related Links
- Contributors
- Known Issues
- MediaBank
- Tutorials
- GeoMapApp
- Virtual Ocean
- EarthObserver

Access GMRT

- Create Map/Grid
- Download for GoogleEarth
- Web Services

Overview   Source Data   Data Preparation   Access   History   Attribution   Original Data
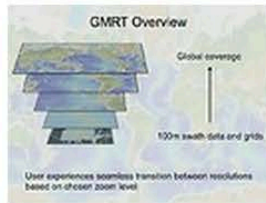
GMRT Overview

The Global Multi-Resolution Topography (GMRT) Synthesis is a dynamically maintained global multi-resolution synthesis of terrestrial and seafloor elevation data available as images & gridded data values. Details about the tiling method and procedures used for creating and serving the GMRT synthesis is available in Ryan et al., 2009.
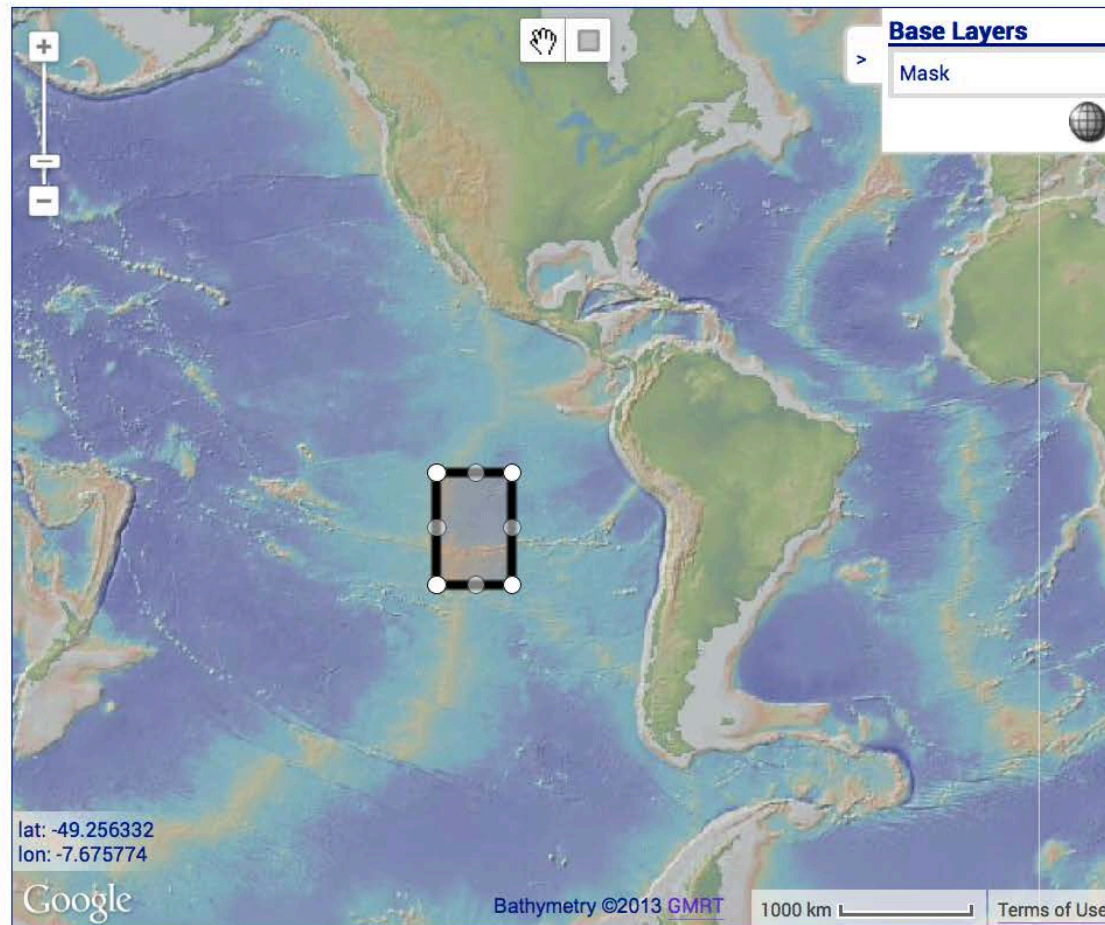

Source Data & Resolution

GMRT brings together a variety of elevation sources, which are delivered as multi-resolutional images and grids of land and ocean elevations. A mask layer is available that highlights the high-resolution data. Source data include:

- Multibeam swath bathymetry data (100-m resolution) from research cruises assessed, cleaned, processed and curated by the MGDS. (Current version 2.4 contains 689 cruises)
- Terrestrial elevation data (10-m resolution) for portions of the US from the USGS National Elevation Dataset (NED)
- Terrestrial elevation data (30-m resolution) from NASA's Advanced Spaceborne Thermal Emission and Reflection

Improved Custom Grid/Image Interface

2013 Collaborations

- Hosted GEBCO / Nippon Foundation Scholar
- Links to Reports & Info from complementary NSF-Funded MB efforts focused on US Academic Fleet (R2R, MAC)
- Updated 100-m content in Google Basemap
    - *GMRT v 2.4*

Next Steps…

- LDEO 100m Compilation
  - Ongoing growth of compilation
  - Further enhance metadata & QC reports
  - Enhance GMRT MapTool export options
    - More formats & resolution options
    - Include attribution info (BAG)
  - GMRT Web Coverage Service (WCS)
- GEBCO 100 Concept
  - Develop data sharing/licensing agreements & protocols
  - Workflow development for contributing new data

GEBCO 100: *Concept*

Regional & Global Grids (> 500 m res.) *e.g. GEBCO_08*

Contributed Grids (< 500 m res.)

LDEO 100-m compilation + 100-m contributed grids

= GEBCO-100