

# DIMENSIONS

## SURVEYING THE SALT

What do Geocomp Systems and salt ponds have in common? *Dimensions* reports on a dry topic in northwest Australia.

Onslow Salt Pty Ltd is an Australian-based company producing 2.5 million tons of salt each year from its state-of-the-art solar salt plant on the coast 1000 kilometres north of Perth.

'We run a solar salt field,' explains Technical Services Superintendent, Rob Lund. 'We use three huge seawater pumps working at 4000 litres per second to move the seawater through a series of condenser ponds. The sun dries it out, crystallising the sodium chloride.'

Around 90% of the seawater is condensed in these ponds until the brine is fully concentrated. The saturated brine is then transferred into large crystallisers—shallow evaporation ponds—where the salt crystals form.

'We mechanically remove the salt—this is the tricky part—then wash it and stockpile it ready to ship to Japan, Korea, China and Taiwan,' says Rob.

'We can store a million tons of salt on-site.'

Using a rover GPS mounted on a tractor, they survey a crystalliser pond before

harvesting to compare it with the survey done after the previous harvest. This helps determine the relative level they'll cut the salt pile down to, with volumes worked out by Terramodel.

'We try to take out the very top layer of salt,' says Rob. The harvest 'design' is loaded into a computer mounted on a harvester, with Terramodel controlling the blade depth remotely using GPS.

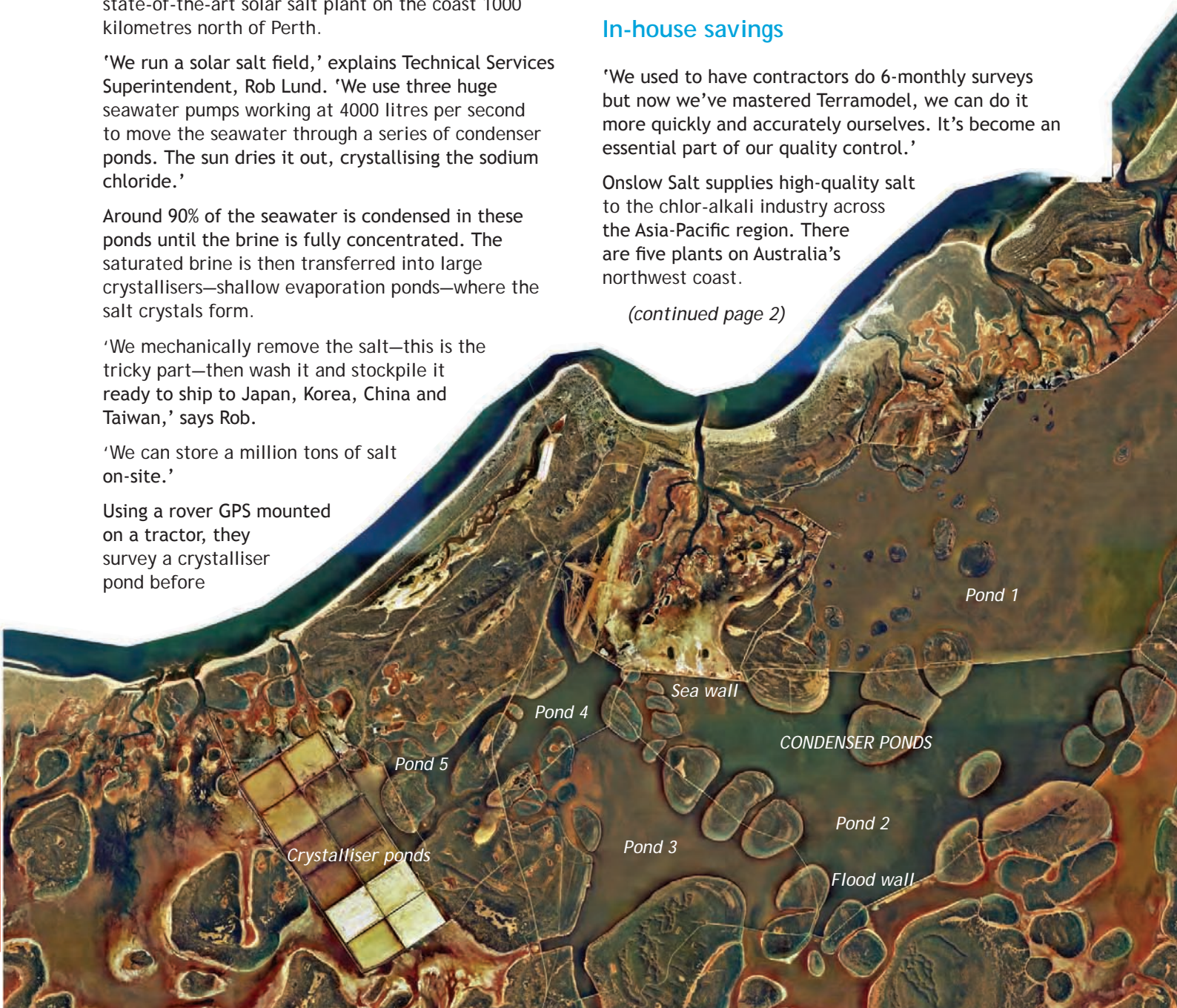
After the harvest, the pond is surveyed again to cross-check the volume extracted. 'We also survey the stockpile and process that information in Terramodel too. We get lovely pictures.'

