

Dimensions

Terramodel 10.20 includes new SideSlope

Since your last issue of *Dimensions*, Geocomp Systems has released Terramodel 10.13 and is now supplying 10.20.

Two significant new features allow Terramodel users to efficiently go about their work.

Take advantage of that mouse wheel!

If you haven't already got one, get a wheelie mouse. Then you'll be able to navigate around the display quickly to find and investigate objects using a simpler way to zoom and pan. For example:

- Rotate the wheel to zoom in or out (or up and down a drop-down list).

- Use the Ctrl key and mouse wheel to define the zoom rectangle.
- Pan by dragging with the mouse wheel.
- Re-centre with the Shift key and mouse wheel.

Sideslope command

The new Sideslope command is a powerful innovation for earthworks, landscape, dredging and site preparation contractors.

Sideslope provides tools you'll love in a single command for complex earthworks design and re-engineering.

Sideslope allows some design operations to be performed in minutes instead of hours, dramatically increasing productivity and reducing mistakes. See page 2 for more details.

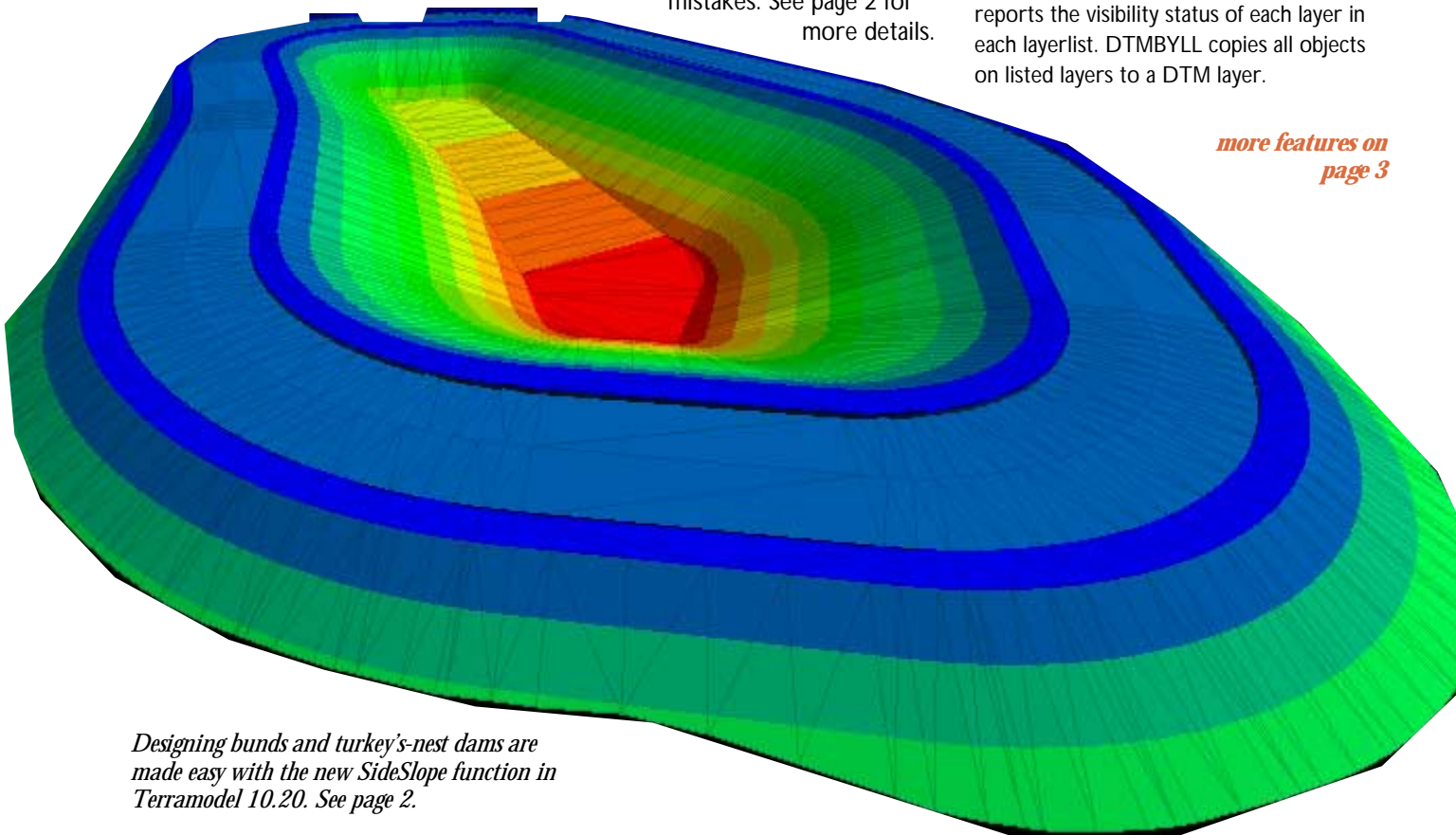
Other features

Manuals See the \Documentation\en folder of the CD for new, easier-to-follow documentation for the Field Data Module and Raw Data Editor. The Terramodel and FDM User Guides and the TML List are now installed with the Geocomp Update so you can select them from the Terramodel Help menu. You can also make a desktop shortcut to the TML List during installation.

Layerlists To encourage you to use LayerLists more often, we now include toolbar buttons for the LLISTSET and LAYLSET commands. LLISTSET controls the layers in the layer lists. LAYLSET makes layers in the selected layerlist visible, and other layers invisible. LLIST associates layer lists with dynaviews. GC32 reports the visibility status of each layer in each layerlist. DTMBYLL copies all objects on listed layers to a DTM layer.

more features on page 3

Designing bunds and turkey's-nest dams are made easy with the new SideSlope function in Terramodel 10.20. See page 2.



More uses for Sideslope

Sideslope helps Version 10.2 of Terramodel handle all types of surface engineering, mining, landfill and construction applications, including:

- Commercial, industrial and residential subdivision road schemes



- Lagoons and ponds
- Borrow pits
- Mine slope and bench schemes with access ramps
- Defensive bunds for noise, dust and visibility
- Utility trenches
- Dredge channels
- Rock coverings in pipe and cable laying marine operations
- Building pad designs
