



The Dirt Digger



Welcome...

to the July 2003 issue of the Dirt Digger. As per usual, we've been very busy and have much news to share!

We are excitedly planning the first International 12d Model Users Conference, to be held in Queensland in late 2004. Stay tuned for further information.

12d Model Version 6 saw the release of the Visualisation module, and we are now seeing images produced using this model in everyday use for checking projects and in public consultations. You may notice that this issue of the Dirt Digger is particularly colourful, as we have included magnificent images from Queensland Main Roads and Brisbane City Council. We have also added some images to the Visualisation section of our web site www.12d.com. Please let us know if you have any Visualisation examples which are available for public release.

In other big news, from July 1st this year, 12D Solutions has taken over from 4D Solutions as our marketing arm. 4D Solutions will remain as our R&D centre but the day-to-day interaction with our customers and distributors will be via 12D Solutions.

Connell Wagner has recently used 12d Model in an exciting, ground breaking project: the development of a new integrated community – Kelvin Grove Urban Village in Brisbane.

Our final piece of exciting news this issue is that our sales have increased so much that we have had to use the entire back page to welcome aboard new licenses/additions so we can catch up on *some* of the backlog. Please be patient if it takes a few issues for your company name to appear - we haven't forgotten you!

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International Users Conference 2004

In response to demand from our users, 12D Solutions is planning to hold its inaugural International 12d Model User Conference in Queensland, Australia next year.

It will run for 3 days in September/October. Both full-conference and daily registrations will be available.

If you are interested in attending or in giving a paper at the Conference, please email Jenny at jenny.dooley@12d.com.

We look forward to seeing you in Queensland next year.

12d Visualisation takes off!

With the addition of the Visualisation module, 12d Model is soaring to new heights in producing presentations.

Unfortunately many of the visualisation projects cannot be shown because of their confidential nature, but some work by Queensland Main Roads in the Macalister

Range has now gone out for public consultations, so we are able to include a few of the images in this issue (see p.3).

Brisbane City Council, who are beta-testing our bill board feature for road signs, provided the image on this page.

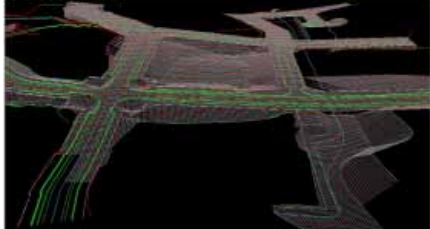
12D Solutions takes over from 4D

From July this year, 12D Solutions Pty Ltd will take over as the marketing/distribution arm of 4D Solutions, finalising the transition from 4d to 12d. Invoices sent from July 1 will be from 12D Solutions rather than 4D Solutions.

4D Solutions Pty Limited still exists but will only be involved in R&D.

Connell Wagner - Major Player in the Kelvin Grove 'Vision'

In the words of Queensland Premier Peter Beattie, the development of a new integrated community – Brisbane's Kelvin Grove Urban Village – is 'a vision for the future'. Connell Wagner has been an integral part of this vision.



Much of the Village is situated on the former Gona Barracks site and other areas. The Gona Barracks site was originally owned by the Department of Defence (DoD), whilst the balance area is jointly owned by both Queensland University of Technology (QUT) and Queensland Government, Department of Housing (DoH). The DoH and QUT are now redeveloping the total site, as a mixed use / residential precinct for retail, commercial, and university functions and accommodation with projects like QUT's Creative Industry. The project is the first of its type, designed to help integrate the university back into the community as part of QUT's philosophy of 'A university for the real world'.

The construction of the Village has been designed to have the smallest environmental impact possible and to preserve important cultural aspects of the site. Further design challenges the site posed for Connell Wagner (as Principal Consultant for the infrastructure delivery), included certain heritage areas, such as trees, buildings and open spaces on the upper parade ground area, which had to be preserved. In the early planning phase, the project team consulted with both the Turrbal Association and the Heritage Council, the outcome being a Cultural Heritage Management Plan. The project's aim is to create "a vibrant, new urban environment that meets the lifestyle needs of the community, but does not compromise the environment for future generations"¹, in keeping with the principles and practices of Ecological Sustainable Development (ESD).