### In-house savings

'We used to have contractors do 6-monthly surveys but now we've mastered Terramodel, we can do it more quickly and accurately ourselves. It's become an essential part of our quality control.'

Onslow Salt supplies high-quality salt to the chlor-alkali industry across the Asia-Pacific region. There are five plants on Australia's northwest coast.

*(continued page 2)*





## WEBSITES

Keep an eye on:

[www.geocomp.com.au/support](http://www.geocomp.com.au/support)

[www.geocomp.com.au/links](http://www.geocomp.com.au/links)

[www.engineeringcivil.com](http://www.engineeringcivil.com)

Bypass email size limits and extra traps with:

[www.yousendit.com](http://www.yousendit.com)

or

[www.mailbigfile.com](http://www.mailbigfile.com)

To search for current web content, try:

[www.mylivesearch.com](http://www.mylivesearch.com)

If you would like to own a football club, see:

[www.myfootballclub.co.uk](http://www.myfootballclub.co.uk)

# INDUSTRY NEWS

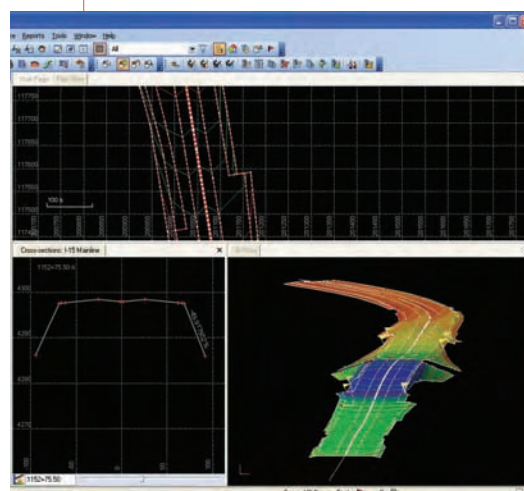


The big news from the Trimble Dimensions 2007 conference in Las Vegas is the release of the new Trimble® Business Center–Heavy Construction Edition. TBC–HCE is the latest Trimble Construction software suite with improved support for instruments running Trimble SCS900 Site Controller Software for construction operations.

Trimble Business Centre–HCE is a new graphic environment. It has a new user interface on a new software platform for preparing digital design models and managing measurement and set out data captured using Trimble SCS900. TBC–HCE adds significant value to the workflows of the Trimble SCS Data Manager, while

expanding the quality control benefits of that data organisation and management tool.

*For your FREE copy of TBC–HCE, please ring or email Geocomp Systems.*



*(continued from page 1)*

'Ours is a medium-sized salt field, producing about 2.5 million tons each year,' says Rob.

'The largest is in Baja California, Mexico, producing 6 million tons'.

The innocuous-looking substance we know today as salt has historically been so essential to all life as to be highly valued. Today, salt is predominantly used for industrial purposes by the chlor-alkali industry.