- Rock cuttings
- Landfill and mine restoration schemes
- Landscaping and golf courses



- Embankments and flood alleviation schemes
- Stockpile and storage mound designs
- Site cut and fill designs
- Earthwork dams

Updates

Sideslope

steps in

Sideslope is a significant new feature in Terramodel 10.20, with benefits such as:

Feature Allows both interior and exterior projection from closed polygon alignments.

Benefit Makes certain applications (including the design of lagoons, borrow pits, excavations and mine bench, batter and haulage ramps) faster, with fewer steps.

Feature Allows for the simultaneous projection of multiple offset lines and a sideslope to both sides of a selected alignment. Each sideslope can also be projected to a different reference surface.

Benefit Increased flexibility and simplicity. Fewer steps to complete the design and deliver better results.



Feature When generating the surface design, Sideslope uses construction tolerances through horizontal and vertical alignments to define the density of created point nodes.

Benefit Surface designs can be graded, staked or checked to construction tolerances with no rework or manual intervention on the data.

Feature Provides a surface manager for:

- 3D DTM surfaces
- level datum planes defined by datum elevation
- sloping planes with single point location, slope and slope direction
- sloping planes defined by three 3D points

Benefit Created surfaces stretch to infinity all round, guaranteeing design surface intersection. Eliminates the need for data or time-consuming operations to create temporary surfaces or datums. Improves productivity and versatility.

Websites

www.terraserver.com

Omni Resources is a major distributor of maps and globes, specialising in international mapping with maps for nearly all regions of the world. It has topographic maps at various scales, supplied direct from a computerised inventory of more than 100,000 maps.

Maps are listed by subject and by country. For example, for Hungary they offer maps on hiking, wine and railroads; cycling and angling atlases; and raised relief maps. This is in addition to maps of towns, geology, and pollution sensitivity.

www.heavens-above.com

This site aims to provide all the information you need to observe spaceflight and astronomical information and find out about spectacular events like the dazzlingly bright flares from Iridium satellites.

The site has detailed star charts tracking satellites. All pages are generated in real-time and are customised for location and time zone. Type in your location and the site lists times of visibility.

