AGOS Progress Quarter 3 2013

At the conclusion of Quarter 3 2013 (31 March 2013), most planned milestones had been reached in line with the AGOS Agreement. There have been some further delays in commencement of construction of the 4 remote CORS GNSS sites. Other than this, the majority of equipment and physical infrastructure for the AGOS infrastructure has now been acquired or is under construction. Deployments by end-user research groups are underway in several areas.

The Earth Sounding Network

Progress has been on track in all areas.

The Earth Data recorders, which became field ready in December 2012, are now in heavy use in Australia and New Zealand.

The first 100 units of the New Generation ANU seismic recorders have now been completed. Half of this pool was successfully deployed in northern NSW/southern Queensland in late 2012. A further batch of 50 instruments is close to completion.

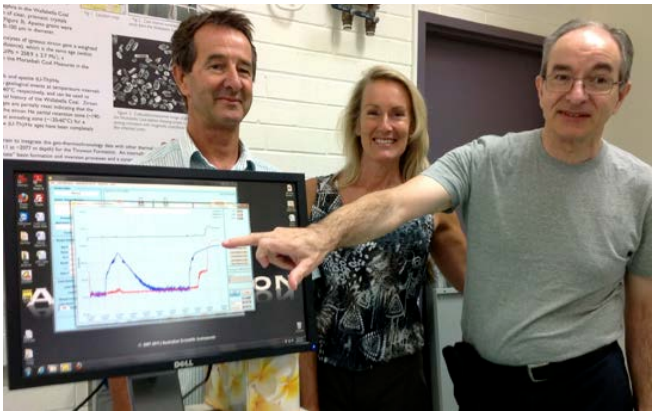
The Ocean Bottom Seismometer (OBS) units are scheduled to be delivered by the end of FY2013. Negotiations with the Marine National Facility (MNF) are underway to secure a place on Research Vessel Investigator during its initial at-sea trials to allow for a test deployment.

The final equipment purchases for the ANU network comprising 50 Trillium Compact seismometers are on order with delivery expected by the end of the June quarter.

Construction of the electric field loggers, at Adelaide University, is complete with field testing underway.

The Geohistory Laboratory

Activity during Quarter 3 was focussed largely on the Curtin laboratory node where final hardware components were successfully tested and met required specifications.



Full integration testing of instruments was demonstrated, fulfilling the objective of producing a prototype in-situ helium dating instrument.

In-situ ablation testing produced a world-first "helium mapping transit" across a zircon crystal at 40 micron intervals.

No further infrastructure expenditure has

been undertaken on the Melbourne University node of the Geohistory laboratory. Inter-calibration experiments between the Melbourne and Curtin nodes have commenced.

The Subsurface Observatory

The Subsurface Observatory petrophysics laboratory has focussed on commissioning a number of instruments. This includes the GeoDTS heating cable as well as a number of portable petrophysics monitoring instruments such as the P-wave and S-wave tools and the modulus tester. The oven and vacuum chambers in the Melbourne laboratory have also been commissioned. These are now all on line and ready for deployment. The modulus and P-wave and S-wave tools are currently being used on a research project looking at geothermal potential.

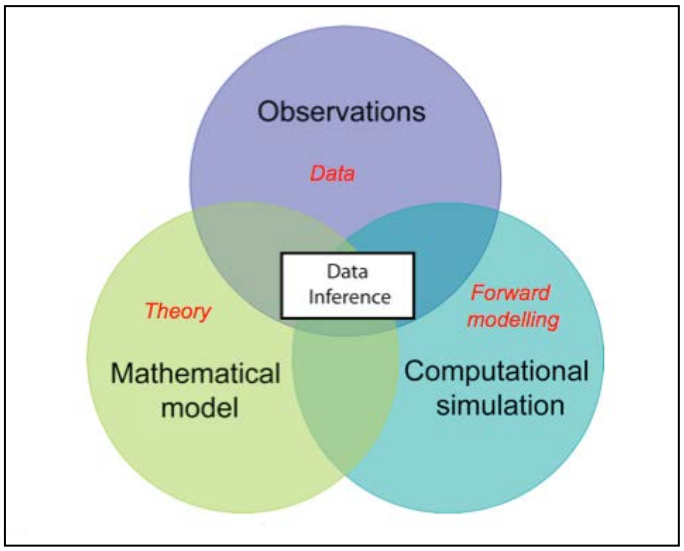
A list of all of the instrumentation available through the Subsurface Observatory has been compiled and will be publicised on the AuScope website.

