

PositionIT

The geo-informatics, surveying, GIS, mapping and location based services journal for Southern Africa

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Leica Zeno GIS Series



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Leica
Geosystems

Coordinate reference system standards to be revised

Members of the Open Geospatial Consortium (OGC) request comments on the draft charter for an OGC Coordinate Reference System (CRS) Standards Working Group (SWG). The purpose of the working group is to revise Abstract Specification Topic 2 – Spatial Referencing by Coordinates to the state of an adopted OGC standard and an identical ISO International Standard. This will be achieved by processing comments received during the public comment period and ensuring that the standard is consistent with OGC business plans. This revision will accommodate advances in modern geodesy to include the definition of CRSs having a “dynamic datum” – to compensate coordinate changes with time due to tectonic activity, as well as enhanced capabilities for derived CRS definitions (such as a vertical CRS defined through a geoid model). The work will also correct some minor errors. The technical content of OGC Abstract Specification Topic 2 and ISO 19111:2007 are currently identical. In the interests of interoperability, ISO and OGC standards need to remain aligned. The work will be conducted jointly with ISO Technical Committee 211.

Contact OGC, info@opengeospatial.org ©

Design software for Bruma Lake bridge rehabilitation

As part of the rehabilitation of the Bruma Lake business precinct, Boksán Projects partnered with the main contractors, Basil Read and ARQ Consulting Engineers, who are giving the Bruma Lake Bridge a much needed facelift. Boksán looked to Prokon Software



Consultants as their Autodesk reseller and trusted advisor. A common problem with the refurbishment of old buildings and structures is that the original architectural drawings are paper-based hand-drawings that can get damaged or lost, which means that years later, contractors need to recreate the drawing to carry out any repair work required. Bridge detailing always presents a challenge to architects as each bridge is unique. To manage the re-drafting of the bridge's plans, the company used Autodesk's Advance Steel 2015 package. The software helps accelerate design, steel detailing, steel fabrication, and steel construction. It also improves accuracy, reduces time to fabrication, and enables a more connected workflow.

Contact Ryan Giliam, Worldsvie, Tel 011 844-1074, ryan@worldsvie.co.za ©

Underground infrastructure mapping software

Owners and operators of aging infrastructure are faced with increasingly stringent demands to manage their assets in an efficient and responsible manner. In response to these pressures, Geospatial Corporation has developed GeoUnderground, a lightweight, secure, and feature-rich web-based GIS management portal to provide a suite of tools to make critical data available to the customer in a comprehensive and user friendly platform. The software-as-a-service (SaaS) model is developed for web-based multi-users who have a need to manage and access critical infrastructure data, and is custom designed around the Google Maps API and Google Maps Engine. Offering a variety of powerful data management tools, it incorporates GIS functionality and web services that can be used to supplement or even replace standard Enterprise IT environments. The company's proprietary, cloud-based, 3D mobile GIS mapping platform enables users to securely view, edit and share accurate x, y, z coordinates of buried pipelines, geo-referenced photos and mapping application. The data is stored and accessible to authorised users via a secure centralised data repository, and it is delivered to users through their existing web browser.

Contact Geospatial Corporation, info@geospatialcorporation.com ©

Scheduling and stockpile management optimisation

Hexagon Mining has released Atlas 3.0, a complete package for activity scheduling and stockpile management. It provides a resource-based, true calendar approach to scheduling, and handles material movement and reclaim. Using the Destination Optimisation functionality allows users to set grade, volume, or tonnage constraints for destinations to optimise reclaim parcels routed from stockpiles. The optimisation results can be manually modified to allow more control over the reclaimed material and generate more practical schedules. The software also allows users to exploit a combination of manual and optimised routing solutions in a single setup to generate more practical schedules. Version 3.0 introduces a new license for Atlas integrated with CPLEX. The engine can also be used to achieve optimised solutions for stockpile blending challenges and meet the quantity and quality requirements at target destinations, such as processing plants. Production scheduling focuses on extracting mining blocks, but stockpiled materials must also be blended before concentration. Blending challenges pervade medium and short term scheduling, where mining engineers must reduce grade fluctuations in the materials reclaimed from stockpiles and the quantity of the reclaimed material to satisfy demands in tonnage, volume, and composition.

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