

> In this issue

What's new in Vulcan 9

Implicit modelling

Templated attributes

Save costs with PerfectDig

Underground survey workflows

Modelling blast hardness

Coordinating spatial data

Slope monitoring study

Forge

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Want more?

➤ More information available online

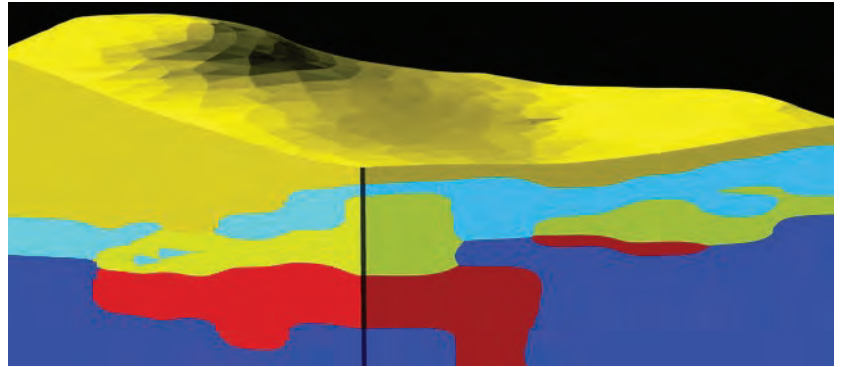
📺 Video

📄 Detailed article

📷 Photo gallery



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In this issue

Cutting costs. Increasing efficiency. Eliminating wastage. We understand that these are the challenges which are facing our customers everywhere. Maptek is focusing on solutions that improve operational productivity.

In this issue we preview performance upgrades and enhanced features coming in Vulcan 9. New implicit modelling and templated attributes will make a significant difference to modelling and design workflows.

PerfectDig, launched in June, allows users to compare digging with designs in the field, for measurable benefits. Presenting information in near real time saves costs, with better decisions on equipment and material movement.

The I-Site 8200 is already delivering on underground survey. Read how your operation can get better survey results for optimal mine planning.

BlastLogic offers a solution to harness data measured while drilling to model hardness within a blast for ongoing productivity improvements. Eureka provides easy to use tools to convert all of your spatial data to a preferred, common coordinate system.

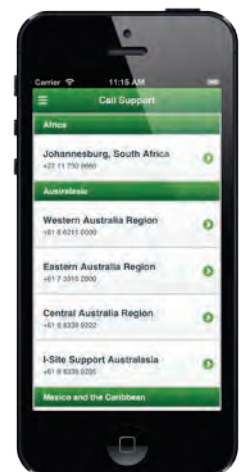
Users conferences in Australia and South America in 2013 provide the ideal opportunity to discover ways companies can benefit from Maptek products and services.

We hope you enjoy this issue, and welcome feedback at forge@maptek.com

Maptek iPhone app

- > Keep up to date with latest news
- > Contact technical support
- > Access to Vulcan users portal
- > Easily find product information

<http://www.maptek.com/mobile/>





ISO quality tick for I-Site

Maptek has gained accreditation to the international quality standard ISO9001 for management systems applied to I-Site development.

'This is the result of almost 2 years' concentration on formalising processes and procedures to ensure our quality systems meet the exacting requirements of this standard,' said Athy Kalatzis, Manager of Laser Imaging Solutions.

'The accreditation provides customers with an additional measure of confidence in Maptek's ability to manufacture robust, quality survey systems that meet regulatory and safety requirements.'



Workshop in Calama, Chile

Exploration, survey and mine planning professionals took advantage of the opportunity to learn more about Maptek products and services in Calama, northern Chile.

The workshop focused on how Maptek technology can optimise mining processes and lead to better decisions. Recent new products were shown alongside Vulcan developments and best practices for increased productivity and reduced operating costs.

Customers were particularly impressed with the capability of the I-Site 8200 for delivering fast, accurate underground survey data, and the strategic management system for drill and blast, BlastLogic.



Maptek mine design trophy

Maptek's Steve Sullivan presented an award for best mine design at the University of Adelaide on 30 August.

The project undertaken by final year mining engineering students is a team-based assessment and was won by Leigh Bowen, Ashlee Kiss, Mathew Harding and Samuel Lockett.

The award consisted of a certificate, a cash prize and names engraved on a perpetual trophy.



Top 10 companies in Colorado

Maptek was rated 10th in the 'Top 10 Companies to work for in Colorado' organised by ColoradoBiz magazine.

Maptek earned the top 10 position after judges took into account staff surveys, employment benefits and the unique characteristics of the company. A commitment to providing staff with access to further education, and encouragement to participate in professional industry groups were two Maptek initiatives commended by the judges.



Resourcing the future

Maptek has donated a mobile library to Seatile Primary School in Westonaria, South Africa as part of a social enterprise initiative.

More than 1000 children attend this government run primary school where budgets for teacher salaries, equipment and utilities are tight.

Maptek partnered with Qualibooks, which provides school supplies throughout the country, to equip the wagon with 400 books. The resources will be used by students at all year levels.

'Bekkersdal sits in the heart of the gold mining industry near Johannesburg. Being able to positively affect the future of children and families here is one way that

Maptek can contribute to the local mining community,' said Duncan Lee, General Manager Africa and Europe at the official handover in August.

The contribution to Seatile school helped Maptek to gain its recent level 4 rating for BEE (Black Economic Empowerment).

This government initiative recognises companies based on their social responsibility to community groups and disadvantaged businesses, as well as employment equity.



I-Site facility

The Maptek I-Site scanner facility in South Australia has been in the spotlight recently with visits by local, national and international groups.

Surveyors attending the Australian Institute of Mine Surveyors annual conference in Adelaide enjoyed a tour of the R&D, engineering and manufacturing facility in August. The exposure was useful for Maptek and surveyors alike.

In July, His Excellency Mr Ravdan Bold, Ambassador of Mongolia showed interest in the potential for applying I-Site to record Mongolia's archaeological sites. Maptek works closely with Mongolian reseller, IT Experts LLC, which established the Maptek Vulcan Lab at the Mongolian University of Science and Technology.

Adelaide business leaders toured the manufacturing facility in early June as part of a showcase of South Australian innovation in action.

Vulcan introduced in Vietnam



Maptek has introduced Vulcan to the geology team at Ban Phuc Nickel mine, 180 kilometres west of Hanoi in Son La province, Vietnam.