This industry produces indispensable ingredients for making polymers such as PVC, isocyanates and polycarbonates, as used in building, automotive and packaging industries.

'It might sound like an easy way to make money but before you bulldoze your beach shack and start digging ponds, it's worth knowing this only works on a grand scale—the market price is about US \$20 per ton!'

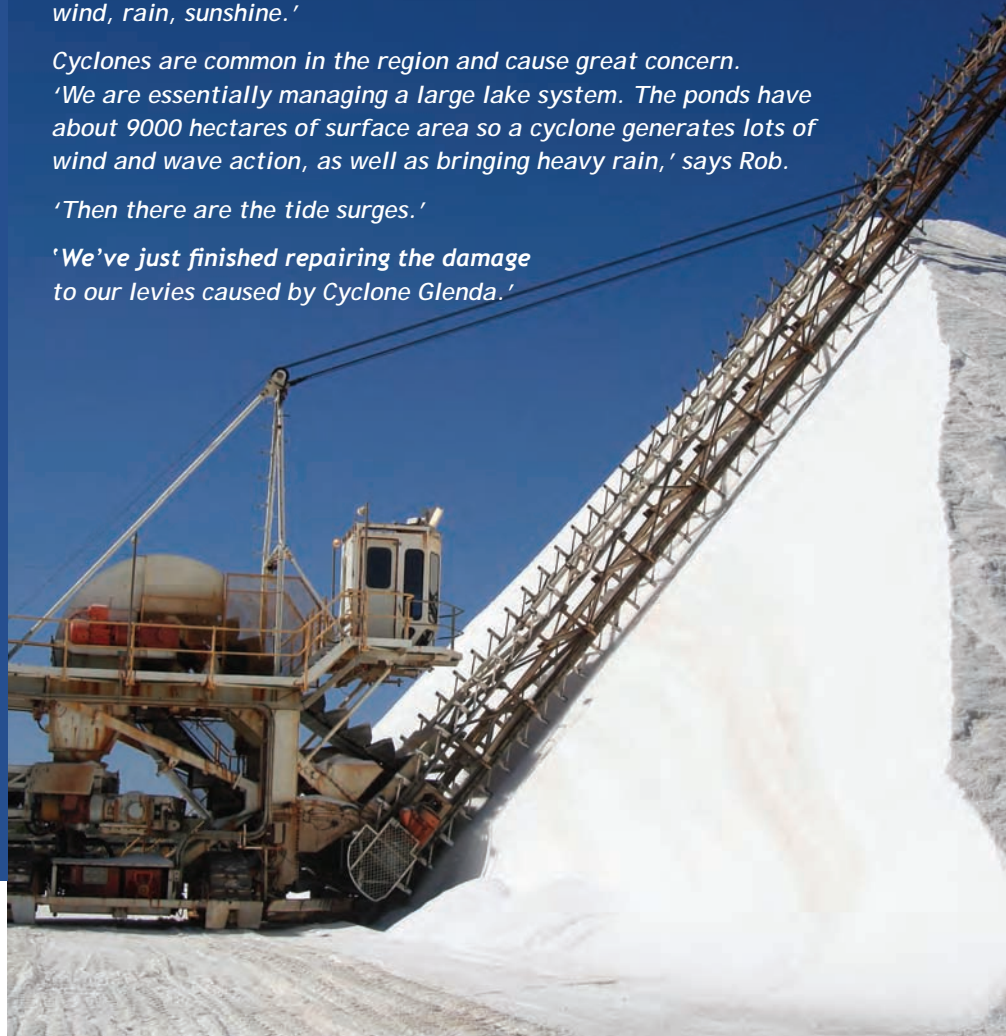
*'We talk like farmers,' says Rob. 'We are obsessed by the weather: wind, rain, sunshine.'*

*Cyclones are common in the region and cause great concern.*

*'We are essentially managing a large lake system. The ponds have about 9000 hectares of surface area so a cyclone generates lots of wind and wave action, as well as bringing heavy rain,' says Rob.*

*'Then there are the tide surges.'*

*'We've just finished repairing the damage to our levies caused by Cyclone Glenda.'*



# WELL-SCHOOLED

Jerry Cresp has run Geocomp Systems' training sessions for years, but he's never done anything like this before!

