



GEO Travel Grant winners with GSDI president David Coleman

THE SMART HOMELAND

GSDI 15 DISCUSSED HOW SPATIAL ENABLEMENT CAN BOOST DISASTER PREVENTION, TRANSPORT AND SMART CITIES. ROGER LONGHORN REPORTS

The 15th Global Spatial Data Infrastructure (GSDI) World Conference was held in Taipei, Taiwan, from 29 November to 2 December 2016, with the umbrella theme 'Spatial enablement in the smart homeland' and a focus on three principal sectors: smart disaster prevention, smart transport and smart cities. Attendees included senior representatives from major national, regional and international organisations, government and universities, and key commercial firms from geomatics and allied industries. More than 160 abstracts and papers were submitted, leading to 110 technical presentations in parallel sessions.

The conference's 12 keynote speakers from the Asia-Pacific region, the US and Europe, covered a diverse range of topics. Mark Reichardt, president and CEO of the Open Geospatial Consortium, recognised how far the world had progressed in implementing the many components of spatial data infrastructure (SDI) globally, aided by rapid advances in technology. He also set a challenge for conference participants to consider adopting specific projects around the world that will help those in most need to use spatial information in innovative ways to improve the lives and economies of their communities.

Menno-Jan Kraak, president of the International Cartographic Association (ICA), focused on the role that the association plays in promoting cartography in support of the UN's Global Sustainability Goals. He presented 17 'take-home' messages based on cartographic perspectives from the ICA's commissions and a plan to work on an 'Atlas of Best Practice'.

Ivan DeLoatch, executive director of the Federal Geographic Data Committee Secretariat at the US Geological Survey, reviewed progress and future challenges for national SDI implementation in the US. His presentation included challenges such as how to enable a location-based digital ecosystem, in which data is recognised more fully as

a valuable national asset, with technology providing the tools and services to access that data as easily and widely as possible.

Tien-Yin (Jimmy) Chou, president of Taiwan Association for Disaster Prevention Industry (TADPI) and director of the GIS Research Center at Feng Chia University, Taiwan, focused the participants on the many roles that spatial information plays in planning for and managing the 'Smart Homeland', the main theme of the conference.

Ed Parsons, geotechnologist at Google, presented a challenge to the SDI community to go 'beyond SDI', since many SDI implementations appeared to be achieving less than their planned goals. He proposed that the current approach to publishing spatial data using dedicated infrastructures has met with limited success in terms of findability, discoverability and innovative use. To reach the web mass market, we should consider changes to our approach.

Other keynote speakers included Winnie Tang, chairman of Esri China (Hong Kong), who presented the challenges in building SDIs for smart cities. Dr Tang is also founder and chairman of the steering committee, Smart City Consortium, Hong Kong. Vernon Singhroy, Canada Centre for Mapping and Earth Observation, Natural Resources Canada, introduced the audience to advances in InSAR monitoring of surface deformation related to geohazards.

Workshops

Also at GSDI 15 was an exhibition showcasing cutting-edge drones, robots, sensors, software and web applications designed to harness the assets of cities, advance a cross-functional, transport ecosystem, and interact with citizens to mitigate risk and increase safety.

In addition, unlike previous GSDI World Conferences, GSDI 15 featured 20 half-day sponsored workshops, conducted on a wide range

of topics relevant to the main themes of the conference. Attendance at the workshops was free and they generated considerable interest from both local and international participants. Several workshops focused on remote sensing and earth observation technologies and applications for smart territory development, management and innovations, and disaster monitoring, planning and mitigation – all key concerns for the Asia-Pacific region. Other topics included the role of open data, crowdsourcing and public-private partnerships in smart territory development; methods for assessing SDI development; sensor web technology advances; creating business value and societal benefits from innovative use of spatial data; and advances in 3D cadastral development for land information systems.

The GSDI extends grateful thanks to its host, GSDI member TADPI, as well as to Taiwan's Ministry of Interior and sponsors including Esri and the National Chung-Shan Institute of Science and Technology, which provided significant financial support to GSDI 15.