An underground mine using modern mechanised equipment will feed a process plant incorporating conventional sulphide flotation technology for the production of a Ni-Cu rich concentrate.

The mine geologists are using Vulcan for recording underground channel samples, registering drive mapping and associated photos for accurately digitising geology, constructing 3D orebody and fault models, drillhole database management, block modelling and resource estimation.

Online knowledge

Vulcan customers with current maintenance are encouraged to register for the new users area.

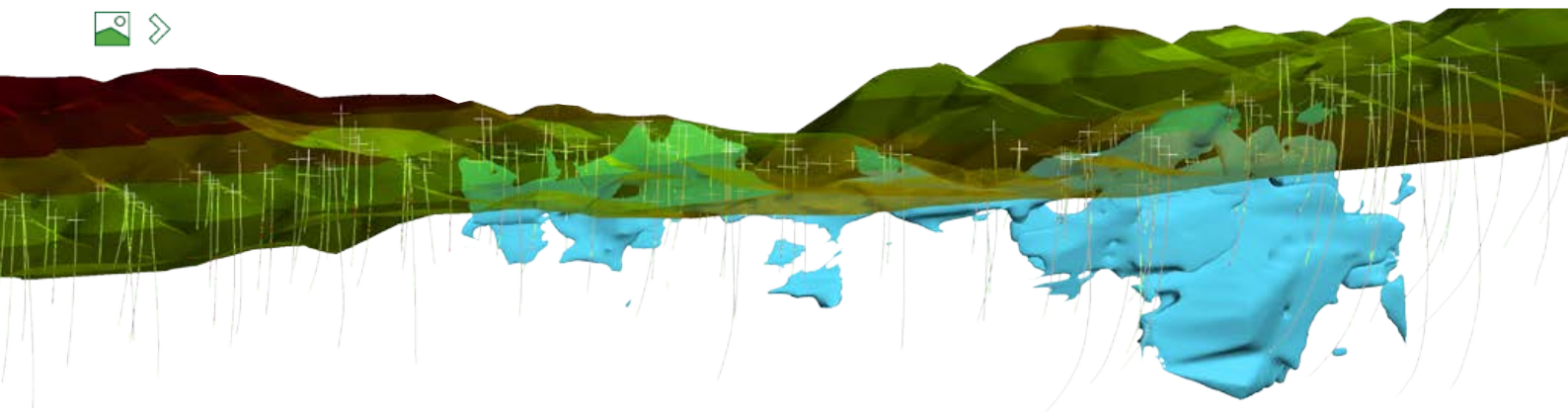
- > Submit, track and manage your support cases
- > Search FAQs, tips and tricks
- > Download releases, service packs
- > Post comments in forums

I-Site content is scheduled to come online by the end of 2013.

Contact users@maptek.com

Vulcan 9 delivers the power and features

Maptek Vulcan™ version 9 is scheduled for release in late 2013. New functionality targets specific applications in resource modelling and underground design, alongside improvements to software architecture to manage massive databases.



Vulcan 9 provides the freedom for users to apply their own expertise to their unique and complex tasks.

Large data

Users of Vulcan 9 will enjoy the benefits of a new graphics driver engine. Targeting newer graphics cards, Vulcan 9 will provide accelerated speeds and responsiveness, enabling users to load and interact with larger datasets.

LiDAR data

With Vulcan 9 large data files can be loaded straight into layers split by polygons, with the option of filtering the data on import. LAS data (LiDAR data that includes intensity and classification information) can also be imported into Vulcan and displayed. This means larger, more detailed surfaces can be used for designs as well as volume and reconciliation calculations.

Highwall ramps

Engineers working with stratigraphic deposits will save time when designing highwall ramps in open pit operations. A new tool allows the sequence of designs to be saved and easily replicated on different strips. A highwall template (triangulated surface of the highwall profile) is generated automatically.

Improved solids modelling

Boolean improvements will allow pit solids to be split by the highwall templates, block lines and horizons, to enable individual solids to be created for reserving against a Vulcan HARP (Horizon Adaptive Rectangular Prism) model.

Vulcan 9 puts the user, not the software, in charge of the results.

Upgrades to ROM (run of mine) tools include the ability to calculate strip ratios from user-defined block model variables, and to limit strip ratio calculations to a lowest mineable level, based on elevation, depth, surface or horizon floor.

Enhanced haulage profile

The Haulage Profile module in Vulcan 9 includes rimpull curves to calculate the cycle time. The haul segments will take into account the effect of rolling resistance as well as gradient on haulage route times.

A new algorithm provides a better estimation for distances based on actual bench geometry at the time of mine haulage. Nodes and segments between multiple routes will be easily created for assessing different scenarios.

New grade estimation

Vulcan 9 users will be able to apply the LVA (Locally Varying Anisotropy) method to account for arbitrary search paths for grade estimation. LVA provides a flexible approach to create the models of anisotropies, and improves results when modelling complex stratiform orebodies.

LVA is faster and easier to validate compared to non-linear methods. Users will be able to create their own anisotropy definitions or use pre-defined methods.

Upgraded stope optimiser

An upgrade to the stope optimiser tool will address more complex scenarios for designing stopes which conform better to the desired mine layout. Users will be able to create or specify irregular frameworks, allowing more varied stope parameters to be accomplished in one run.

Automatic analysis of the optimal placement of the framework reduces the need to perform multiple iterations. Variable cutoffs based on position or stope size provide users with a more representative result.

Looking further ahead, Maptek will continue to work on tools and underlying software to deliver a modern, flexible solution for modelling and mine planning.

Implicit modelling in Vulcan 9

Maptek Vulcan™ delivers an estimation algorithm for creating geological domains. Users of implicit modelling will experience fast, reliable results, combined with user-driven parameter selection, familiar modelling techniques and custom modelling workflows.



Implicit modelling can be combined with existing Vulcan tools to create a customised approach to automatically generating complex 3D geological surfaces.

It can be used alongside existing approaches like explicit modelling and stochastic modelling.

Implicit modelling techniques enable rapid construction of solids and surfaces and can be used to estimate the potential size of a mineralised body.

