



News from
12d Solutions



The Dirt Digger



Welcome

...to the **June 2018** issue of the **Dirt Digger**. We're nearly halfway through another year; can you believe it? This edition will feature:

- **Product Updates**
- **12d International Innovation Awards 2018**
- **Two new 12d training options - BIM and ARR 2016**
- **The Surveyor's role into the future**
- **12d International Technical Forum 2018**

We look forward to hearing any feedback or news you might have.

Regards,

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Product updates

12d Model 14 will be a huge release for us (Technical Preview at the Tech Forum)! It will include updates in these areas:

- Model tree
- Project settings
- Civil BIM and IFCs
- Combined 12d Field
- GDA2020
- ARR 2016
- Point clouds
- Multipage Plots
- MTF on steroids
- Attribute Manipulator
- Setting out BIM
- 12d View

12d Synergy 4 will also be showcased at our Technical Forum in July! Thank you to all our beta testers who have been busy putting the new version through its paces. We look forward to showcasing such features as:

- CAD functionality
- Workflows
- Spatial Search
- Advanced reporting

We have welcomed many new customers in the last six months, on great projects such as:

- Perth Metro (WA)
- M1/M3 (Qld)
- Westgate Tunnel (Vic)
- Easing Sydney's Congestion

We would also like to take this opportunity to welcome new 12d Synergy team members Shane Machon (Marketing Coordinator), Dov Goldenthal (Testing), and Giovanni Samia (Technical Support).

12d International Innovation Awards 2018

Good luck to all our entrants - the judges are very impressed with your efforts, and we can't wait to showcase the entries at the Technical Forum!

The 12d International Innovation Awards (\$17K prize pool!) will be presented at the Gala Dinner.

2018 Innovation
Awards Sponsor



And in the next round of exciting news...Calibre has come on board as our official Innovation Awards 2018 Sponsor! We're so pleased to be welcoming you as an integral part of our event!



2016 Winners

BIM and ARR 2016 training

We've added a new training course - BIM - into our already extensive suite of training on offer! We will also be adding a section on ARR 2016 to future Water training! [Enquire](#) for more details.



The Surveyor's role into the future

Australian Surveyors, and our spatial industry as a whole, are very advanced and have readily adopted state-of-the-art data capture equipment, methods, and management.

However, new technologies are enabling non-surveyors to capture data and information. This is a dangerous situation, and one that requires careful monitoring to ensure the supplied spatial data is 'fit for use'. For example, with the advent of drones, scanning and BIM, often a flat earth approach is used. On a small scale such as a building structure, this is sufficient, but when looking at data on a regional scale, this approach falls short. Surveyors are trained to ensure that all such data is 'fit for purpose'. That is, the surveyors are trained to be the 'data certifiers'.

Today's data is no longer simply x,y,z coordinates, but now encompasses alignments, strings, services, surfaces, point clouds, and 3D models. Plus an ever-increasing amount of metadata and attributes, and QA information. In the future, all projects – design, construction, QA, As Constructed - will be totally digital and supplied to all clients, agencies and authorities as the one point of truth. Paper plans will only be a method of examining the digital data. The development and use of open standards such as ADAC and IFCs will help make this possible. With their background in handling such a variety of data, surveyors are the perfect 'data managers'.

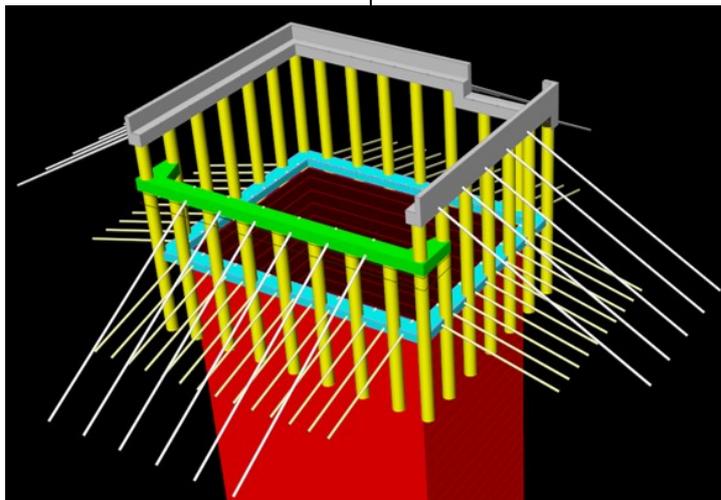
There has been a rapid move to using full Windows Tablets instead of Windows CE devices for use with all survey equipment, and this means that the modern surveyor can have just the one computer and operating system to merge historical, current and future survey data rather than the data being locked away in silos. The office software can now truly be the field software so that everything is easily integrated.