We would also like to thank the Group on Earth Observation (GEO) Secretariat for providing funds to support travel to the conference for participants from developing nations. Winners of the five travel awards were chosen by the GSDI executive committee from the 21 abstracts and papers that were submitted from qualifying nations. Successful applications were from Indonesia, Ukraine, Kenya, the Philippines and Uganda.

Their presentations focused mainly on SDI developments in their respective countries or regions and the challenges they faced and were trying to overcome.

Finally, our very special thanks to all those on the GSDI 15 local organising committee, who have worked so hard over the past year in preparing for the conference. We would not have succeeded without their strong commitment, work and support.

Roger Longhorn is the secretary-general of the GSDI Association (www.gsdi.org)

FURTHER INFORMATION

The GSDI 15 conference book, *Smart Enablement in a Smart World*, comprises 13 selected refereed papers from the proceedings, edited by GSDI members David Coleman, Abbas Rajabifard and Joep Crompvoets, and published by GSDI Association Press under Creative Common License, Attribution 3.0, ISBN 978-0-9852444-5-3, 286 pages.

To download the book, and for more information about the conference, including digital proceedings from the presentations and papers, visit: <http://gsdiassociation.org/index.php/homepage/gsd-15-world-conference.html>



Jimmy Chou, president of TADPI, spoke on the conference theme 'the smart homeland'



Mark Reichardt, president and CEO of the Open Geospatial Consortium, set a challenge for attendees

<p>POINTFUSE 21</p>	<p>RIEGL 22</p>	<p>SATEL 23</p>
<p>Pointfuse V2 provides an automatic, fast and universal way of converting point cloud datasets to vector geometry, creating a more streamlined workflow compared with manual or semi-automated methods.</p> <p>The generated surfaces consist of 'discrete' geometries separated by breaklines and edges, making them more usable in third party software. Pointfuse can process data from a wide range of 3D imaging technology, regardless of the data density, scale or quantity. Whether the scan is of an intricate manufactured part or magnificent architectural structure, and whether collected from hand-held, tripod-mounted, mobile or airborne platforms, Pointfuse processes the data in the same way.</p>	<p>1 Operator 8 Hours 500+ Scans</p> <p>High Speed Data Acquisition with the RIEGL VZ-400i</p> <p>The latest 3D terrestrial laser scanning solution, the RIEGL VZ-400i, is one of the fastest scanners on the market. High performance scanning technology provides the highest pulse repetition rates and a high line scan speed. Useful features, pre-defined workflows, and helpful apps support efficient data acquisition missions in the field. Up to 500,000 measurements per second and a new standard in user friendliness have been proven in a special field project. Over 500 scans of approx. 5 km of city roads within the complex urban environment of Vienna, Austria, have been captured by just one operator in 8 hours of acquisition time!</p>	<p>Satel introduces new lightweight M3-modules that have same form factor and pin-outs to enable easy integration and quick swap inside host devices. Also a multiband board that combines two Satel modules, GSM and Bluetooth connection into a one motherboard is going to be available very soon.</p> <p>Finnish, globally operating high technology company Satel specializes in private mission-critical data connectivity radios. Customers include different types of industrial operators and high technology system providers, using radios of almost reliability in their solutions. Key application areas for Satel include control of smart utility networks, GNSS support systems (e.g. land surveying, precision farming, machine control and marine) and Intelligent Traffic Systems.</p>
<p>INTERGEO 2016, Booth C3.059, hall A3: See the full RIEGL product range in Hamburg – the RIEGL team looks forward to meeting you there!</p> <p>RIEGL Laser Measurement Systems Riedstr. 10 3580 Horn, Austria phone: +43 2982 4211 e-mail: office@riegl.at www.riegl.com</p>	<p>Satel Oy P.O.Box 142, FI-24101 Sais, Finland Tel. +358 2 777 7800 info@satel.com www.satel.com</p>	<p>Pointfuse www.pointfuse.com</p>

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