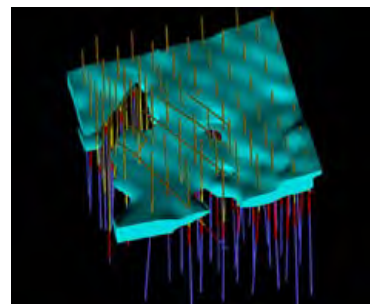
Running implicit modelling in Vulcan will mean geologists can spend more time validating and improving interpretations, rather than creating basic results.

Users will be able to model multi-domain geological settings with no overlap, giving more consistent results and eliminating manual adjustment of triangulations.

The user is in total control of the intuitive modelling process, which requires no hidden or special techniques.

Vulcan implicit modelling outputs a block model automatically, minimising errors from file transfer protocols. Block models are ready for other modelling processes such as reserving.

Geologists and engineers generating polygons, creating a blast region or calculating reserves will all experience the benefits of implicit modelling.



Greater flexibility

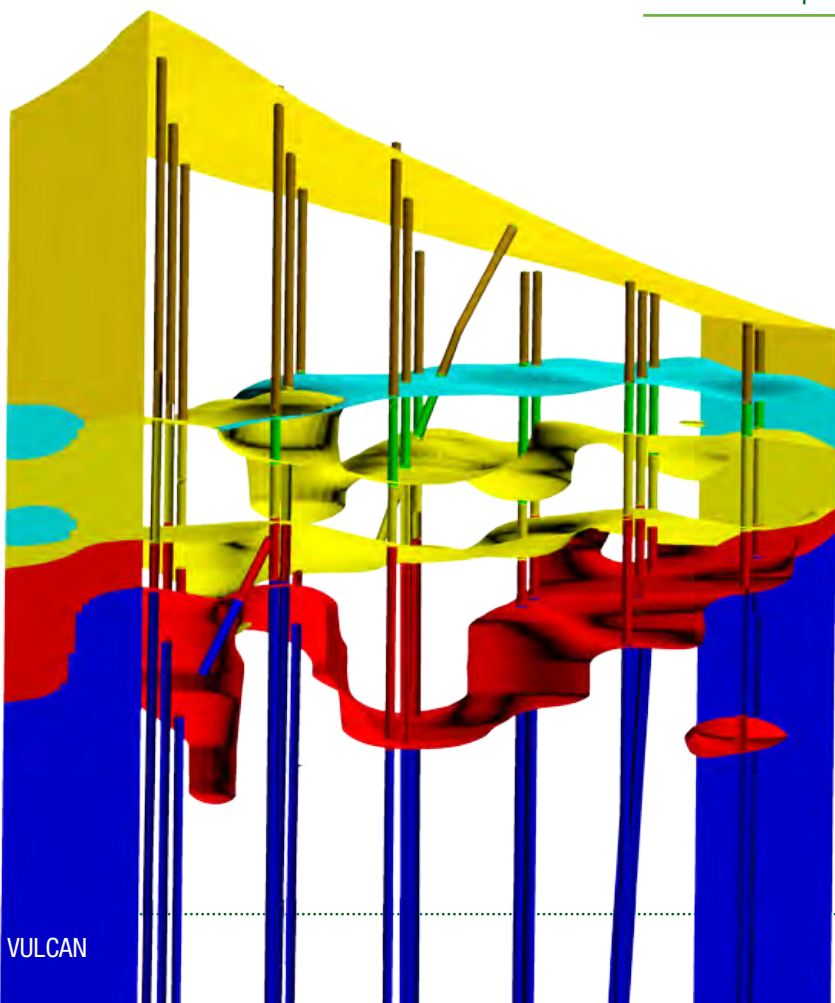
Implicit and explicit methods both handle deterministic modelling, which can be used with risk driven stochastic modelling. Any, or all of the methods can be combined to suit operational requirements.

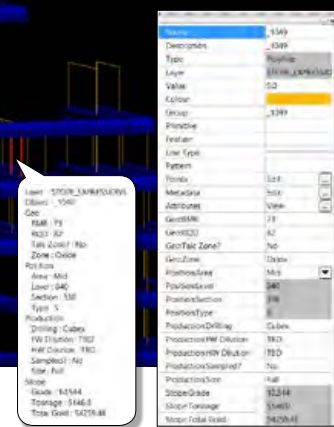
Geologists looking at a deposit for the first time can use implicit modelling to quickly understand orientations and characteristics.

Implicit modelling redresses the shortcomings of traditional approaches, which tend to be time consuming and only generate a single result. Where drillholes are sparse or poorly oriented, the interpretation is more likely to be biased. The range of possibilities will be large, but the results will not reflect this.

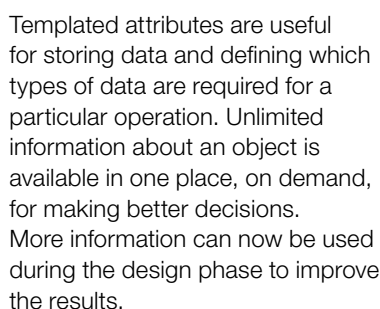
With implicit modelling, geologists can compare different modelling interpretations. Model parameters can be adjusted to determine how sensitive a shape is, and how much it could change volumetrically with varying interpretations. The scale of possibilities is now apparent.

Customers with current maintenance will receive implicit modelling as part the standard geology tools in Vulcan 9.





The new templated attributes feature in Vulcan 9 allows users to assign custom attributes to design information, improving workflow.



This saves considerable time because users don't need to perform multiple processes. Instead of re-running reserves based on a new design, a single mouse-over on a point shows the new reserve information.

Confidence is raised. Users can now iterate designs as many times as required for an optimal result.

of attributes to design data, which has traditionally been a manual process with limited options. Manual assignment will still be possible, but the new expressions tool - similar to BCF scripts - will make this much faster.

Expressions allow users to access the properties of an object and assign them as attributes. A block model can be accessed and the user can assign, as an attribute, the grade and tonnage of a shape to a piece of design data.

In the past when naming underground mineable shapes, the various elements of a name may have been stored in the traditional object attributes (e.g. the stope section was stored in the Group field). This would have been manually assigned and managed.

Once the attributes are applied, users can view, and in some cases manipulate, the data in the Properties Window. The attributes can be used in design, creating triangulations or scheduling.

Expressions can be used to acquire the tonnage and average grade from the block model. Those values are stored in the attributes for the stope or other design object.

