

DIMENSIONS

TERRAMODEL 9.6 HAS ARRIVED!

The latest improvements to this very powerful program make it even easier to use and customise. This means enhanced functionality all round.

Geocomp Systems are pleased to announce the latest release of Spectra Precision's TERRAMODEL Version 9.6. TERRAMODEL 9.6 is a significant step in building a uniquely powerful system that will automate every stage of a project, from conception to completion.

Geocomp Systems' role in Version 9.6 has been to modify the US version to suit international conditions and, more importantly, to add Geocomp-like functions to TERRAMODEL.

TERRAMODEL has been used for innovative site development work around the world and is available in modular "PAKS" for civil engineering, surveying and construction applications.

For information about TERRAMODEL 9.6, contact Geocomp Systems at www.geocomp.com.au or on 1800 800 754.

Reference files

This feature is important for companies who need multiple personnel to work on a project. It adds flexibility for storing and using data. By attaching a reference file from an existing project to a new project, you can view information in both projects simultaneously and can copy data from one to the other.

New DTM viewer

The 3-D digital terrain model (DTM) is now upgraded to TerraVista Lite which works in perspectives rather than simply in isometrics. The surface viewer lets you change the display of a surface in real time, using simple mouse movements.

Version 9.6 upgrades have been posted to all TERRAMODEL Upgrade and Support clients. With every copy we have included a list of TERRAMODEL Macro Language (TML) programs in the file TMLLIST.HTM. This list includes new, modified and otherwise unlisted TMLs.

The "snapshots" feature lets you create a high-resolution raster image of any particular scene, which you can import into a report, plot, print and present to your clients or co-workers for project visualisation and verification.

Improved image manager

The Image Manager has been modified so that a non-geo-referenced image can be registered to the project co-ordinate system using a process that will scale and rotate the image as needed.

Then you can automatically create plan and profile sheets with correctly oriented and clipped images.

New keystroke macros

New keystroke macros enable you to automate routine processes using a simple method. You can record and playback repetitive activities, adding to TERRAMODEL's already powerful customisation features.

A "snapshot" of a breakwater created in TERRAMODEL 9.6 using the new DTM, TerraVista Lite.

FROM THE DIRECTORS

Geocomp Systems' Paul Fulton recently represented us in a joint exhibition with Spectra Precision at the Penrith World of Entertainment, demonstrating the alliance between our companies.

Some clients have asked why an alliance is necessary, when we already develop our own software, such as Geocomp and GeoNav. The simple answer is that this arrangement means we can concentrate on doing what we do best: that is, innovative, high-end programming and support to clients.

The resource-hungry part of software development is taken care of by Spectra's Toolpak. This is the computation engine, performing all the routine work. It makes sense for us at Geocomp Systems to use our skills in innovation to refine these functions, and to rely on the operating system for the user interface.

By adding our talents to those at Spectra Precision we benefit from a combined world-wide development team of more than 60 staff. It means we can apply our specialist skills to a larger product range, and ultimately create more powerful solutions for our clients.

Brad Quick and Barry Smith
Directors, Geocomp Systems

INDUSTRY NEWS

WHAT'S NEW?



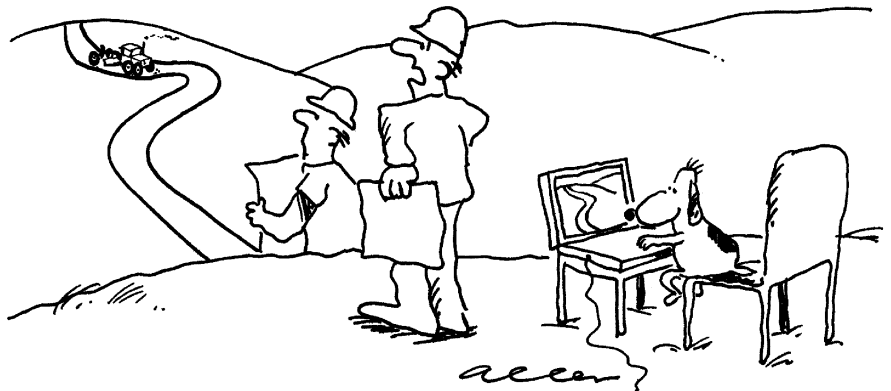
Those who saw the Machine Control BladePro 3D released in Australia at the recent Brisbane Truck and Machinery Show will have some idea of the direction that the construction industry is heading in.

