

# DIMENSIONS

## THE SEASON FOR UPGRADES

The Geocomp Systems September Distribution CD includes upgrades to several of our applications.

Our new CD includes Terramodel 9.82, Geocomp 10.08, and Paydirt Sitework 5. To get your copy, you need to have a licence for one of these applications, with a current Customer Care membership: see page 4 for more information.

The CD's new autorun menu makes it easy to get around, install applications and updates, read release notes and manuals, and check out web sites.

The new Geocomp 10.08 update features extensions to existing options, and Sitework users now have Terramodel CAD. For more information about Sitework and Geocomp updates, see page 2.

### Terramodel 9.82

This release includes Trimble Terramodel 9.82 enhanced by Geocomp Systems.

The latest update to the powerful Terramodel design programs brings in a number of improvements. The main features of the new version are:

- an 8 million point limit
- Terramodel data survey controller interface
- faster coordinate system conversions with more Australian and New Zealand coordinate systems
- more cross-section plotting options
- labelling multiple surfaces
- user-defined datum control throughout
- new 'even offset option' which plots even-interval offsets rather than random intervals
- 25 new fonts
- more TMLs, building on Terramodel's well-known strength and versatility.

### What's on the new Upgrades CD?

- Terramodel 9.82
- Geocomp 10.08
- Paydirt Sitework 5
- Terramodel Visualizer 2.03
  - GST 2.02
  - Terramodel Hydrographic Data Management System 1.6
  - GCGeocode
  - GeoCalc 4.2
- Acrobat Reader 4
  - CivilView
- Geocomp 9.13.

This CD has now been released. If you haven't received it, contact Geocomp Systems.



## Geocomp Systems on the road

In June, Geocomp Systems' Sales Manager Paul Fulton visited Reson, distributors of hydrographic equipment in Denmark. Paul trained Reson staff in using Terramodel to process hydrographic data, using enhancements created by Geocomp Systems.

Paul has also recently been to Malaysia to conduct Terramodel training and to Singapore to train staff in Terramodel at a local company which is beginning work on a land-reclamation project.

## GCGeocode

GCGeocode allows you to load a whole survey of hundreds of millions of points, then cut the size down with a powerful polynomial surface filter, by selecting within a boundary or selected cells. This is a powerful and specific program that can handle 100 million data points in seconds, enabling you to cut down enormous data sets and crop pieces off to different files.

See our website for more details:  
<http://www.geocomp.com.au/gcgeocode/>

## New Geocomp 10.08

Last year we released Geocomp 10.07 on our first CD. Since then, patches have been available from our website. The latest Geocomp Systems distribution CD includes Geocomp 10.08, which includes all the patches to 10.07, plus a number of other small changes.

The best things about the CD for a Geocomp user are the improved installation and the ease of accessing the manuals. And, because you now have Terramodel software, you can view any Terramodel projects you may get, even without a Terramodel licence.

## Paydirt Sitework 5

• Open and view engineers' CAD files in .DXF, .DWG (including AutoCAD 2000), .DGN (Microstation) and .PRO using the new 'Import Using Terramodel' feature.

- View all data contained in a CAD file then modify the display to show only the data you want to send to Sitework.
- Create lines, point, pads and curves with the CAD editing features.
- Clip the CAD data to a boundary and delete data that is inside OR outside the boundary.
- Graphically select the CAD layers of individual objects to import to a selected Sitework surface with the click of a mouse.
- Select or enter the Sitework surface name to send data to; if it doesn't exist in Sitework, the surface is created.
- Export Paydirt Sitework data directly to Terramodel.
- Export selected surfaces and types directly to Terramodel.
- Use data for road takeoffs.
- Export data to Trimble Sitevision and BladePro 3D machine control.
- Improved user interface.