If a point is moved on a stope polygon to cut some unnecessary waste, the attribute can be simply reassigned to recalculate the grade and tonnage. Earlier techniques used the Reserves by Polygon option, or the user recreated the stope triangulation and ran reserves to determine the new grade/tonnage for the stope.

MAPTEK FORGE / SEPTEMBER 2013

Reduce costs with PerfectDig

Maptek PerfectDig™ allows you to detect and communicate critical design conformance information before machinery is moved out. Make informed decisions, optimise equipment allocation and increase productivity at your operation.



PerfectDig provides a solution to a universal challenge - how to improve the accuracy and understanding of mine operations so that production is optimised from the first cut.

PerfectDig combines mine plans and design information with laser scans of working areas.

Detailed 3D visual and spatial analysis information is provided in near real time to production managers and site crews.

Not reaching design thresholds
\$70,000

Early detection
\$20,000

Wall safety analysis
1040 hours

Early detection
43 hours

Unidentified overburden
\$34,000

Early detection
\$20,400

How PerfectDig works

A Maptek I-Site™ laser scanner captures surfaces while mining proceeds. PerfectDig automatically determines the location and registers the scan data against the mine survey grid.

The data is geospatially accurate and up-to-date.

The PerfectDig tablet is used to analyse and compare scanned surfaces against the design imported from Maptek Vulcan™.

Different layers can be displayed. Users can instantly view detailed sections, photos and volumes.

The degree of conformance to plan can be assessed with specified tolerances. Excavation can then be adjusted and designs updated. All of these decisions can now be made in the field.

Overlays of the conformance to plan parameters are available via secure online server to production operators, pit designers and management.

How PerfectDig helps

The benefits of using PerfectDig are significant. PerfectDig makes it easy to quickly review critical data in the field and act efficiently to keep mining operations on track.

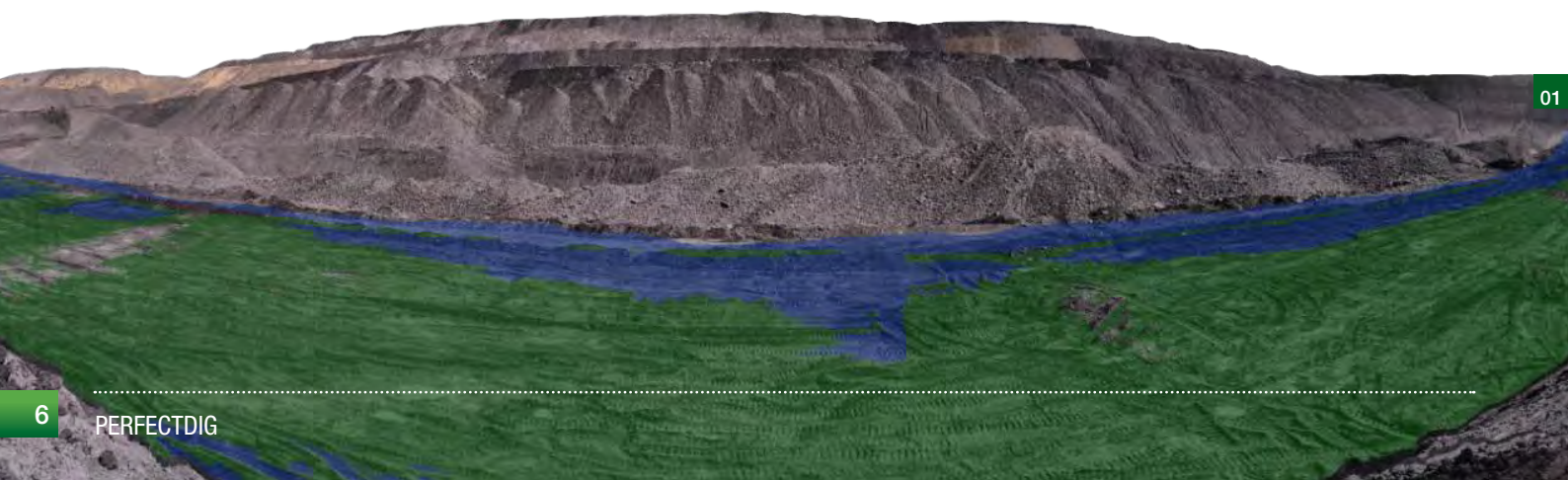
Without PerfectDig, the information to achieve this is either not available, or requires a lot of effort and time to prepare, and is usually presented too late for effective decision making.

PerfectDig provides a solution for improving profitability through informed decision making.

Productivity and efficiency are industry bywords. The examples here are indicative of the savings you can expect with PerfectDig. PerfectDig can also provide operational efficiencies for drill & blast, streamlined communication of designs and managing contracts.

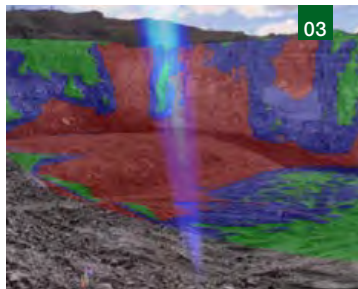
Find out more by emailing perfectdig.sales@maptek.com.au

In less than 10 minutes the visually rich spatial feedback is conveyed to mine production.





02



03



04

Hardcap compliance

Ignoring early indications that excavation is progressing beyond hardcap thresholds can be costly. The resource model and design is an interpretation of the coal seam. It is possible that the seam bulges into the hardcap (*image 1*).

Digging 100mm past the hardcap threshold over a 4000m² area could result in a potential loss of 400 tonnes of coal - a \$40,000 loss of income.

Result: Avoid costly damage to hardcap and loss of coal

Using PerfectDig to monitor hardcap compliance reduces the risk of coal loss AND identifies areas where overburden remains. Not reaching the hardcap with the dragline requires digging at a higher cost per bcm (*image 2*).

The original cost of removing this overburden with a dragline would have been \$20,000 based on \$0.80/bcm. Removal using an excavator fleet incurs higher costs of \$70,000 (\$3/bcm).

Result: Avoid unnecessary overburden costs of \$50,000

Identify safety issues

PerfectDig can quickly identify overhanging material near the top of the wall. Safety measures can then be taken to remove the risk to operators working in the area.

Conventional methods take too long. First the engineer suspects a risk and files a survey request. Then the scene is surveyed, data is processed and provided to the engineer. This can take several hours.

With PerfectDig the engineer can quickly identify hazards and make an informed judgement in the field (*image 3*).