Designer John Martin said, "The original site was extremely undulating with extensive existing infrastructure and contaminated material on the site, which had to be remediated by either removal or controlled burial on site."

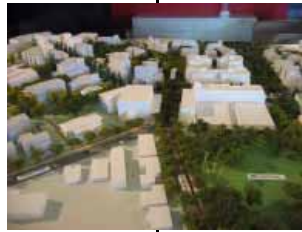
"One aim of the project was to make the streets as friendly as possible for disabled access, bicycles, etc – all the sorts of things you find in a new urban environment and at a university. The grading of the roads and the blocks has been critical in terms of the outcomes that were required for the project."

The project entailed major rework and many options. According to Mr Martin, "The fact that we were able to

turn around the options extremely quickly with 12d Model, often 'on the fly', was great. I'd sit at the computer with the landscape architect, the engineer on the job, the council planning officers, and the client, and shift things around on the screen so they'd be able to immediately see what was going on. It was simple!"

"Because of the nature of the site, we were repeatedly calculating cuts and fills. We also built a park (one of several) through the site, now called Kulgung Park. Going just from looking at plans and long-sections and such, it's quite hard to visualise what was happening. The fact that we were able to produce a quick perspective of what the finished site was actually going to look like, was extremely beneficial. Without 12d Model, we would have had a lot of trouble putting together something to show the layperson how the finished product would look at completion."

According to Principal project engineer, Mark Reardon, "One issue (of many) that the project had to resolve was the integration of the new storm water system into the existing storm water network. Because of the staging of the project we had to plan progressive links between the new and the old systems. Being able to hold all that information in the model was a great advantage. We serviced all the other design teams that were on the job with long-sections, cross-sections and contours and were able to do this very quickly."



"Another issue was remediation. The identified contaminated areas were logged and we then created a number of different layers to show where the contaminated areas were in both plan and sectional view. We used these sectional views to display what was going to happen in the future and how deep under the finished surface the contaminated material would be. We had to prove this to the Department of Defence as part of a sales agreement. Additionally we had to show where residential areas, in particular the building footprints would be in relation to remediated areas to settle an argument they had in terms of getting the site removed from the Environment Protection Agency's EMR (Environmental Management Register). 12d Model was invaluable for this."



"Brisbane City Council was also very happy with our procedure of using 12d Model to demonstrate the finished surface. In fact, that was one of the reasons we got the approval. Their two major concerns were predicting the appearance of the finished product and ensuring public safety in the future. Because we could get down on a visual plane and give relative heights, we could illustrate these aspects with confidence and alleviate concerns."

"Overall, everyone was pleased with the project outcome. It's currently being constructed and we're almost out of the ground now." The project is scheduled for completion in August 2003, with the QUT's Creative Industries Project due to open its doors for students at the start of the 2004 academic year.

1. Quotation from 'The Urban Village' brochure pack by Queensland Government Department of Housing and Queensland University of Technology.

Kennedy Highway - Qld

Q ueensland Department of Main Roads is working on the preliminary design for the upgrade of 12 kilometres of the Kennedy Highway which travels west from Cairns to Kuranda and on to Mareeba, linking the coast to the tablelands.



Passing over the Macalister Range and through the Wet Tropics World Heritage Area, Queensland Main Roads has created a virtual fly-over and drive through and selected views of the new highway for the first half of the project, which includes 28 of the 34 bridges.



The original terrain was constructed from laser airborne scanning (LIDAR data) from a helicopter and then aerial photos were draped over the resulting triangulation to realistically represent the existing scene.



