

Dimensions

The past and the future

In 1981, Survey Computing Consultants (SCC) started at Melbourne University. Soon Brad Quick opened a tiny office in St Kilda Road Melbourne, with a DEC PDP 11/23 computer and an AI HP 7580 plotter.

'The software we wrote in-house to provide solutions became so popular that we began selling it as "Geocomp" and employing staff,' Brad remembers. 'Once we'd sold our software to clients we found that they rarely needed our consulting services but were keen to use our cheaper upgrade and support service instead.'

By 1987, Geocomp 5 was a DOS application running on state-of-the-art Intel 286 computers. An evaluation report from a road authority that selected Geocomp stated 'the time taken to form a 7500 point DTM was a not unreasonable three hours'. Geocomp is now up to version 10.08, somewhat faster, still DOS-based, and still being sold.

in 1987 ... 'the time taken to form a 7500-point DTM was a not unreasonable three hours'

'Some of our customers wanted a program that could handle very large data sets, better graphics and a multi-tasking environment,' says Brad. 'So we developed a Unix alternative.'



Townsville, north Queensland. Photo courtesy of the Townsville Bulletin.

'Then Windows became the preferred platform for our users rather than Unix or DOS.'

'We knew what our customers wanted, and found a 32-bit Windows product in the USA that would serve as our development platform. This was of course, Terramodel.'

SCC became Geocomp Systems and merged with Navigation Management Systems (NaMaSys). As a result, Director Barry Smith moved from Wollongong to Melbourne and we added GeoNav to our product list.

Time to head north

Four years ago, we opened our new Head Office in Blackburn, Melbourne. Now Barry is moving north to open a branch office in Townsville.

'This location in north Queensland will give our Asian and northern Australian clients greater access to our training and

development services,' says Barry.

'As well as being near to James Cook University, our base in Townsville gives us quick port access for trialling new hydrographic and navigation software systems. It also means we can offer better services and develop closer relationships with some of our major hydrographic clients based in this region,' Barry adds. 'More than 20 of our systems are based within 300 km of Townsville.'

'This is an exciting move for our company,' says Barry. 'And I'm looking forward to getting out on tropical waters again.'

You can phone Barry at 07 4755 0521 or email to Barry.Smith@geocomp.com.au

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UPDATES

TERRAMODEL IMPROVED



Terramodel 10.12 was distributed to subscribers last year. Geocomp Systems Director, Brad Quick, talks to *Dimensions* about the improvements to this popular, pioneering program.

The latest Terramodel refinements make it even quicker and more powerful.

‘These improvements continue to keep Terramodel at the forefront of land data manipulation and design,’ says Brad. ‘As well as UK English, it is now available in three major languages which means that, for the first time, professionals in many parts of the world can use the software in their first language.’

‘And we are very excited about the improved AutoDraft and the AutoDraft Editor, which I think are the best new features of this update,’ says Brad. ‘These functions automate what was formerly a complex, lengthy process and makes Terramodel accessible even to users who don’t have extensive survey training.’

‘The update contains a number of small changes to the software that will make a big difference to users. For example, you can now import and export ESRI shape files (.shp) which is the most common format for GIS data,’ he explains.

‘It enables Terramodel to transfer files to and from the latest Trimble survey equipment, and import data using Land.XML (land surveying format) which has been developed as a new standard for survey data transfer.’

Geocomp compatibility

‘The update also improves the program for our many users familiar with Geocomp coding,’ Brad says. ‘They can now by-pass the DOS data collector interface and stay within the Windows environment while downloading data, but still use their Geocomp feature coding and field coding.’ (Note that to do this, you might need to make some small changes to your survey technique, as described in the release notes.)

Terramodel 10.13 is being prepared for release now. It adds more data collector improvements and new TMLs.

Brad concludes: ‘We hope our subscribers enjoy these new functions and find the update simple to install. Please ask us if you need any advice.’