Basically, BladePro 3D works like this: the grader driver has a display touch

screen in the cab connected to an interface system, and can see where the grader is in relation to the plan. The road design (from TERRAMODEL) is loaded into the interface using a standard data card.

The surveyor sets up an auto-tracking total station nearby and its radio transmitter communicates back to the interface in the grader. BladePro 3D compares existing X, Y, Z coordinates to design levels and automatically adjusts the hydraulics on the blade.

This means that stringlines, stakes and layout surveys will become ancient practice. It also means grade control in real time: no more waiting for a grade checker.



"Well, it beats me how that dog leg got in there!"

"Geocomp Systems ... Denita speaking"



Most of our clients can recognise Denita's greeting at the Geocomp Systems end of the telephone. But she's much more than a smiling voice: Denita can drive a 3-ton truck, has a forklift licence and is cool as a cucumber when a caller says "Help, my dongle is dead!"

In her past life, Denita worked for many years installing stage lighting rigs and managing the hiring of lighting equipment. A far cry from her present position: "I worked in a warehouse, freezing in the winter, 6-day weeks ... I used to dream about working in a climate-controlled office, 9 to 5, wearing suits!" she laughs.

Suits aside, she wears the pants when it comes to the Geocomp Systems AFL

footy tipping. "I'm an avid Carlton supporter and I run the competition here," says Denita. "We are all heavily involved in it and—it's a sore point—I'm winning!" The others mutter about a conflict of interest because Denita records the tips.

Dongles are another story. "I program the dongles and send out the activation codes. That's just one of the jobs I handle here, as well as the admin and book-keeping. It's really varied work and no two days are the same."

"I've actually met very few of our clients, but I've spoken to most of them. It's amazing how well you feel you can know someone just by their voice ..."

Is there anything Denita misses about lighting rigs? "Nothing."



“On fine days you’ll find me out in a boat on the Murray, fishing. For data, of course.”

This idyllic description hides the pressures behind the growing workload of Heinz Burlik, Manager River Services with South Australia Water’s River Murray Operations Unit, based at Berri.

Heinz is part of a team responsible for managing the flow of the Murray River and its associated structures.

“We manage and monitor the capacity of our water storage areas, the largest of which is Lake Victoria,” he explains. “Lake Vic’ is thought to be one of the largest Aboriginal burial sites in Australia. An archaeologist has worked there for 3 years and is still going.”

They also keep an eye on river bed erosion around structures like locks and dams. Of the 14 locks on the Murray, the RMOU manages 9 and 5 barrages at the Murray mouth. The lesson from Lock 26 springs immediately to mind:

“No one knew that there were holes in the river bed undermining the structure.”

Rebuilding the damaged lock cost \$40 million. The main problem was the lack of detailed knowledge of the river bed.

“Only spot depths were known, obtained the old way: drop a cable down, measure, log, hand-draw the maps,” says Heinz.

“It used to take 4 people a month to produce plans to the same standard above and below a structure,” Heinz remarks. “But now we can do it all in two days, just me, the boat driver ... and the computer.”

Heinz carries out his own “field” surveys and produces the maps in TERRAMODEL and TerraVista.

He is a recent convert to Geocomp Systems software, having switched over from another suite. Heinz uses GeoNav to map underwater land forms, and TERRAMODEL for the dry terrain.

“This software is much easier to use and its big plus is 3D modelling—good for



those who find contour maps difficult to read, like some of the tour operators who use the River.” But there’s one small hitch:

“Virtually everyone who sees what we produce with our software thinks of a new use for it.”

Heinz’s original assignment was to watch over the river bed above and below each structure, but now that his plans have been distributed, he’s been asked to map every storage area in SA. His Murray River work now includes projects like monitoring trouble spots for navigation and surveying creeks for environmental reasons. The unit’s “clients” include the Murray-Darling Basin Commission, on a project covering the full length of the Murray River over 3 states.