## THE CALL

The Australian Defence Force (ADF) is developing a training facility on the former Bradshaw cattle station. The 8700 square kilometre property lies about 600 kilometres southwest of Darwin, Northern Territory.

In June this year, as part of a military exercise, the US Army's Joint Rapid Airfield Construction (JRAC) program built a 1200-metre airfield at Bradshaw. Their assignment was to use equipment, tools and techniques developed under the JRAC program to site, design and build the airfield in 19 days—no mean feat.

The staff had to be able to complete the survey and design on-site within 24 hours once the exercise began. (Construction was scheduled to start on Day 2.) They called on Geocomp Systems to help them work out how.

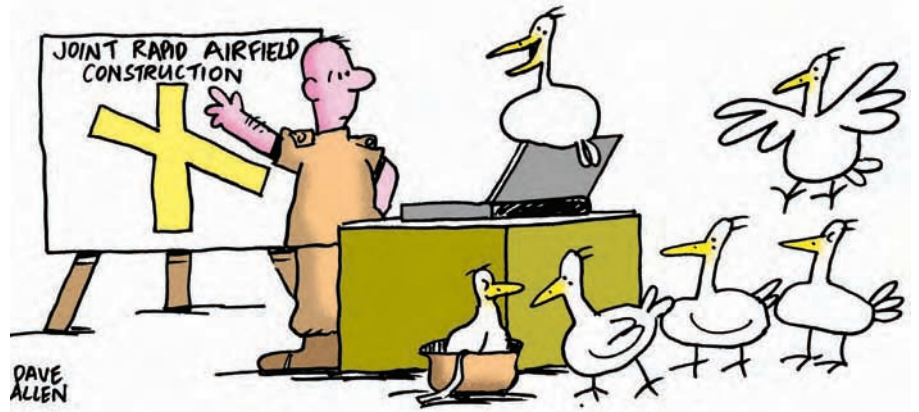
## TEACHER'S REPORT

*Geocomp Systems' Jerry Cresp reports:*

'I flew to Darwin to do 12 hours software training for JRAC over 36 hours. In the lead-up to the military exercise, my job was to make sure staff could use Terramodel for the survey and design work. We were then on standby to provide support afterwards.

'The team supervisors had used Terramodel before, but the designers hadn't.

'JRAC had experts flying to Darwin from all over the world to prepare for the exercise because they were trialling advanced technology. For example, staff were being trained in rapid site analysis techniques so they could select the best site quickly.



'Say, we'd like one of those airfields too! Could I borrow your laptop?'

'It was incredible to see the level of detail and intensity involved in a military exercise. The forces had to go into an area as if they were under combat conditions. They had to rapidly assess the terrain to work out where to build an airfield and then build it. All this in 19 days straight!'

## THE PROJECT

The runway was to have an unsealed surface and be structurally designed to cope with 500 landings and take-offs by huge C-17 aircraft.

The property will be used to train defence personnel and will include joint exercises between Australian and foreign forces. They'll be using a range of vehicles such as tanks, light armoured vehicles, armoured personnel carriers, and heavy trucks as well as an armoury of weapons including grenades, howitzers, mortars, machine guns, cannon and aircraft-mounted high-explosive warhead weapons.

The ADF is developing infrastructure and environmental management plans.

## THE INTENSE WORLD OF JRAC

JRAC is a microcosm complete with diarists and photographers. These two excerpts are from the JRAC diary on the website at <https://jrhc.erdcc.usace.army.mil>

### CLASS SUCCEEDS

*The US Army, Navy, Marines and Air Force have been here in Australia since mid-May working with units from the Australian Army and the Royal Australian Air Force. Airfield construction started on 2 June with the first clearing and grubbing of open land, and in the 14 days since then the hard working equipment operators have carved and shaped a most impressive runway that is rapidly nearing completion.*

*Stabilisation training, movement of the stockpile material, clearing*

*and grubbing of the apron areas, three layers of material to be placed and compacted on two aprons and taxiways, and fibre-cement stabilization of the aprons and taxiways are all yet to be done by 24 June, but I am still very proud of our accomplishments with the runway. GO JRAC!*

### EXPERT EFFORT

*Geocomp Systems' Jerry came to Darwin on short notice and conducted an extraordinary class on Terramodel (the survey and design software being used by the JRAC Task Force).*

*In just over a day, Jerry was able to teach the surveyors and draftsmen how to use this powerful software tool to quickly design the airfield and make quick adjustments during construction. Once on the ground here at Bradshaw, the initial runway design was completed in just over 2 hours!*



# EXPERT ADVICE



GEOCOMP

## Parallel ports

Geocomp users are reporting that computers shipped with parallel ports are getting harder to find.