The concept design of the new highway was done in 12d and the bridges modelled using super strings. Roadside barriers and vegetation were also modelled in 12d to give a

realistic impression of how the road and surrounding area would look after the completion of the project and regrowth occurred.



The creation of the drive through for the final section of the highway is currently under way.

The Kennedy Highway images and other selected images produced by the 12d Model Visualisation module can be found on our web site www.12d.com under Visualisation.

Top sales & support

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D Solutions is committed to providing not only the best surveying/civil engineering software on the market, but also the best service and support. Expert sales support is available from:

- Tony Ingold** at Extra Dimension Solutions in NSW
tingold@12d.com Ph. (02) 9970 7117
- Maria Bernhagen** at Critical Image in WA
critical.image@hutch.com.au Ph. 0411 601 066
- Steve Crossley** at SCS Software in Vic
steve911@bigpond.net.au Ph. (03) 9802 8849
- Ian Cameron** at Technical Solutions in Qld
techsol@tpgi.com.au Ph. (07) 3378 8702
- Michael Brehmer** at 3D Measurement Solutions in SA
mb@3dmeasurementsolutions.com.au Ph. (08) 8212 9300
- Richard Worrow** at Waterman IT in UK
r.j.p.worrow@waterman-group.co.uk Ph. (020) 7902 0958
- Lane Irwin** at 12d NZ in NZ
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- Phil Davies** at Sokkia in Singapore
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- Kevin McConell** at Lukemine Enterprises in Fiji
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For further details on our sales and support representatives, see our website www.12d.com

Welcome aboard - extended!

Sorry, but due to lack of space, many of our new licenses/ additions must still be left until the next Dirt Digger!

Abigroup – Qld, Vic
 Agus Development Corporation – SNG
 Al Futtaim Tarmac Dubai – UAE
 Alan Huntley - SA
 Alexander Browne Cambridge & Partners – Qld
 Alistair Tennant – SA
 Ardhi Institute – SNG
 Arup - Qld
 Baseline Consulting – Qld
 Baulderstone Hornibrook - NSW
 BPA Engineering Pty Ltd - WA
 Brisbane City Council – Qld
 Bundaberg City Council – Qld
 Burchill Partners Pty Ltd – Qld
 Buro Happold (Bath) - UK
 Cardno MBK – Qld
 Christchurch City Council – NZ
 Civil Dimensions Pty Ltd – Qld
 Clark Fortune McDonald and Associates Ltd – NZ
 Coffs Harbour City Council - NSW
 Cogswell Surveys Ltd – NZ
 Colin Ashby Consulting Ltd - NZ
 Connell Wagner – NSW, Vic, SA, Qld, NZ
 Coomes – Vic
 Cossill and Webley – WA
 Dalrymple Shire Council – Qld
 Dalton Consulting Engineers – Vic
 de Groot and Benson - NSW
 Department for Planning and Infrastructure – WA
 Design Partnership Ltd – SNG
 Direccao dos Servicos de Cartografia – China
 Earth Tech Engineering – Qld
 Electro Net Services Ltd – NZ
 Envisors LLC – USA
 Fiji Institute of Technology – Fiji
 GHD Pty Ltd – Qld, ACT, NSW
 Glenn Allen – NT
 GPS IT Ltd – NZ
 Harrison Civil Surveys - SA
 Henwood Consulting Engineers – Qld
 horizons.MW - NZ
 Imperial College (London) - UK
 IPEX ITG (for DOD Army) – NSW
 Ipswich City Council – Qld
 Jacobs Gibb (Reading) - UK
 Jeff Mouldsdales & Associates – NSW
 John Alexander Surveys – NZ
 John Wilson and Partners – Qld, NSW
 Jones Flint & Pike Pty Ltd – Qld
 Joto Designs Pty Ltd – Qld
 Julian Brotherton & Partners Survey Ltd – UK
 Kellogg Brown and Root – Qld, WA
 Kevan Burnett - SA
 Khansaheb Civil Engineering – SNG
 KLM Development Consultants – Vic
 Kodi Engineering - SNG
 Kolej Universiti Teknologi Tun Hussein Onn – SNG
 KPD Group – Vic
 Kumpulan Jayaputera Sdn Bhd – Malaysia
 Kuwait University – Kuwait
 Landmark Surveys – NSW
 Lands & Survey Ltd – NZ
 LAO PDR – SNG
 Larson and Tubro Muscat – Oman
 Lawson Treloar - Vic
 Logan City Council – Qld
 Lyall & Associates – NSW
 McWilliam Consulting Engineers – Qld
 Mahoney Consulting - NZ