All of which gives him plenty to contemplate on those fine days afloat.



Coming up

Exhibitions can be an ideal forum for you to talk to us about your software requirements. Drop in and meet our staff for a personalised demonstration. Upcoming dates include:

Engineering Computer Hardware and Software Show
13–14 October
Melbourne Exhibition Centre

AIMEX
19–22 October
Homebush Bay, Sydney

For more information about either event, please contact Paul Fulton.

Web sites

Most professional groups now have a presence on the World Wide Web. Here are some sites to add to your files:

Assoc of Consulting Engineers
<http://www.acea.aust.com>

APESMA
<http://www.apesma.asn.au>

Consulting Surveyors Australia
<http://www.surveying.org.au>

Land Surveyors Reference Page
<http://www.lsrp.com/mainind.html>

Institute of Surveyors Australia
<http://www.isaust.org.au>



EXPERT ADVICE



Geocomp tips

Creating an easement or other parallel offset lines

An easement is usually represented on a plan as a dashed line parallel to boundary lines. To create the point where the dashed line bends use SDS 6.

Nominate three points on the boundary and enter the offsets. Offset directions are based on the order the points were selected. If the easement is terminating at a boundary, the offset is 0. If the Join Points toggle is on, the points will be strung automatically.

The **TERRAMODEL equivalent** is to draw a pline, using OffInt to locate the points. The offset directions are relative to the selected end of the segment.

Where the boundary is sequentially joined and the offsets are constant, use SDS 71 or OffsetDist or OffElev in TERRAMODEL.

More TERRAMODEL tips

Active alignment

When working on more than one road design, use the Active Alignment command to view data in the Profile View that only refers to one particular design alignment. Also use the Active Chainage command to detail a typical section in the XSECT view.

Coordinate scroll box

Set the number of decimal places displayed in your coordinate scroll box by adding the following line under the [CoordScroll] section in your TMODWIN.INI file:

```
CoordNdec=x  
(x is the number of decimal places).
```

GEOCOMP OPTIONS

Changing heights

- SDS 9 Enter a new height for a group of points.
- SDS 35 Shift a group of points by the same amount in x, y or z.
- SDS 123 Scale a group of points.
- SDS 185 Change to match a grade line.
- SDS 236 Interpolate from a DTM if no height.
- SDS 237 Interpolate new heights from a DTM.
- SDS 238 Shift height if below a DTM and write to FLD file.
- SDS 239 Shift height if below a DTM.
- SDS 240 Drop height by DTM thickness.
- SDS 254 Shift height and refresh contours.
- SDS 258 Set same height on contour strings.
- SDS 273 Display points with heights.
- SDS 274 Display points without heights.

Moving existing points to correct positions in 2D

- SDS 32 Enter new coordinates for an existing point.
- SDS 18 Move a point along a 3D line.
- SDS 33 Enter a new bearing or distance from another point.
- SDS 35 Shift a group of points by the same amount in x, y or z.
- SDS 37 Rotate a group of points around a single point.
- SDS 37 Transform a group of points where rotation, scale and shift are calculated automatically from control points.
- SDS 62 Bowditch adjustment of a traverse.
- SDS 120 Move group of points to a line.
- SDS 123 Scale a group of points.
- SDS 119 Square up an entity.
- SDS 124 Move ends of lines on to nearest point on another entity.
- SDS 161 Affine transformation (where shift is different in x and y).
- SDS 184 Drag a group of points.

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Upgrade & Support Help Hotlines

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

9 am – 6 pm EST every working day

For help with all queries about using our software, including:

- installation
- systems compatibility
- converting data
- applications.

2 hour response time

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

Staff

DIRECTORS Barry Smith
Brad Quick

SALES Sales Manager Paul Fulton

TRAINING/CONSULTING Jerry Cresp

SUPPORT Client Services Garth Coverdale
Engineers Bill Lazaris

OFFICE Office Manager Denita MacDonald

Products

Geocomp Systems supports:
GeoCalc GeoNav Geocomp
TERRAMODEL TerraVista
Trenchwork Paydirt®

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