For purely astronomical info at your specific location, it has a whole sky chart, Sun and Moon data for the day, planet summary data, constellations, minor planets and comets.

www.ga.gov.au/download/

Geosciences Australia makes many maps and images available for free download. Topography, elevation, boundary, geology, satellite and geodetic maps are available, mostly at large scale. The maps are generally in PDF and the data can be imported into Terramodel using Shape files.

We invite Dimensions readers to send us your review (100 words) of a favourite survey or construction-related web site.

Expert advice

Filter superfluous points from a DTM

3DFILTER reduces large DTMs where much of the data is not significant. Common sources include photogrammetry, laser scanning and sonar.

3DFILTER can select points on spikes, points on similar grade, and points where removal would make insignificant changes to the volume.

The points are marked non-contourable. To reduce the size of the project, delete these points.

Price AUD\$950.00 + GST.

Related functions in 10.20

BLFILTER reduces points along a breakline set.

FILTER reduces vertices along a pline.

GC31 removes duplicate points.

DESPIKE removes spikes.

GC58 removes duplicate plines sets and text.

GC53 makes points non-contourable.

HDMS manages hydrographic depth labels.

ShapeMan

In Terramodel 10.20 Shape Manager, when you select the new option and the shape editor is displayed, the new shape is not the shape displayed. You must select the new shape from the shape list or you will be editing an existing shape.



"Do we accept smelly bacon bones as payment?"

(continued from page 1)

FLIPUP Copy selected objects from a plan view into an "Elevation" drawing in a selected view. The position of the point along the selected baseline determines the x-coordinate, and its elevation determines the y-coordinate. This is ideal for showing features on walls.

F8C Configure the symbol number and size for marking points using the F8 key.

GC82 Compute DTM areas by slope ranges within boundary. Within selected boundary polygons, compute the horizontal and surface areas of the DTM.

GCLABGRD More grid labelling options.

GCMATCH Edge match sheets of digitised contours. Create new contour segments across the gaps. Then JOIN to create contiguous contours.

GCONECON & GCMULCON Assign contour elevations by incrementing elevations to all the plines along a selected line.

GCRIVER Interpolate elevations from contours on to a digitised river.

GCRENUM Sequentially renumber points in selected sets, starting at the highest point number in the project plus one.

GCSKIPMN Edit, report, sort or import skip ranges.

SIGHTDST Create lines representing a driver's line of sight where limited by a DTM surface. From the resulting lines, you can see whether the design sight-line requirements have been met.

VRMLIN & VRMLOUT Virtual Reality Markup Language (VRML) defines 3D datasets that can be displayed in freely-downloadable viewers. Clients without any CAD software can look at models from any angle. This is a compact way to exchange DTMs.

VIEWSCAL The new Default for Pt Labels button computes a plan view scale so that text placed by F7 and F9 is about 2 mm high (assuming sheet units are cm and the screen is 30 cm).

ZOOMSCAL Zooms the display so the screen scale is approximately the specified value. This is similar to Geocomp option SDS 47.

TEXTARRO Creates a pline arrow around the text you enter.

For more details, see **Terramodel Help and the Release Notes. The TML LIST is available on the Help menu and at** <http://www.geocomp.com.au/support/terramodel/tmlist.htm>

More convenient bill payment

On your next invoice from us there are payment options of the type you are used to on your other bills.

Australian clients can now pay us in any of the following ways:

- send a cheque as before
- by Visa, MasterCard or Bankcard over the phone, at any time of day
- by internet from your bank account
- by phone using BPay
- by cash or EFTPOS at any Post Office.

International customers can pay by Visa or MasterCard, or by TT to Commonwealth Bank of Australia, Account 063187 10101623.

In Action

GRASS ROOTS REVOLUTION



'The more accurately you can map the land, the better you can manage it,' says Greg Hair, co-Director of Agwork Pty Ltd.

For surveyors, this is not a terribly profound statement, but for agricultural contractors Greg and Nicky Hair, it means a revolution in their services to Gippsland's dairy farmers. By incorporating the latest surveying techniques and software into their business, Agwork helps farmers to irrigate their lands more economically, with far-reaching environmental benefits.

