AuScope
AN ORGANISATION FOR A NATIONAL EARTH SCIENCE INFRASTRUCTURE PROGRAM

AUSCOPE EMAIL UPDATE NO.1 – FEBRUARY 2009

Welcome to the first issue of the AuScope Email Update.

This update will be issued every three months to the Australian geoscience research community, keeping you up to date with the latest developments and progress of each of the six AuScope infrastructure components. Please forward the update to anyone in the wider research community who would be interested in finding out more about the investment in earth science infrastructure in Australia.

Bob Haydon
CEO, AuScope Ltd

AuScope Grid and Interoperability Program Director Robert Woodcock

Bruce Simons (DPI Victoria) has been appointed (part time) to promote awareness of GRID capabilities to various State Geological surveys to "grid-enable" their data.

AuScope Grid attended and hosted a booth at the recent **eResearch conference** last October. The booth attracted a positive response and included a live demonstration of the AuScope Discovery Portal.

For more information on the services and **Portal components** now available via AuScope Grid go to **www.auscope.org.au**

The AuScope Discovery Portal

National Virtual Core Library Program Director Jon Huntington

Eight new-technology, **HyLogger-2 systems** (2 prototypes and 6 operational systems) are in parallel construction with the first to be delivered during March 2009 and the last by July 2009.

Design of the production-stage **NVCL datamodel and Oracle database,** suited to Geological Survey needs, is 99% complete and connectivity to the industry-standard TSG-Core interpretation engine will be complete by the end of February 2009 ready for beta testing.

A new version of the **TSG-Core package (TSGTM version 7)** is scheduled to be complete and available to the Surveys by the end of April 2009. The NVCL Use Case Web demonstrator remains publicly available at **http://nvcl.csiro.au.**

During the last 18 months pre-cursor **NVCL hyperspectral data** has been collected from drill cores in Tasmania, Victoria, Queensland, the Northern Territory and South Australia to augment previous data also collected in WA. NSW will start its pre-cursor program in February 2009. Details of all these data are available from each Geological Survey Core Library manager.

AuScope NVCL co-hosted a booth with CSIRO and Ausspec International at the November 2008 **PACRIM conference** on the Gold Coast. A NVCL/HyLogging/TSG alteration workshop is scheduled for the **ASEG Conference** in Adelaide on February 26th.

One of the eight new HyLogger-2 systems soon to be delivered.

The NVCL poster can be downloaded at www.auscope.org.au

Earth Composition and Evolution Program Director Bruce Schaefer

The building of the **Cameca 1280 ion microprobe** was completed, factory tested to achieve technical specifications in Paris and shipped to Perth. The installation at the Centre for Microscopy, Characterisation and Analysis (CMCA) at UWA, has been undertaken and commissioning is on schedule. The opening of the facility is planned for June 2009.

In the last quarter of 2008 there were **2 new collaborative projects** initiated with analytical work commencing and an additional 3 new collaborative projects initiated and completed. In total, 22 collaborative projects made use of the AuScope infrastructure between Jan to Sept 2008.

TerraneChron methodologies were promoted at several international conferences and short-courses.

Cameca 1280 ion microprobe

Earth Imaging and Structure Program Director Brian Kennett

The **580 km GOMA reflection line** from southern NT to Tarcoola in SA was completed in early December despite adverse weather conditions. 200 km were funded through AuScope in association with GA-OESP and PIRSA.

Support has been provided to a number of **portable equipment experiments** (NSW, SA/NT, WA, Tasmania) with necessary maintenance work to ensure equipment performance. A number of connector cables have been fabricated to allow use of different types of seismometers with the same recorders.

The station locations for **supplementary passive seismic** around the OESP reflection lines in the Gawler craton have been cleared and deployment is complete (35 stations). Planning continues for similar work for the Curnamona Craton.

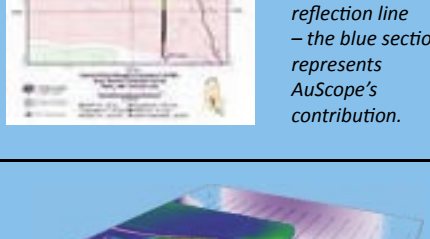
The GOMA reflection line – the blue section represents AuScope's contribution.

Earth Simulation, Analysis and Modelling (SAM) Program Director Louis Moresi

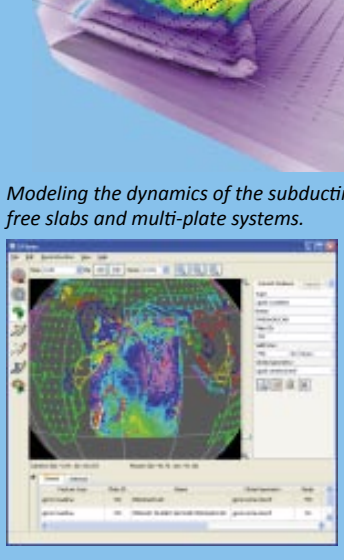
The coordinated release of the **Underworld Project** and AuScope (Vic Node) websites allowed user access to the latest Underworld Software release and the Underworld User Manual. Luke Hodkison attended the Geomod Workshop, presenting successful Underworld benchmarks to the academic modeling community. For more information visit the underworld website at **http://www.underworldproject.org**

GPlates 0.9.4, has been released containing interactive pole manipulation and polygons. The previous release of GPlates, version 0.9.3.1, was downloaded almost 2700 times before GPlates 0.9.4 was released - an average of approximately 300 downloads a week - demonstrating the continuing relevance of GPlates. In total, the public releases of GPlates have been downloaded more than 4400 times. For more GPlate news go to **http://www.gplates.org/news.html#gplates094**

Pplates v 1.1 was released, and a website was created which incorporates the software-download capabilities of the former ACcESS MNRF server. At the behest of this project, another web page was created at ANU RSES that summarizes all RSES AuScope activities, including Pplates.



Modeling the dynamics of the subducting lithosphere for free slabs and multi-plate systems.



GPlates is now able to display raster images which do not cover the whole globe.

Geospatial Framework and Earth Dynamics Program Director Gary Johnston

Three **12m Patriot radio telescopes** are being constructed in the USA and due to be installed in Hobart in March, Yarragadee in October and Katherine in November.

2 Hydrogen Maser Clocks have been delivered from Russia, with a third being constructed to replace one damaged in freight. The receiver prototype has been constructed and will be fitted to the first telescope for testing.

The **FG5 Absolute gravimeter** is now in operation and has commenced an observation program on Sydney, Mt Stromlo, Melbourne, Hobart, Perth and Yarragadee.

The **SLR** area of AuScope's Geospatial component is now complete with the finalisation of the MT Stromlo SLR power upgrade in 2007 and the Mobile SLR campaign at Burnie (Tasmania) in 2008.

All states are now actively selecting sites and progressing construction for the new **GNSS stations** across Australia. It is expected that the construction of many sites will be completed in 2009.

A hydrogen radio frequency discharge, the first element inside a hydrogen maser.

Typical AuScope GNSS installation at Norfolk Island.

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42.6 million dollars dedicated to earth science research infrastructure in Australia...
Isn't it time you explored the possibilities AuScope has to offer?
www.auscope.org.au

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