



IN *brief*

In brief

More than a map

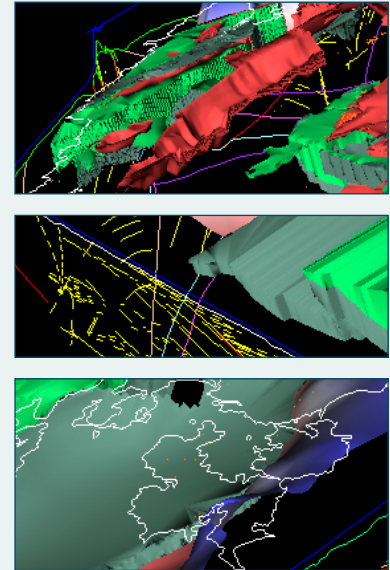
Geoscience Australia's 3D Visualisation Laboratory (3D VizLab) is the latest research tool to assist geoscientists explore underground Australia. The VizLab was designed to help Geoscience Australia's scientists interpret three dimensional geoscience data, by providing a venue for collaborative viewing and interpretation.

Scientists can view and discuss data presented on a large 7 metre by 2.5 metre rear-projection screen. Two active stereo projectors synchronise with special glasses to provide users with a 'true-3D' view of data.

The facility was opened on 26 October by the Hon. Bob Baldwin MP, Parliamentary Secretary to the Minister for Industry, Tourism and Resources. He pointed out that it would not only prove to be a valuable tool in the continuing search for ways to identify and unlock Australia's vast resources wealth but it will also allow us to increase our understanding of our continent's subsurface structures and systems.

'Unlike viewing a geological model on a flat computer screen, using the models in 3D creates the perception that you are underground, exploring the subsurface structures and systems of Australia. This tool will be invaluable for identifying new exploration opportunities, and for encouraging international interest' Mr Baldwin said.

The lab will help scientists to better understand geological structures in areas critical to Australia's mineral and petroleum exploration and to better understand Australia's geological hazards.

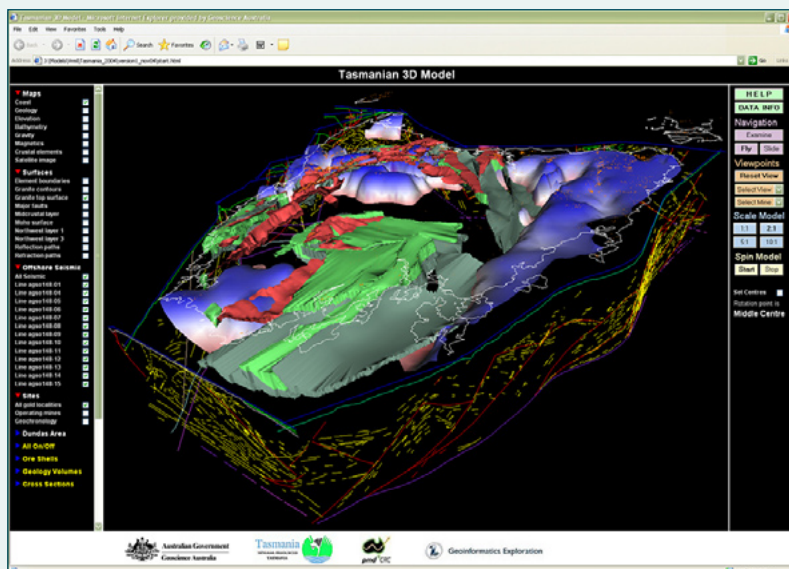


James Johnson, Chief of Geoscience Australia's Minerals Division, highlighted the importance of the facility as a visualisation tool which allows geoscientists 'to produce models, turn them on their head, look from all angles at a geological problem... in effect, place ourselves inside the data and look at it that way.'

Some of the 3D models viewed in the 3D VizLab can also be viewed across the Web on the Geoscience Australia website.

For more information

www.ga.gov.au/map/web3d/



Landslide Database Interoperability Project

Landslide inventories are fundamental to the development of rigorous hazard and risk assessments. However, at present, an agreed, systematic way of developing these inventories is not available.

There are a number of different landslide inventories within Australia, and each database addresses a specific purpose. Although there are some similarities and a number of common themes between databases, the method in which information is organised and described varies considerably. As a result information cannot be readily compared or aggregated with other sources.

These inventories are also generally only accessible to a small number of individuals and consequently there is the possibility that there is significant duplication of effort between landslide researchers working independently. These limitations are being addressed by a collaborative project currently underway between Geoscience Australia, Mineral Resources Tasmania and the University of Wollongong.