Some software companies such as 12d Solutions saw these trends and added 12d Field modules to the

existing 12d Model software rather than making a plethora of separate programs. This means that ALL the options within 12d Model are available to the surveyor, not just some arbitrary subset. For in today's world, it is impossible to know what a surveyor may be called on to do.

The NorthConnex tunnelling project in Sydney (NSW) is an excellent example of cutting-edge technology being used right now.

With the use of 12d Field and Leica's MS50 and MS60 scan stations, the project's surveyors are delivering



previously unheard-of time savings in capture and subsequent QA reporting of the tunnel excavation. This project has 19 road headers (tunnelling machines) running simultaneously. 12d Model with the 12d Field module provides the tools to create the tunnel surface using Trimeshes for solid and surface modelling. The scanned excavated or

finished tunnel sections are captured live into 12d Field, providing the contractor with live information for areas requiring rework, QA reporting, and as-constructed point clouds with rich attribute information. All survey data for the project is managed through the 12d Synergy data management system – another way in which the industry is rapidly changing, using data collaboration solutions. This is an intensely demanding environment for surveyors and tunnellers alike, but with 12d Software tools and the latest scanning survey equipment, a mammoth task has been made surmountable.

It is clear that the role of the Surveyor in the future will continue to evolve, as it has over the past 30 years. We've gone from field books and notes to large point cloud data sets. But the common theme is to manage and supply certified data to the industry. And with products such as 12d Model and 12d Synergy, Surveyors will continue to help users manage existing and future digital formats as they arise. So the future for Surveyors is very bright indeed. The sky is, in fact, not the limit!

—by Graham Wirth

12d International Technical Forum 2018

Introducing...the 12d International Technical Forum! We received feedback suggesting that calling our big biennial event a 'Conference' doesn't adequately capture how very technical the sessions are, and just how much information is packed into those three days! So we decided to give it a new name to better describe just how full your brain is going to be by the end of 31st July...join us for the best value 12d learning experience we can offer, in Brisbane, this July!

Registrations for this event have been flying in! In case you haven't heard, Dalton Consulting Engineers has come on board as an official Sponsor! We're so excited to have them back on board, as well as Calibre, and of course our official Media Partner, Position Magazine/ Spatial Source!



[Register](#) today if you haven't already!

At this 3-day event, 12d Solutions will be highlighting the new features in 12d Model 14 and 12d Synergy 4, and more! We will continue the popular 'Birds of a Feather' breakout sessions on Design, Surveying, Three Waters, and 12d Synergy.

This event will be an invaluable learning and networking experience for users of 12d products and other industry professionals, in all areas of civil design, surveying and construction, and data management and project collaboration.

The 12d International Technical Forum offers:

- A great opportunity to develop your 12d Model/12d Synergy skills
- The ability to interact with the developers of 12d products
- The chance to network with, and learn from, other 12d users

Pricing

The Full Technical Forum Package for \$800 +GST includes:

- Welcome Event (Add Guest for \$95 +GST)
- Gala Dinner* (Add Guest for \$200 +GST)
- 3 Full Days of Technical Forum Main Sessions
- 'Birds of a Feather' Sessions
- Morning/Afternoon Tea Breaks and Lunches
- 12d Polo Shirt and Other Goodies!

*Includes 12d Innovation Awards 2018 Ceremony

Day passes also available - [contact](#) us for details. Please note we can now accept credit card payments online for this event.

Dates Sunday 29th, Monday 30th and Tuesday 31st July 2018

Venue Brisbane Convention and Exhibition Centre

(BCEC) – Boulevard Level (Grey St)

And don't forget...all delegates of the 2018 Technical Forum with licences on Maintenance will be eligible to receive a Technical Preview Version of 12d Model 14!



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OTHER REGIONS

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Welcome Aboard to our New Licences and Upgrades from...