NEW FEATURES

- English, Spanish, German or French menus, help, manuals and aliases
- new look
- Remote Device Manager
- new import file formats
- new data collector import scripts
- Raw Data Editor improvements
- Geocomp field code support for AutoDraft Editor
- Geocomp menus
- new Geocomp symbol blocks
- Geocomp Data Collector Interface retained and updated
- Trimble and Geodimeter instrument changes
- updated roadway transitions
- more and updated TMLs
- surface smoothing in HDMS
- more depth-label weeding options

SURVEYING UNDER PRESSURE

In July 2002, news bulletins announced that nine men were trapped in a flooding mine in Pennsylvania, about 70 metres underground.

The miracle of their rescue is a story of GPS engineering and surveying expertise in action.

The situation in brief: miners breached an abandoned mine, releasing a flood into their shaft. Most of the workers fled, but nine were trapped. Those who escaped described which area they’d come from, but couldn’t tell where the remaining men had gone to get away from the flood.

Working from mine maps, rescuers located the section of high ground that the men would probably head for. With time running out for the miners, the rescuers decided to drill a 15 cm exploratory hole so they could pump air in. They chose a spot on the map.

Drilling the hole down would take hours, and with the added risk of hitting a nearby gas line, the accuracy of that the first hole was crucial. They had good maps of the mine, but then had to locate the spot on the ground above—an extremely difficult task.

Engineer technician Bob Long was summoned and he used Trimble equipment to make the crucial calculations to decide where to drill—this top-line system is accurate to better than a centimetre.

Once he had entered the data and coordinates, Long’s hand-held rover

guided him to a spot above ground where they then sank the first drill. If they had been even a metre out in their calculations they could easily have missed the tunnel and not realised for hours.

Within two hours, the drill broke through to the tunnel and the message was sent across the world that the miners were alive, hammering on the drill bit with their tools.

*From an article by Jeff Goodall.
To read the full story, go to
www.trimble.com/quecreek.html*





Field Data Module

While you can still use our traditional Geocomp DOS Data Collector Interface in Terramodel 10.13, you usually don't need it since the advent of our new, more powerful, fully Windows Field Data Module.

Once fully configured, you simply:

- 1 Download and import your survey.
- 2 Check your data in the Raw Data Editor (RDE) and edit or adjust if needed.
- 3 Join and label the points according to the feature code.

That's it: from survey to map in three commands. Of course, if there are problems with your survey, it'll take a little longer.

In setting up, the first step is to trial import a small typical file. Go to File... Download/Import... Import Script Manager. Scripts ending in `_i` are import only, `_d` download only and `_d+i` both.

The Import scripts that have names starting with 'Geocomp' can recognise Geocomp codes so if you're used to coding for Geocomp, start with one of these.

The Edit button leads to the script editor. Take a look at the preset values but don't change anything at this stage.

Importing

From the File menu, select Download/Import, then your Import script.

Once the Import script finishes, the RDE will open (if configured). This editor shows the raw survey data in a format you can edit and configure. The raw data, which is stored in the Terramodel project file, can be edited at any time.

Terramodel may be configured to prevent changing surveyed stations without the editor.

When the RDE window is closed, you can display your points. Identify some objects to confirm that the co-ordinate system and naming convention are correct.

Joining the points

Next run Draft/Automated Drafting from points. This joins points with sets according to field codes and places blocks, which may include scaled trees and attribute text, based upon the point

names and the AutoDraft configuration file which contains your feature code library.

Downloading

If you're not using a card for file transfer but are downloading directly into Terramodel via cable, you'll also need to create a download script.

Return to the Import Script Manager and create a new download-only script. When prompted for your instrument model, select it then "Add/Edit Devices" to choose the correct communication device for your instrument. Once you've mastered both the import and download scripts, you can make a new script that both downloads and imports.

Editing your script

In the final edit of your script, deselect the pages that allow you to configure variables that you don't want the script to prompt for, such as baud rate and default units. Also, hide scripts you won't be using by unticking them in the Import Script Manager.

In some cases you'll need to make changes to your survey techniques to take advantage of the new method. The process for uploading is similar.

Need to know more?

Once it's all going smoothly, you'll be impressed at how well the new tools act together. All this without even a security key!

Please ask us if you have any questions after reading the relevant sections of the Terramodel User Guide and Terramodel Field Data Module User Guide, both of which are included in the /Documentation folder of the installation CD.

EXPLORING PAYMENT OPTIONS

We are trying to make invoice payment as simple as possible for our clients, and we are asking for your preferences.