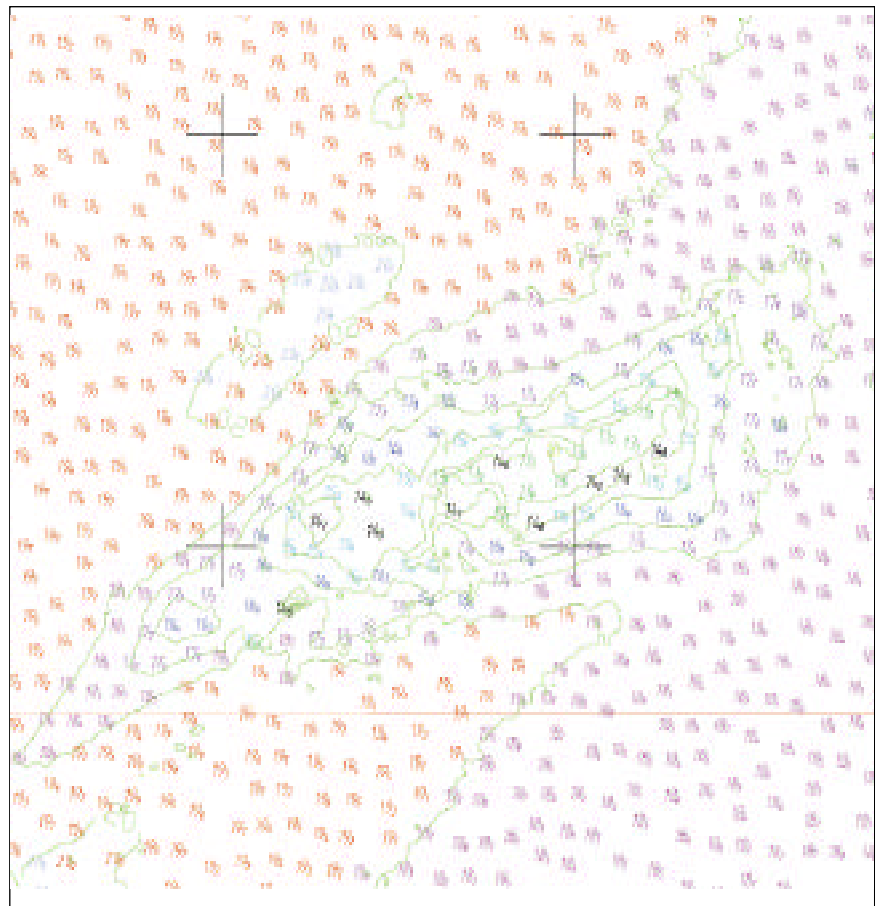
## Depth Clashing

Hydrographic surveys typically have hundreds of thousands of points, especially multi-beam surveys. As the underwater surface can't be seen clearly, surveys have to be thorough; however, this creates maps which are so full of spot depths that it is difficult to read any single one.

Depth text label overwrite removal (also known as 'depth clashing' or 'weeding') is an enormous task. Geocomp Systems' additions to Terramodel let you remove clashing labels for all but the shoalest (or the deepest) points within a nominated range. The resulting map has legible depth labels.

Contact us to find out more about our  
[Hydrographic Data Management System.](#)

*The data on the map at right has been 'depth clashed' from many millions of points to create a map that is much easier to interpret.*



# IN ACTION



## NOT JUST THE LAST SUPERMARKET BEFORE CAPE YORK

Cairns is an 800-km drive away, 550 km on dirt, which doesn't deter tourists in the dry season, but in the wet you need to fly in or catch the barge from Karumba.

'All of our freight comes in by barge from Karumba,' says Ian Doig, Comalco's Surveyor who has lived in Weipa for 11 years. 'Especially our heavy equipment.'

Weipa, home to 2500 people, is the Western Cape's regional centre for health and education and is the hub of Comalco's bauxite-mining activities. Comalco-Rio Tinto ships 12 million tonnes of bauxite out of Weipa each year.

'And the fishing is fantastic,' says Geocomp Systems' Jerry Cresp. Jerry recently explored Weipa while working with Ian conducting Terramodel installations and training for Comalco.

### Extracting the product

Typically the topsoil is about 1.5 metres deep, and beneath the topsoil there is often a layer of waste material. Underneath these two layers is what Ian calls the 'mineable ore', lying 2-4 metres thick on top of an ironstone floor.

Ian explains: 'The mines are shallow open-cut pits. Extracting the bauxite is a fairly straightforward operation: no blasting or anything else, just digging it out with front-end loaders. A D11 bulldozer removes the top 2 layers using SiteVision.'

'Of course, the layer thicknesses vary and undulate,' says Ian. 'So we use drill-holes to locate the top of the mineable ore and enter this data into Terramodel to generate a digital terrain model.' Then it is transferred to the SiteVision system, which operates on the D11 bulldozer.