12d Model

3D Surveys – SA
 360 Surveying – NSW
 Aarvee Associates – Qld
 Ace Contractors Group – Vic
 Acor Consultants – NSW
 ACT Civil Surveys – ACT
 Active Survey – NZ
 Adamson Shaw – NZ
 ADG Engineers (Aust) – Qld
 Advanced Surveys Australia – Qld
 Advantage Civil – WA
 ADW Johnson – NSW
 AECOM – NSW, Qld, WA; China
 Affinity Surveys – NSW
 Afflux Consulting – Vic
 Airey Consultants – NZ
 Alexander and Symonds – SA
 Alliance Surveying – WA
 Arney – Vic
 Andrew Ackerman – WA
 Arc Infrastructure – WA
 Arcadis – NSW, Qld; Middle East
 Arkhill Engineers – NSW
 Arman Larmer Surveys – Qld
 Arup – NSW, Qld
 asBUILT – NZ
 AT & L – NSW, Qld
 Aurecon Australasia – Qld
 Auspat Australia – NSW
 Australian Utility Solutions – NSW
 Babbage Consultants – NZ
 Barker Ryan Stewart – NSW
 Beca – NZ
 Bennett + Bennett – Qld
 Beveridge Williams – Vic
 Beyond – NZ
 BG & E Consulting Engineers – NSW, Qld,
 Vic, WA
 BG Group NT – NT
 Birch Surveyors – NZ
 BMD Group – Qld
 Bonisch Surveyors – NZ
 Bouygues Construction – NSW
 Breese Pitt Dixon – Vic
 Brisbane City Council – Qld
 Buro Happold – UK
 Calibre – NSW, Qld, WA
 Callaghan and Toth – Qld
 Cameron Gibson Wells – NZ
 Candor3 – NZ
 Canterbury Bankstown Council – NSW
 Capital Consulting Engineers – NSW
 Capricornia Services – Qld
 Cardno – NSW, Qld; NZ
 Cato Bolam Consultants – NZ
 CB Constructions – Qld
 CCL Construction Contracting – NZ
 Centreline Surveying – NSW
 Charters Towers Regional Council – Qld
 Cheal Consultants – NZ
 Churchill Land Development Services – NZ
 City of Gold Coast – Qld
 Citywide Service Solutions – Vic
 Civil Dimensions – Qld
 Civil Site Services – NSW
 Civilex – Vic
 CivilPlan Consultants – NZ
 CKL Surveys – NZ
 Coastal Civil Designs – Qld
 Cogswell Surveys – NZ
 Compton Consulting Services – UK
 CPB Contractors – NSW, Qld, Vic, WA; NZ
 Craig and Rhodes – NSW, Vic
 Creo Consultants – Vic
 Crilly Surveys – Qld
 Cuttriss Consultants – NZ
 D & C Civil – Qld
 D & M Consulting – NSW
 DA Surveying – NSW
 Dalton Consulting Engineers – Vic
 De Witt Consulting – NSW
 Degotardi Smith & Partners – NSW
 Delfs Lascelles Consulting Surveyors –
 NSW
 Dempsey Wood – NZ
 Dennis Price and Miller – Vic
 Department of Buildings and Government
 Architect – Fiji
 Dept of Defence (Army CISSO) – ACT
 Dept of Transport & Main Roads – Qld
 Development Nous – NZ
 Dixon Homes – Qld
 DMC QLD Consulting – Qld
 Downer – NZ
 DTS Group QLD – Qld