The Landslide Database Interoperability Project (LDIP) was established as part of a continued endeavour between these agencies to improve the historic record of landslide events in Australia and to ensure that information is useful, relevant and easily accessible.

The project demonstrates how three diverse landslide inventory databases being maintained independently by different organisations at different scales, can be integrated via a web interface into one 'virtual' database using interoperability. Interoperability is like an information portal. It creates a series of 'live links' from separate databases into a common interface via the internet. The interface is where data is organised into a consistent format before allowing the user to view the information (figure 1).

The interoperable approach allows the virtual database to be tailored to meet the needs of various users and decision makers. This will ensure that the database is useful to all levels of government, geotechnical professionals, emergency managers, land use planners, academics and the general public. It will provide direct access to spatial data and allow users to simultaneously search and query different landslide databases for the most up-to-date information available. The combined search results can be displayed as reports, graphs, maps, statistics or tables, and data can be queried against background datasets, such as topography, geology and geomorphology.

The project also highlights the advantages in developing an 'overarching database structure' that adopts and promotes the use of agreed standards, classification systems and terminology to describe landslide events. This is currently in development as part of the LDIP and will provide the basis for incorporating other landslide inventories into the interoperable interface. It is envisaged that this overarching database structure could become a template for the 'best practice' capture of landslide information.

If the proposed landslide database structure is adopted for developing inventories, and the community assists by contributing relevant information to database custodians, it is possible that there

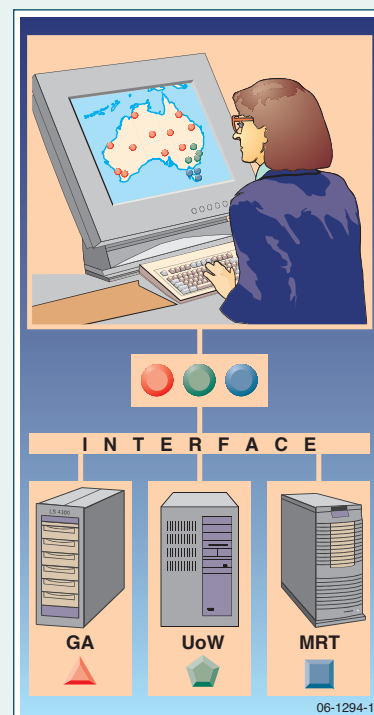


Figure 1. How interoperability works.

could eventually be one virtual landslide database with national coverage. More importantly, it will ensure that the most up-to-date information on landslide events is accessible to those who need it.

This project aligns well with recommendations made by the Council of Australian Governments (COAG) in the Report: *Natural Disasters in Australia: reforming mitigation, relief and recovery arrangements*. It is particularly relevant to Reform Commitment 2 and the establishment of a nationally consistent system of data collection, research and analysis to ensure a sound knowledge base on natural disasters and disaster mitigation.

For more information

phone: Monica Osuchowski on
+61 2 6249 9717

email: Monica.Osuchowski@ga.gov.au



Geoscience Australia's new Cadetship scheme

Next year Geoscience Australia will be offering a unique cadetship scheme for Canberra-based students who are embarking on their first year of university science studies. It is hoped that the program will effectively boost the number of students pursuing careers in geoscience.

“We are looking for bright, enthusiastic young people who wish to pursue careers in science”

‘We are looking for bright, enthusiastic young people who wish to pursue careers in science. In collaboration with the Australian National University, we will be offering a tailored cadetship program which will offer professional work experience placements and on-going support from academic mentors’ said Dr. Neil Williams, Chief Executive Officer of Geoscience Australia, when announcing the scheme.

‘Geoscience is just such a diverse scientific discipline that there are so many rewarding and exciting careers to choose from. The students who obtain a cadetship will have the opportunity to work in a range of professional working environments allowing them to make informed decisions about their futures’ said Dr Williams.

The career path of Geoscience Australia’s Trevor Dhu (pictured) demonstrates the rationale for the scheme. Trevor studied maths and physics at University because he enjoyed it at high school. As he continued with his university studies he discovered that there was a great opportunity to apply these skills to questions and problems relating to the Earth. This drove him towards geophysics and he is currently leading the development of earthquake risk and ground motion models for Australia.

The cadetship scheme is open to students in Canberra, who have performed well in science and maths for their Year 12 Certificate and are about to apply for a science-related degree at the Australian National University. The cadetships will be offered to students commencing science degrees including the newly offered Bachelor of Global and Ocean Sciences (Honours), or to students completing science degrees with interests in geoscience-related subjects.

For more information

phone Tony Robinson, on +61 2 6249 9411

web www.ga.gov.au/jobs/