The cross-section view requires no data filtering prior to modelling; 3D output is obtained in one click. Accurate data is available in 10 minutes, with the engineer retaining control over the data.

Checking for anomalies 5 times a week would result in a cost of 1040 person hours per year. With PerfectDig, this is reduced to 43 hours per year.

Result: 1000 hours saved and productivity improved

Optimise machinery

Early detection of errors in material movement enables operators to rectify issues before machinery leaves the area.

This highwall (*image 4*) has not been dug to specification while the right equipment was in place. It will cost about \$5/bcm or \$34,000 if the coal excavator and truck fleet is used to remove and transport the remaining overburden to be able to expose the coal.

With PerfectDig, the extra overburden is identified immediately. The appropriate equipment still operating in the area can remove the material at a cost of \$3/bcm or \$20,400.

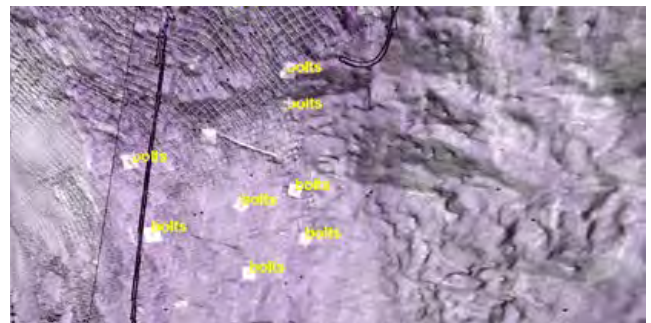
Result: A saving of \$13,600 through the early detection of material movement errors

With minor mis-conformance a regular occurrence, one instance per week of undetected overburden could cost an operation \$700,000 a year from inefficient fleet use.



Underground survey solution

The Maptek I-Site™ 8200 underground laser scanning system continues to provide significant time savings over conventional underground survey methods.



Maptek delivers a user-friendly solution with I-Site, which couples a world-class scanning instrument with best practice software.

I-Site Studio

Advanced modelling tools

- > Register targets via multi-point registration
- > Create survey database of support bolt position
- > Create grids over solids or surfaces for export
- > Extract geological boundaries via smart line
- > Extract geotechnical information for analysis in stereonets
- > Fragment and join intersecting models
- > Colour objects based on distance to other objects for calculating distance from floor to backs
- > 13 filtering options

I-Site Void

Register, filter and model drives and stopes

- > Create loop wraps (closed polygons)
- > Model multiple closed polygons (loops)
- > Create closed solids of drives and stopes
- > Calculate solid volumes
- > 4 filtering options

Create a survey database of all support bolts in a drive

I-Site Solution

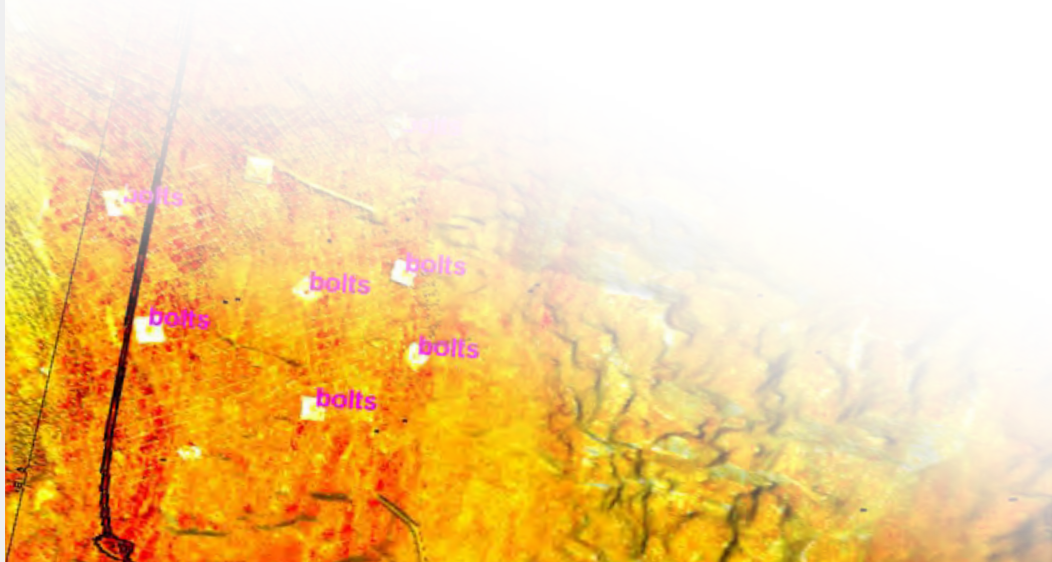
Survey the drive with the I-Site 8200 laser scanner; all bolts are captured in the point cloud data. With the **Survey Point Creation** tool in I-Site Studio create a survey database of all support bolts.

A 3D visual representation of the bolts is automatically created. Data can be exported to other databases.

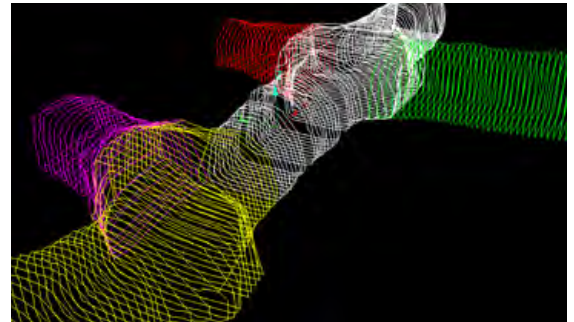
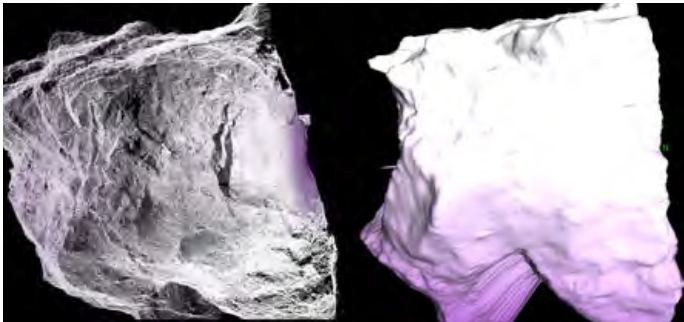
Without I-Site

Each bolt must be surveyed individually. Survey points must then be manually exported to a database.