Currently, our clients can pay our invoices by:

- Cheques from Australian banks
- Visa, MasterCard and Bankcard credit cards by phone, fax or email
- Internet banking
- Telegraphic Transfer (TT) into our bank account.

TT is extensively used for international payments and by large companies with automated electronic payment systems. Many of our customers use internet banking to pay us already.

For TT and internet banking, you may need the following details about our account.

*Commonwealth Bank of Australia
Camberwell Branch
737 Burke Road Camberwell, Vic, 3124*

Phone: 03 9813 3422

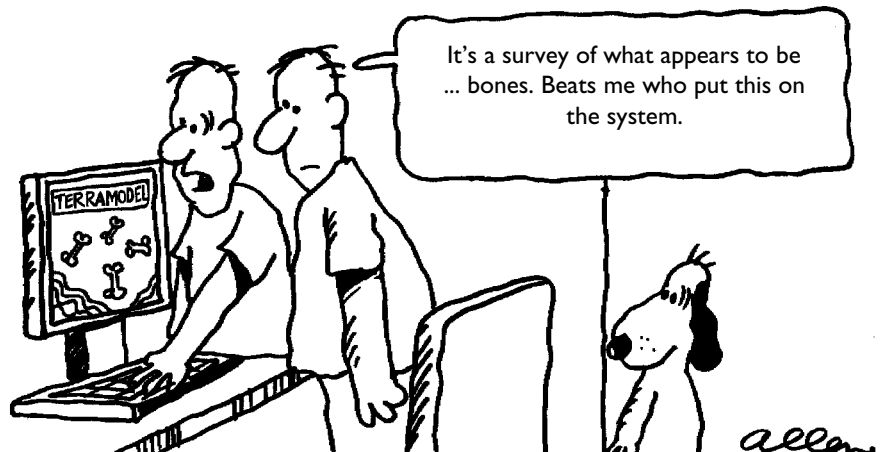
BSB: 063107 Account: 10101623

When you set up your payment, please include our invoice number and enough information in the description for us to identify you.

Another possible option

One common way to pay bills is through BPay or Australia Post. If we set this up, you could make secure payments via internet or phone through the Post Office or most Australian banks.

We would like to hear what you prefer before we decide to launch into this project, so please get in touch.



HELP AT HAND



If you want to know more about our software, our guides and training products might suit you.

The Terramodel 10.12 User Guide is available in two-volume spiral-bound paper format. The Field Data Module User Guide is available as a printed booklet.

We also have printed manuals for some of our add-on modules and other applications.

You can also order the set of three printed User Guides for AUD \$150.00 including GST and delivery within Australia. Please contact us to arrange an order.

To order printed volumes from outside Australia, please contact your local Terramodel distributor.

A3 colour plots from Geocomp!

We have discovered that the Lexmark Optra series of inkjet printers all support HP-GL/2. This means that they are ideal for use with Geocomp. Just configure Geocomp to plot to HPLaserJetA3 or A4 and you can plot colour directly from Geocomp. You no longer need to use a HP-GL/2 translator such as PrintCAD, a laser printer or large format plotter.

All of these Trimble Terramodel manuals are supplied as Acrobat PDF files in the \Documentation\en\ folder of the Terramodel 10.12 CD .

Type	Subject	PP
User Guide	Terramodel 10.12	663
User Guide	Terramodel Field Data Module	110
Instant Expert	Getting started using Terramodel	30
Instant Expert	Creating a contour map	24
Instant Expert	Grading projects	42
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Training Guide	Basic Terramodel concepts	36
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White Paper	Raw Data Editor least squares computations	46

In December last year we decided it was time to get Garth out of the office, so we sent him to Bhutan for two weeks, to deliver more Geocomp training for engineers in their Department of Roads. He brought back this photo of the historic cantilever bridge which was the only access over the river at Thimphu until comparatively recently.



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HELP HOTLINE

For Customer Care Members with 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

8.30 am–5.30 pm Melbourne time,
each working day

PRODUCTS

Geocomp Systems supports:
GeoCalc GeoNav Geocomp
Terramodel Visualizer GCGeocode
Paydirt Sitework and Roadwork

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