Geocomp Systems created a module for Terramodel to plan the most efficient use of farm irrigation water. Spurred on by the module's success with groups such as wine growers in Bendigo and cane farmers in Queensland, Agwork adopted the software to use for whole-farm planning in Gippsland, Victoria.

Greg and Nicky Hair live in Briagolong, near Sale, eastern Victoria. For 20 years Greg's laser grading work has taken him to irrigation farms throughout the Macalister Irrigation District (MID). Four main rivers that flow through this dairy, beef and crop country flow into the Gippsland Lakes.

Dairy farmers irrigate their pastures by flood or spray irrigation, or both. 'On ungraded land, flood irrigation and eventual run-off are harder to control,' Greg explains. 'Laser grading aims to minimise run-off for two reasons: run-off water is lost potential productivity,

and it is nutrient-rich when it enters local waterways, contributing to environmental problems.'

'The more farmers know about their land, the better they can manage it.'

'For example, without firm details a farmer might estimate Paddock X to be about 15 ha and so apply a certain amount of phosphorous to it. However, if that paddock is closer to 12 ha in size, then they are applying too much. The excess usually ends up as run-off, eventually into the Gippsland Lakes.

'This doesn't help anyone—wasted money for farmers and bad for the environment. Our planning helps farmers manage properties sustainably.'

'Traditionally, farmers would laser grade a paddock or set up spray irrigation here or there, but didn't plan for the entire property. With Terramodel, we are now creating staged master plans they can work towards over a number of years.'

They gather data using standard survey techniques in a GPS unit. 'We pick up all the infrastructure—fences, gates, lanes, channels and drains, as well as natural elements such as topography, trees, streams and wetlands.'

'We feed the data into Terramodel and

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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

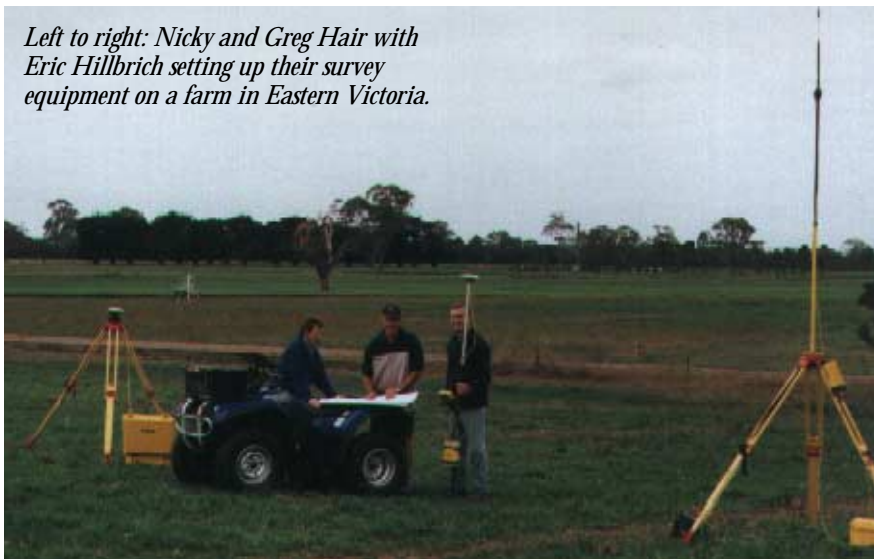
Geocomp Systems supports:

GeoCalc GeoNav Geocomp
Terramodel Visualizer GCGeocode
Paydirt Sitework and Roadwork

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Left to right: Nicky and Greg Hair with Eric Hillbrich setting up their survey equipment on a farm in Eastern Victoria.



sort it into layers so we can produce contour, paddock and feature maps for example, and then design options for both flood and spray irrigation, all at a range of scales. Very manageable.' Nicky comments.

'We use Terramodel to look at management options with farmers, to develop a system which will use water efficiently, manage run-off and dairy effluent, and protect environmental assets across the whole farm.'

'There is more milk produced in the MID than in Tasmania,' says Greg. 'Detailed farm mapping and planning has broad impacts: becoming more sustainable has environmental benefits throughout the Lakes region. It's a chain reaction, ultimately strengthening tourism and Gippsland's economy.'