Survey location data must be entered manually for each bolt before creating a model to view the location of all bolts.



Surveying is essentially measuring points. A laser scanner is an efficient instrument for quickly and accurately collecting point data. The value lies in the interpretation and use of that data.



Survey a stope and model the results

I-Site Solution

The I-Site 8200 laser scanner is mounted onto a boom and placed into the stope. The scanning aperture of 125 x 360 degrees allows the entire stope to be surveyed.

Scans are automatically levelled in the correct orientation ready for modelling in I-Site Studio.

Without I-Site

Scan data is imported into processing software without automatic levelling.

A manual process is required to level data to the correct orientation.

Create a solid surface of a tunnel to calculate volume

I-Site Solution

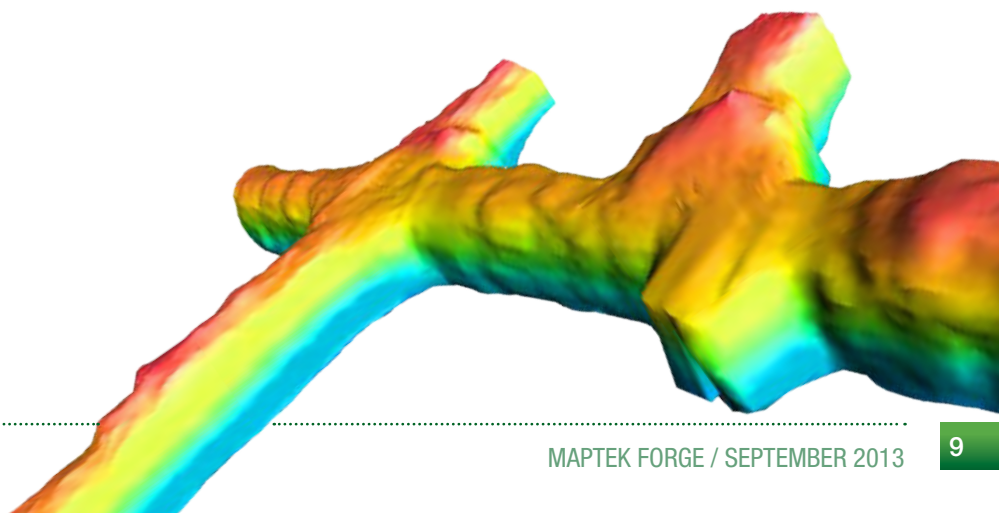
Data from the I-Site 8200™ laser scanner is imported seamlessly into I-Site Studio™ software. The tunnel is digitised with one click at the start and end of the tunnel using **Create Loop Wraps**.

Objects such as pipes, vent bags and vehicles are automatically removed from the closed loop. Right mouse click to easily edit or change the surface.

Without I-Site

Laser scan data is imported into most systems and requires manual digitisation. Each loop must be digitised and joined together to create a surface or solid.

Unwanted objects must be manually removed. It is time consuming to edit or change a surface (e.g. fill holes or despikes).



Coordinating your spatial data

Maptek Eureka™ provides drillhole and seismic tools within an integrated platform for viewing and modelling exploration data. Eureka 1.1 will allow users to easily convert spatial data to any coordinate system or grid representation.



This is beneficial when the spatial data for an exploration project is in different coordinate systems.

Spatial objects in Maptek Eureka™ are initialised by the user to a coordinate system. Predefined grid coordinate systems include:

- > Australian Map Grid (based on the Australian Geographic Datum 1966) - AMG66
- > Map Grid of Australia (based on the Geographic Datum of Australia 1994) - MGA94
- > State Plane Coordinate System (based on North American Datums 1927 and 1983 - the local grid for each US state)
- > More than 4000 different grids defined by the EPSG geodetic parameter dataset

Users can also define their own grid systems by specifying a datum - a reference ellipsoid and a transformation back to WGS84 - and a projection system.

Twenty different projection systems are available, including:

- > Universal Transverse Mercator (UTM)
- > Universal Polar Stereographic (UPS)
- > Mercator
- > Lambert Conformal Conic
- > Polyconic
- > Stereographic

Objects in one coordinate system can be transformed into any other coordinate system.

- > Convert latitudes and longitudes to any UTM zone, e.g. UTM Zone 54 South
- > Convert drillhole collars between different UTM zones, e.g. when project data spans multiple zones
- > Convert old survey data, e.g. from AMG66 to the more recent MGA94 grid
- > Convert GIS data, e.g. data from SPCS Colorado Central Zone 502, NAD27 to UTM Zone 13 North