Durkin Construction – NSW
 East Bay Surveyors (2014) – NZ
 East West Engineering Surveyors – NSW
 EDM – WA
 Elite Survey – NSW
 Engineering Design Consultants – NZ
 Engineering Surveys – SA
 Engineers Plus – Qld
 Environment Canterbury – NZ
 ESO Surveyors – NSW
 Essential Survey Services – NSW, Qld
 Farrelly Construction Services – NSW
 Ferroval York JV – NSW
 Fifth Generation Mining – Qld
 FJA Consulting Engineers – NSW
 Flanagan Consulting Group – Qld
 Flat Out Surveying – Vic
 Fletcher Construction Company – NZ
 FORM Engineers – Vic
 Formosa Construction – NZ
 Fortesque Metals Group – WA
 Friedman Wilson Surveying – Qld
 Fulton Hogan Group – NSW
 Fyfe – Qld
 Gandy and Roberts Consulting Engineers –
 Vic
 Gassman Development Perspectives – Qld
 GCA – NSW
 GenEng Solutions – Qld
 GEO Image Services – NSW
 Geodezia Survey and Spatial – NSW
 Geosurv – NSW
 GeoSync – NZ
 GM-CCS – Qld
 Grant and Cooke – NZ
 GT Survey – NZ
 Hadley Consultants – NZ
 Hager Drafting – NSW
 Hail Consulting – NZ
 Halls Frupp Surveying – Qld
 Hardy Bros Mining and Construction – NSW
 Harrison Grierson – NZ
 Harrison Infrastructure Group – Qld
 Hawkesbury City Council – NSW
 HDR – Qld
 Henry and Hymas – NSW
 Higgins Contractors – NZ
 Hobart City Council – Tas
 Holmes McLeod Consulting Engineers –
 Qld
 Hugh Bahnert – NSW
 i-civil consulting – WA
 Insight Survey – Qld
 Integral Surveys – NSW
 J. Wyndham Prince – NSW
 Jacobs Group – NSW, Qld, Vic, WA
 JCA Land Consultants – Vic
 JDSi – WA
 JJ Barber Holdings – NZ
 JJ Ryan Consulting – Qld
 JMC – NZ
 Jones Nicholson – NSW
 JRG Civil – Qld
 KA Civil Design – NZ
 Kaymak Survey – Qld
 Kellogg Brown and Root – Qld
 Keystone Survey – NSW
 King and Campbell – NSW
 Klohn Crippen Berger – Qld
 KR Surveys – WA
 Laing O'Rourke – NSW, WA
 Land Matters Property Consultants – NZ
 Land Surveys No Problems Just Solutions –
 NSW, Qld, Vic, WA
 Landform Surveys – NZ
 Landforming to Perfection – Vic
 Landmark Surveys – NSW
 Lands and Survey – NZ
 Larsen and Toubro – India
 LD Eng – Vic
 Lend Lease Bouygues JV NCX – NSW
 Lend Lease Construction and Infrastructure
 – NSW
 Lend Lease Engineering – NSW, Qld, Vic
 Linke and Linke – NSW
 Liverpool City Council – NSW
 Local Government Engineering Services –
 NSW
 Locaters – NSW
 LogiCamms – Qld
 LOM Engineering – WA
 Lonergan Surveying – ACT
 LPD Surveys – WA
 Lysaght Consultants – NZ
 M J Hannam – Qld
 MAAS Group Properties – NSW
 Mach 1 Contracting – NZ

Macro Consulting Surveyors – NSW
 McCormick Rankin Cagney – Qld
 McKenzie & Co. Consultants – NZ
 Malcolm Smith – NSW
 Marlborough District Council – NZ
 Martens & Associates – NSW
 MCG Drafting – NSW
 Measured Land Surveys – NZ
 Menai Civil – NSW
 Meridian Surveying Services – Qld
 MG Solutions – NZ
 MIEngineers – NSW
 Milestone Spatial – Qld
 Millar Merrigan – Vic
 Minesa – Sociedad Minera de Santander –
 Canada
 MinStaff Survey – Qld
 Mitchell Swaney – NSW
 Mott MacDonald – NSW, NZ
 Mouchel Australia – NSW
 MPF Surveying – NSW
 Murphy Pipe and Civil – Qld
 MVR Surveys – SA
 Napier City Council – NZ
 NCTIR Alliance – NZ
 Neil Construction – NZ
 Neilly Group – Qld
 Nelson Surveys – SA
 Newton Denny Chapelle – NSW
 Nicholson Surveying – NZ
 Norris Clarke and O'Brien – Qld
 Northern Hills Drafting – Qld
 NorthGroup Consulting – Qld
 Northrop Engineers – NSW
 NorthSurv – NZ
 Nova Surveys – Qld
 O'Neill Group – Vic
 Onyx Projects – NSW
 Orange City Council – NSW
 Orion Consulting Engineers – NSW
 Orogen – NZ
 O'Sullivan Surveys – Qld
 Oxley & Co. – Vic
 Pacific Survey – NSW
 PanAust – Qld
 Paterson Pitts Partners – NZ
 Patson & Associates – Fiji
 Paul Jacuba – Qld
 peakURBAN – Qld
 Penrith City Council – NSW
 Pensar – Qld
 Pidd Atkinson Architects – NZ
 Pitt and Sherry (Operations) – Vic
 PLANIT Engineering – NSW
 PLC Consulting – Vic
 Port Macquarie-Hastings Council – NSW
 Porter Consulting Engineers – WA
 Positive Survey Solutions – NSW
 Premise Group Services – Qld
 Pritchard Francis – WA
 Procivil Consulting – Vic
 PT Indosat – Indonesia
 PT Pama Persada Nusantara – Indonesia
 Public Transport Authority – WA
 Quadrant – NZ
 QT Vietnam Consulting and Design
 Company – Vietnam
 Quintec – NSW
 R2 Consulting – NZ
 R.A.S. Engineering Surveys – Qld
 Raster Co. – NZ
 Regional Management Group – Vic
 Reid Surveys – Qld
 Results Based Surveying – NSW
 Reyburn and Bryant – NZ
 RGH Consulting Group – NSW
 Rhelm – NSW
 Rider Levett Bucknall – Qld
 Rio Tinto – WA
 Roads and Maritime Services – NSW
 Robert Bird Group – NSW, Qld
 Rod Young – NZ
 RPS – NSW, Qld
 RTN Drafting Services – Vic
 RW Surveys – NSW
 Salini Impregilo (NRW JV) – WA
 Schick Civil Construction – NZ
 Scope Surveying – NSW
 SCP Consulting – NSW
 Shadforth Civil Contractors – Qld
 Shawmac – WA
 Shire of Broome – WA
 Simon Palmer – Vic
 Siris Consulting Engineers – Qld
 SKS Surveys – SA
 SMEC – NSW, Qld, Vic, WA
 Southern Land – NZ