You may be able to slot a PP card into a desktop computer.

As for notebooks, until recently you could still buy the Fujitsu LifeBook C1410, Toshiba Tecra A7, P and S4 and the Lenovo ThinkPad T60 with serial/parallel port bay adapter.

For a notebook computer, you can buy a Quatech SPPXP-100 parallel-port adapter from [www.ieci.com.au](http://www.ieci.com.au) for about \$250. We have some SPP-100 adapters in stock for older notebooks with PCMCIA.

Good reconditioned laptops are also on the market.

We can replace your parallel port Terramodel and Paydirt dongles with USB dongles.

## Windows Vista compatibility

Windows Vista does not come with DOS which means you can't run any DOS applications, such as Geocomp.

You can load XP, 98SE or DOS onto Vista using a Virtual Machine such as MS Virtual PC 2007, then load Geocomp on top, but this is cumbersome. Geocomp users are much better off sticking with Windows XP.

Terramodel will run on Windows Vista. AutoDraft users will need to contact us for an update. You will also need to download Windows Help for Vista from [support.microsoft.com/kb/917607](http://support.microsoft.com/kb/917607)

Vista User Account Control maintains separate ini and registry entries for each user. If you manually edit or replace ini files, avoid confusion by changing the Terramodel shortcut to Run as Administrator.

## LCD displays

On new computers, it's getting easy to link multiple and large

LCD displays. This can make a big difference to your productivity by allowing you to use one screen for Terramodel and another for functional tasks such as email.

The factory settings for brightness on these screens is usually 100%. Turn down the brightness for easier reading and less power consumption.

Geocomp will take over the monitors, so you will need to Alt TAB or similar to return to Windows.

For wide screens, use Configure Geocomp/Configure SDS Display to adjust the proportions until circles do not display as ellipses.

Rearranging your new displays may result in some windows and dialogs opening outside the display. You can recover by putting the screens back the way they were, but it may be easier to manually alter the coordinates of the window.

For example, to reset the Raw Data Editor location, use REGEDIT to remove the Top, Bottom, Left and Right values from HKEY\_USERS\.....\Software\Spectra Precision Software Inc.\RDE. For the Coordinate Scroll, manually edit CoordScrollPos in Tmodwin.ini to 300,300.

## Project file size

You can reduce the size of a Terramodel project file by removing unused DTM links, blocks, linetypes and sheet view objects.

Each Alpha Point uses more memory than an integer point number. Use the System configuration to limit the maximum number of objects and alpha points to suit your available RAM. See the User Guide for details.

## Selecting in Terramodel

When you select by Window, you only select from visible layers. When you select by View, you select all objects in that view including those which are invisible and off-screen.

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## HELP HOTLINE

For Customer Care Members with queries about using our software.

We aim to respond to your call within 1 hour.

Toll free: 1800 800 754 (in Australia)

Email: [support@geocomp.com.au](mailto:support@geocomp.com.au)

8.30 am-5.30 pm Melbourne time,  
each working day

## PRODUCTS

GeoCalc	GeoNav	Geocomp
Terramodel	Visualizer	GCGeocode
	iWitness	Paydirt Sitework

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## DRIFTING ALONG

Our users of Geodesy in GeoNav, GeoCalc and Terramodel Coordcon may find some aspects of GPS a little confusing.

For example, the Australian continent is drifting north-northeast, towards Indonesia. This means WGS84 and GDA94 are diverging—the difference on the ground is now more than 77 cm, increasing by about 7 cm yearly.

Be careful when comparing coordinates of monuments and GPS to make sure you are not trying to compare apples with oranges.