

Google Earth ocean terrain receives major update

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Internet information giant Google updated ocean data in its Google Earth application this week, reflecting new bathymetry data assembled by Scripps Institution of Oceanography, UC San Diego, NOAA researchers and many other ocean mapping groups from around the world.

The newest version of Google Earth includes more accurate imagery in several key areas of [ocean](#) using data collected by research cruises over the past three years.

"The original version of Google Ocean was a newly developed prototype map that had high resolution but also contained thousands of blunders related to the original archived ship data," said David Sandwell, a Scripps geophysicist. "UCSD undergraduate students spent the past three years identifying and correcting the blunders as well as adding all the multibeam echosounder data archived at the National Geophysical Data Center in Boulder, Colorado."

"The Google map now matches the map used in the research community, which makes the Google [Earth](#) program much more useful as a tool for planning cruises to uncharted areas," Sandwell added.

For example, the updated, more precise data corrects a grid-like artifact on the seafloor that was misinterpreted in the popular press as evidence of the lost city of Atlantis off the coast of North Africa.

Through several rounds of upgrades, [Google Earth](#) now has 15 percent

of the seafloor image derived from shipboard soundings at 1-kilometer resolution. Previous versions only derived about 10 percent of their data from ship soundings and the rest from depths predicted by Sandwell and NOAA researcher Walter Smith using satellite [gravity measurements](#). The two developed the prediction technique in 1994. The satellite and sounding data are combined with land topography from the NASA [Shuttle Radar Topography Mission](#) (SRTM) to create a global topography and bathymetry grid called SRTM30_PLUS.

This new version includes all of the multibeam bathymetry data collected by U.S. research vessels over the past three decades including 287 Scripps expeditions from research vessels Washington, Melville and Revelle. UCSD undergraduate student Alexis Shakas processed all the U.S. multibeam data and then worked with Google researchers on the global integration.

The next major upgrade to the grid will occur later this year using a new gravity model having twice the accuracy of previous models. The new gravity information is being collected by a European Space Agency satellite called CryoSat that was launched in February 2010.

Provided by University of California - San Diego

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