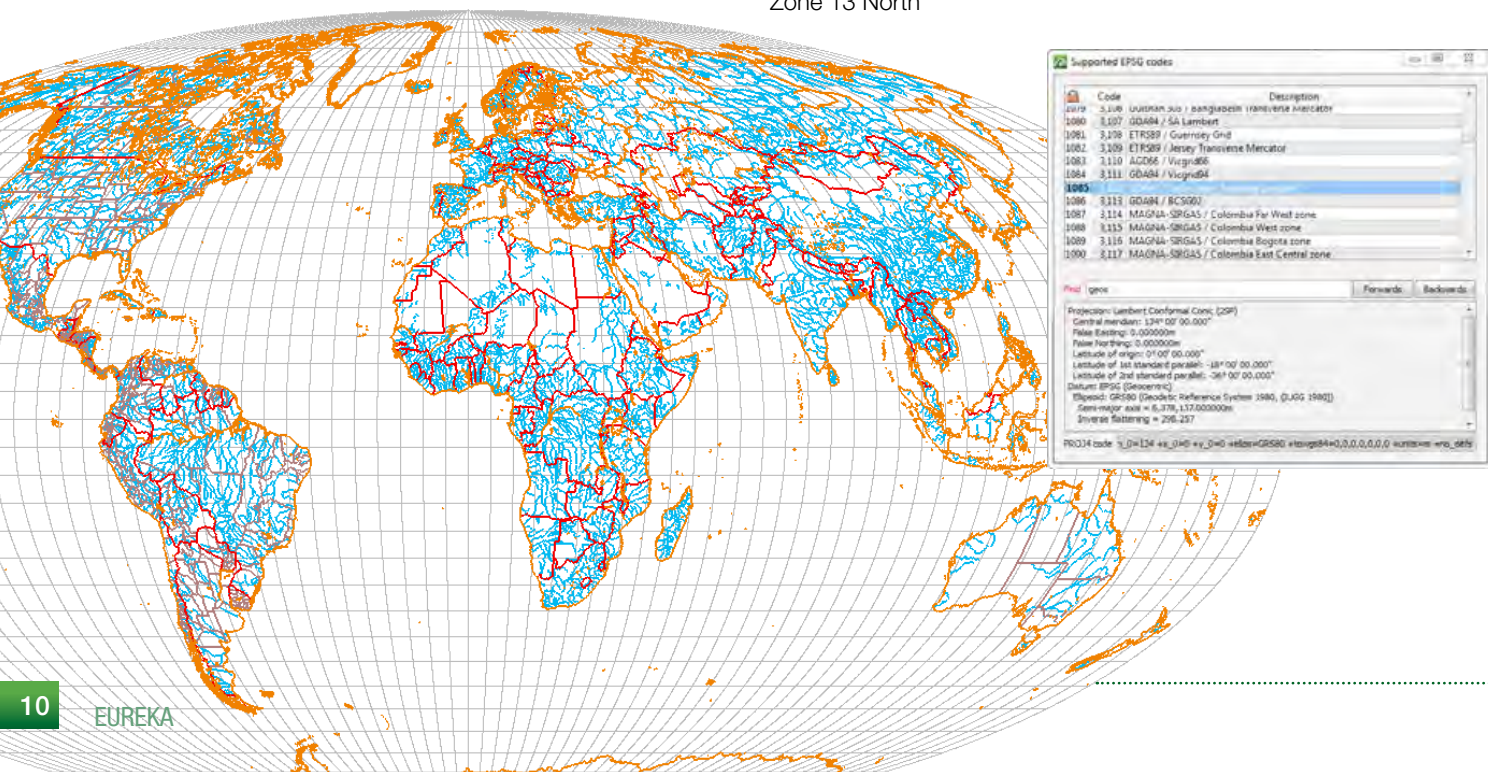
A calculator tool allows users to check coordinate conversions and pick a point on a UTM grid to display latitude and longitude.

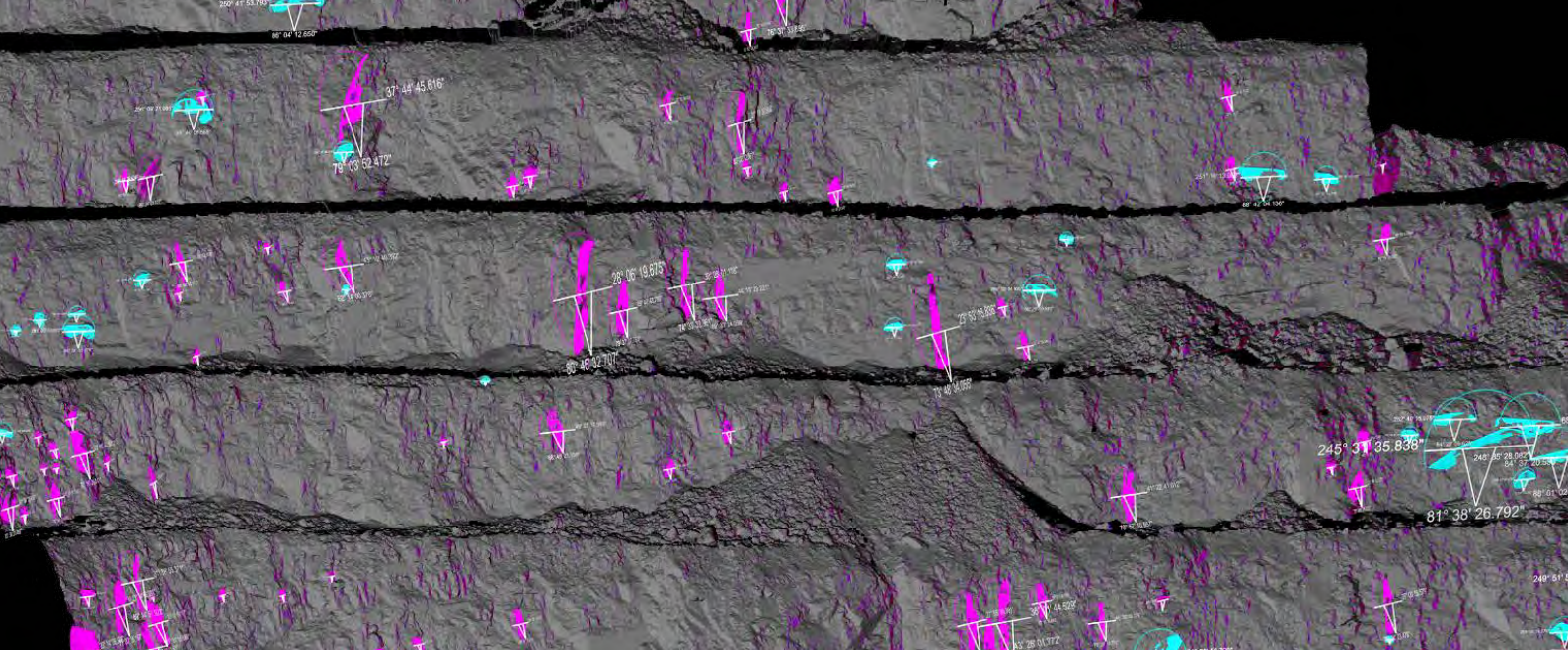
A geographic graticule can be created to provide a reference grid to help with the conversion.

Converting data is simple with Eureka. The user assigns an initial coordinate system to the objects, which can be transferred to other objects to ensure all of the data in the focus area is georeferenced correctly. The data can then be transformed to any other grid projection.

Setting the coordinate system to a local projection minimises distortion when the area of interest lies on the boundaries of standard UTM zones.

Eureka 1.1 is scheduled for release at the end of 2013. New functionality includes implicit modelling and interactive drillhole editing.





Slope stability analysis

A large slope failure in a limestone quarry prompted Golder Associates to use the Maptek I-Site™ system to collect and process geotechnical data for stability analysis.



The government-mandated review of slope stability required rapid mapping of the 4-kilometre long quarry in Asia.

Steven Otto, Geological Engineering Specialist at Golder Associates, explains.