**'The D11s are massive. The blade itself is 2 to 3 metres high,' says Ian. 'Two 2-metre masts connected to the top of the blade carry antennas which transmit to the GPS receiver.'**

In the bulldozer's cabin, a computer running SiteVision is used by the operators who adjust the blade height.



Allan Glinster (Heavy Equipment Operator) beside a D11 Bulldozer equipped with SiteVision.

### A verdict from the crew

'We've tried a number of means: laser was our most scientific method to date. However, its restriction to planar surfaces meant that sometimes we were digging into the product and taking it off as waste or leaving waste behind.' Waste is pushed up and removed in trucks to refill other mined out areas.

**'SiteVision is much more accurate and gives us much better control over the operation,' says Ian.**

'We conducted an on-site trial in late 2000 and received lots of positive feedback from our operators who thought the system to be very user-friendly,' Ian concludes. 'Now that we have it running well, we are looking at expanding its use.'

### Meanwhile ...

Jerry Cresp has been sampling the mining operation. 'Some roads from the mine to the processing plant are 16 km long. The mine uses 13 Cat 7760 belly-dump trucks, each of which carries 150-tonnes of bauxite,' he explains.

'The haul roads are dirt freeways, 24 metres wide, and even these trucks can travel at 60 km/h.'

# IN PROFILE



## FROM CHRONOMETERS TO THE GPS

Ultimate Positioning has stayed at the forefront of technological developments ever since its origins making fine mechanical instruments. *Dimensions* recently spoke to Paul Bright, Managing Director of Ultimate Positioning which has distributed Geocomp Systems software in Queensland and New South Wales for 12 years.

'Our company has been in business for more than 100 years,' says Paul. 'Alphonse Herga began trading as a watchmaker in 1888 and the business became Herga Instruments Pty Ltd.'

The company has subsequently been run by three generations of the Bright family. It is now known as Ultimate Positioning, although some in Queensland know it as Herga Ultimate Positioning.

The company began selling and repairing survey equipment in the early 1900s, re-inventing itself several times to take advantage of new and emerging technologies and products.

Ultimate Positioning is now the agent for Trimble, Spectra Precision, Geodimeter and Nikon surveying and machine control equipment in South Australia, the Northern Territory and Papua New Guinea.

### Working closely together

Paul Bright explains the company's relationship with Geocomp Systems: 'We supply complete integrated solutions—hardware, radios, tripods and software. We work closely together because Geocomp Systems supplies software and support, such as Terramodel, which is integral to our broader systems.'

Ultimate Positioning's seven shareholders have a combination of business, survey and construction experience, and product, sales and local market knowledge. It operates on a 'profit share philosophy' with its full-time staff.



**Ultimate Positioning**  
Survey Laser & GPS Systems

## GEOCOMP SYSTEMS

2-6 Albert Street,  
Blackburn 3130  
Australia

Tel: +61 3 9877 8400  
Fax: +61 3 9877 8411

Email: [info@geocomp.com.au](mailto:info@geocomp.com.au)  
Web site: [www.geocomp.com.au](http://www.geocomp.com.au)

### Upgrade & Support Help Hotlines

For help with all queries about using our software.

We aim to respond to your call 95% of the time within 30 minutes, and 100% of the time within 2 hours.

Toll free: 1800 800 754 (in Australia)  
Email: [support@geocomp.com.au](mailto:support@geocomp.com.au)

8.30 am-6 pm EST every working day

### Products

Geocomp Systems supports:

GeoCalc	GeoNav	Geocomp
Terramodel	Visualizer	GCGeocode
Trenchwork	Paydirt	Sitework

*DIMENSIONS* is published quarterly by Geocomp Systems, Australia.  
Produced by QWERTYcommunications for Geocomp Systems.  
Cartoon by Dave Allen.

## VERSION ACTIVATION

Terramodel 9.82 now has version control, just like Geocomp has always had. This means that you can upgrade only those licences for which you have paid Customer Care Membership.

If the 9.8 upgrade code is not supplied with the CD, you can get your code from <http://www.geocomp.com.au/support/cc/tm98codes.html>.

If that doesn't work, contact Geocomp Systems.

When you install Terramodel 9.82, we suggest that you install it into C:\Trimble, or to a location other than where your previous Terramodel is installed.

This way you can continue to run either version.



*'I put in my licence number  
but it still doesn't work.'*