Main Roads - WA
 Maroochy Shire Council – Qld
 Maryborough City Council – Qld
 Maunsell – SA, Vic, NSW
 Max Padovan & Associates – Qld
 MCM Design and Management – Vic
 Mid Murray Council – NSW
 Millar Merrigan – Vic
 Ministry of Agriculture, Food, and Natural Resources – Mauritius
 Ministry of Irrigation – SNG
 Mortons Urban Solutions – Qld
 M/S Sunder Trading Company – Pakistan
 M/S Technical Engineering Services – SNG
 National Institute of Ocean Technology – SNG
 National Survey Authority – Department of Defence – SNG
 Native Land Trust Board – Fiji
 Newcastle University – UK
 Noosa Shire Council - Qld
 NSW National Parks and Wildlife – Vic
 Oldfield Group Holdings Ltd – NZ
 Ove Arup – NSW
 Pacific Survey Teams – NSW
 Parsons Brinckerhoff – NSW
 Paterson Pitts Partners Ltd – NZ
 Patterson Britton & Partners – NSW
 Peak Downs Shire Council – Qld
 Pemba Kabupaten Kutal Tenggara – SNG
 Peter Leversedge – Qld
 Philip Conway Surveyors Ltd – NZ
 Pine Rivers Shire Council – Qld
 Pipeline Construction Services – NSW
 Pirie Surveying Ltd - NZ
 Planright – Vic
 PMM Group – Qld
 PPK – NSW, Qld
 Project Services – Qld
 PT Berau Coal – Indonesia
 PT Kitadin Site Embalut – Indonesia
 PT Rental Perpada Putratama – Indonesia
 PT Smart Tbk – Indonesia
 PT Tambang Batubara Bukit – Indonesia
 Qld Main Roads (Design) - Rockhampton, Water (No. 132) - Qld
 Qld Main Roads (Survey) - Brisbane, Nerang, SE Survey, SE M (TP) Metro - Qld
 Queensland Parks and Wildlife Services – Qld
 Queensland University of Technology (Survey) - Qld
 RMS Surveyors Ltd – NZ
 Road Services Coleraine – Ireland
 Roads and Traffic Authority Grafton – NSW
 Robinson GRC – NSW, ACT (WP Brown ACT)
 Rowen Meyer & Associates – Qld
 Sam Beasley Surveyors – NZ
 Sandland Consulting – SA
 Sinclair Knight Merz – NSW, Qld, WA
 Singleton Bahen Stansfield – Vic
 State Administration of Geodesy and Cartography – Mongolia
 Steve Shealey – USA
 Surf Town Pty Ltd - Qld
 Swan Surveys - WA
 TGM Group – Vic
 TH Technologies Snd Bhd – Malaysia
 The Sachal Construction – Pakistan
 Toowoomba City Council - Qld
 Transport Construction Design Enterprise – Ethiopia
 Trevere – WA
 Uli Schneider – NSW
 University of Auckland – NZ
 VSL Hong Kong Ltd – Hong Kong
 Waterman Burrow Crocker – UK
 Weathered Howe – Qld
 Wollongong City Council – NSW
 Wood and Jepsen Consultants – Fiji
 Wood & Partners Ltd – NZ
 WP Brown – Qld, Vic, ACT