‘From previous experience coupling the I-Site system with our manual mapping programs, we knew it was ideal for rapid collection and analysis of high quality geotechnical data.’

The main objective for the field investigation was the collection of a high resolution 3D point cloud and imagery for digital geotechnical mapping of existing pit slopes for use in structural stability analyses.

A secondary objective was to generate current, accurate three-dimensional surfaces as a basis for detailed two-dimensional slope stability analyses.

A key focus during data collection was to limit personnel exposure to hazards. The long range of the

I-Site 8810 laser scanner provided a safe option to capture all aspects of the operation.

Tools in the I-Site Studio™ Geotechnical Module allowed Golder to rapidly develop accurate and statistically significant datasets of critical areas in the quarry.

Extract Discontinuities provided for the generation of large datasets, which, after review and quality control, allowed for definition of local structural conditions with a high degree of statistical confidence.

During the review and quality control process, the **Merge Discontinuities** tool resulted in significant time savings. When Extract Discontinuities generates multiple sets of the same feature, the Merge Discontinuities tool allows the user to combine them into a common set.

This is an advantage when bringing the data into a stereonet for further analysis.

Golder staff were able to quickly understand the distribution of discontinuity sets in each of the main pit areas by applying **Colour Surface by Dip & Strike**.

Additional filtering of the dip and strike range proved useful during the digitisation process, allowing verification of the validity and dimensions of features generated by the Extract Discontinuities tool.

‘The I-Site laser scanner and I-Site Studio geotechnical tools allowed us to complete the geotechnical assessment with greater confidence and statistical significance than otherwise possible, given the short project schedule’, Steve concludes.

The I-Site scanner-software combination allowed Golder to effectively meet their client’s needs with increased efficiency - while maintaining high standards for safety, quality data collection, analysis and design.

*Thanks to
Steven Otto
Geological Engineering Specialist
Golder Associates Ltd*

Users conferences

Maptek customers are invited to network with industry colleagues from around the globe, at two conferences this year - Australia in October, or Chile in November.

Australia October 21-23

Time is running out to reserve your seat for the Maptek users conference in Brisbane, Queensland. *Invest in Yourself* offers 23 technical papers, 16 workshops and 5 networking events - 3 days that could change your career.

Learn new skills which you can apply to your work practices to cut costs and improve operational productivity. Be among the first users in the world to see Vulcan 9 in action.

Customer and Maptek presentations will cover:

- > Using drillhole, survey and fault interpretation data to generate accurate coal surfaces for short-term models
- > New implicit modelling and support analysis tools for better analysing resource estimates
- > Modelling regional scale reverse faults to develop a reliable life of mine geological model
- > Making the most of laser scan data for geotechnical appraisal of excavated slopes and dumps
- > Techniques for exploiting the relationships between variables to build coal quality models

Implicit modelling, templated attributes, underground design tools, underground ring design, haulage profile, ROM modelling and more will be covered in papers and workshops. Users can gain an advantage by becoming familiar with the new tools before Vulcan 9 is released later this year.

Learn how the I-Site 8200 will dramatically improve underground survey workflow - take part in a demonstration of the extendible boom. Hear how BlastLogic and PerfectDig support better decisions for saving costs at your operation, and learn about implicit modelling tools in Eureka.

Technical program available at www.maptek.com/users2013

South America November 25-27

Join us at the XVI annual users conference in Viña del Mar, Chile to learn about new features, and reinforce and update your knowledge on the application of Maptek products, services and solutions.

The conference is an ideal opportunity to witness Maptek advances in innovation and see for yourself the developments and applications that make Vulcan the best geological mining software in the world!

Technical sessions will cover:

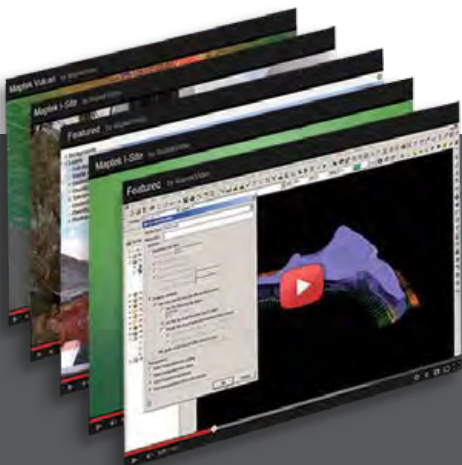
- > Rapid generation of 3D models direct from the database using implicit and explicit modelling methods
- > Techniques for processing large datasets - working with triangulations, databases and block models
- > Premiere the most powerful graphical interface - released in Vulcan 9
- > Chronos applications and enhancements
- > Stope optimiser applications - for underground and open pit cave design projects

Of course, you will also gain exposure to the latest I-Site systems for 3D laser scanning. Increase your productivity with access to accurate survey data in real time.

The I-Site 8810 and 8200 laser scanners deliver operational flexibility and streamlined workflows. Hear first-hand about the direct impact of the BlastLogic solution for strategic management of critical drill and blast processes.

Maptek will host an implicit modelling workshop in the Viña del Mar office the day after the conference, November 28.

Visit www.maptek.com/cl/users2013



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MaptekVideo for English versions
MaptekVideoES for Spanish versions



I-Site 8200 training at the University of Fairbanks, Alaska

Maptek Calendar

September 16-20

Extermin 2013
Arequipa, Peru - Booth 1182 Aust Pavilion

September 16-20

International Society for Mining Surveying
Aachen, Germany

September 17-18

West and Central Africa Mining Summit
Accra, Ghana

September 18-20

Mining World Central Asia
Almaty, Kazakhstan

September 23-26

Exposibram
Belo Horizonte, Brazil - Booth Q11

September 25-27

World Gold 2013
Brisbane, Queensland - Booth 26

October 16-19

XXX Convención Internacional de Minería
Acapulco, Mexico - Booths 3051, 3093

October 21-23

Maptek Users Conference
Brisbane, Queensland

November 4-8

APCOM
Porto Alegre, Brazil

November 12-15

Atexpo
Copiapó, Chile - Booth 152-1

November 25-27

XVI Maptek Users Conference
Viña del Mar, Chile

November 28

Implicit Modelling Workshop
Viña del Mar, Chile

2014

January 27-30

AME BC Roundup
Vancouver, BC, Canada

February 9-12

International Society of Explosives Engineers
Denver, Colorado

February 23-26

SME
Salt Lake City, Utah

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