An independent report on the planned acoustic telelogger purchase has now been received and will inform the purchasing decision for this instrument. This will be the final major piece of instrumentation purchased by the SOB Observatory.

AGOS Access projects at UWA, SA DMITRE and UA have all been put in place and projects are underway.

The Inversion Laboratory

Updated versions of three key pieces of ANU inversion software code have been provided to university researchers for thorough testing. Progress has also been made on launch of a new single site web portal for code download. The design phase is nearing completion and launch is expected later this year.



First release of the escript inversion toolkit for magnetic, gravity and joint inversion has been made available through escript 3.3.1 release at UQ. This version can now be used from the NECTAR Virtual Geophysical Laboratory (VGL) portal.

In relation to the Terrawulf upgrade (TIII) at ANU, all of the new TIII compute servers are operating and users are routinely running production code on the cluster. All standard cluster software

installed on TII is available on TIII but some specially requested packages are still being installed and tested. Large user areas have been transferred to the new data server providing significantly improved data bandwidth.

The Geospatial Observatory

Construction of the antenna calibration facility at Geoscience Australia is near complete and is on schedule for a formal Ministerial Opening in May 2013.

The installation of the 4 AGOS GNSS CORS, which was expected to be reached by the end of Quarter 4 FY2013, has been delayed further due to resources being prioritised to complete the NCRIS CORS build. Nevertheless, progress has been made with the sites located at Boolardy (WA), King Island (TAS), Roma (Qld) and Arkaroola (SA) now selected and land access granted for the Boolardy and King Island CORS. Site selection and access processes have commenced for the Roma and Arkaroola sites. GNSS equipment for each of these CORS has now been purchased

Draft National Collaborative Framework (NCF) agreements with the Queensland, SA and Tasmanian Governments are currently being reviewed for signoff.

Work on the remote sensing portal continues and linking the radar data through the AuScope portal is progressing well.

Prototype radar reflectors have been built and testing by DSTO is currently being planned before they are deployed to the Surat Basin, Queensland, to support the measurement of subsidence in Coal Seam Gas extractions areas.

An NCF Agreement between Geoscience Australia and the Queensland Government regarding the build of a survey network in the Surat Basin is currently being finalised.

The Geophysical Education Observatory

During this quarter the Australian Seismometers in Schools Network has focused on the selection of the schools to receive a primary instrument with invitations to host a primary instrument sent out to 38 of the successful schools. 31 acceptances have been received to date. Three instruments are still to be assigned. One is reserved for the Alice Springs area, one for Northern Queensland and one for the Hunter Valley. These are regions where

responses from schools have not been strong and are currently being encouraged. Installation in New South Wales has begun with Snowy Mountains Grammar.

The second and final batch of 20 seismometers has been purchased which completes the instrument pool. Delivery is expected in Q4FY13

GPS in Schools antenna and receivers have been purchased. The National Collaborative Framework Agreements between Geoscience Australia and Tasmania, ACT, SA, Queensland, Victoria, NT and NSW and been drafted for this program and feedback from each jurisdiction is awaited with sign-off anticipated promptly thereafter.

Project Milestones

The status of project milestones is shown in the table below. Note that milestones 35, 38, 43 and 44 shown incomplete in earlier Quarters are included below to show that progress has been made.

No.	Milestone	Projected completion Date	Status
Milestones to 30 June 2012 (reported not complete in Q4 Report)			
35	Earth Sounding Network: Second batch of 50 electric field loggers constructed	30 June 2012	100 units complete for second batch at 31 March 2013. Further 50 close to completion
38	Geophysical Education Observatory: Specifications and design final stage complete	30 June 2012	Complete; roll-out commenced with 31 Schools accepting at 31 March
Milestones to 30 September 2012 (reported not complete in Q1 Report)			
43	Geospatial Observatory: 4 new permanent GNSS CORS stations installed	30 June 2013	Delay approved by DIISRTE to end June 2013. Work started but progress slow. Access to 2 sites approved with site selection and access in progress with States on remaining 2 sites
44	Geohistory Laboratory: Software interface established	30 September 2012	90% Complete with interlab calibration underway.
Milestones to 31 March 2013			
52	Subsurface Observatory: Second stage logging pool procured	31 March 2013	Complete
53	Milestone Report 9 removed by variation	31 March 2013	Complete for internal distribution