Spiire – Vic
 SportEng – Vic
 Spyve Surveying Solutions – NSW
 STA Consulting Engineers – Qld
 Staig and Smith – NZ
 Stamm Surveys – NZ
 Stewart Group – NZ
 Storm Surveying – Vic
 Subtera Subsurface Locating – WA
 Sunstate Engineering Surveys – Qld
 SurDevel – NSW
 Sure Search – NSW
 Surex – NSW
 Surf Town – Qld
 Survey 3D – NSW
 Survey Dynamics – WA
 Survey Dynamics Group – Qld
 Survey Group – WA
 Survey Management Solutions – Qld
 Survey Worx – NZ
 Surveying The Bay – NZ
 SW Surveys – NSW
 Taggart Earthmoving – NZ
 Taylors DS – Vic
 TC Drainage – NZ
 Te Puke Surveying – NZ
 Technical Spatial – Qld
 TGM Group – Vic
 The Surveying Company – NZ
 Thomas Consultants – NZ
 Titec – Qld
 TJ Kelly Surveys – Qld
 Tomlinson & Carruthers Surveyors – NZ
 Tonkin and Taylor Group – NZ
 Toowoomba Regional Council – Qld
 TRN Group – NSW
 TriCAD Design – NSW
 Tripp Andrews Surveyors – NZ
 TSS Total Surveying Solutions – NSW
 Turnbull Engineering – NSW
 Urban Design and Management – Vic
 van der Meer Consulting – Vic
 Veris Australia – NSW, Qld, Vic, WA
 Verve Projects – Vic
 VFT Engineering Surveyors – NSW
 Vincent Kasiano – Qld
 Vision Surveys – Qld
 Visser Valor Consulting – Qld
 Wallbridge Gilbert Aztec – SA
 Warren Smith & Partners – NSW
 Waste Management NZ – NZ
 Water Modelling Solutions – Qld
 Weller Surveying (2016) – NZ
 West Tamar Council – Tas
 Wigley and Roberts – NZ
 WKTM Future Trust – Qld
 WMG Engineering Surveyors – NSW
 Wollondilly Shire Council – NSW
 Wolter Consulting – Qld
 Wood and Grieve – WA
 Wood and Jepsen Consultants – NZ
 Wood & Partners – NZ
 WorleyParsons – Qld, WA
 WRM Water and Environment – Qld
 WSP Australia – NSW, Qld; NZ
 WW Surveys – Qld
 Xeros Kendall – NSW
 Yeomans Survey Solutions – NZ

12d Synergy

Baseline – NZ
 Bloxam Burnett and Oliver – NZ
 Bouygues Construction Australia – NSW
 Byrne Consultants – Qld, NT
 Cardno – NZ
 Daracon Group – NSW
 Davis Ogilvie – NZ
 Dempsey Wood – NZ
 Dept of Transport & Main Roads – Qld
 Future Freight JV – Qld
 GHD – Australia/NZ
 GT Survey – NZ
 Harrison Grierson – NZ
 MMA – NZ
 Paterson Pitts – NZ
 Projex Partners – Qld
 Rider Levett Bucknall – Qld
 Robinson Engineering Surveys – Qld
 Rose Atkins Rimmer – NSW
 SportEng – Vic
 Terramark – NZ
 Tomkinson Group – NZ
 Tonkin and Taylor – Vic
 Verve Projects – Vic
 Wood & Partners – NZ

