

Demonstration of Measuring Tool for Oblique Imagery at Intergeo

Icaros, a company specialised in advanced aerial remote sensing and 3D visualisation solutions, will demonstrate the Icaros Measurement Tool (IMT) at Intergeo in Berlin. Designed for use with oblique aerial imagery, IMT is a very suitable photogrammetric visualisation application based on ArcGIS technologies.

The IMT is a universal oblique measurement tool. It enables customers working within Esri's GIS environment to view and measure structures in oblique aerial imagery captured by any commercial oblique sensor system, including those from Pictometry, Vexcel/Microsoft, IGI, Leica, and Midas. IMT works equally well measuring images captured by oblique sensors mounted on UAVs.

Icaros is opening the oblique market to all GIS users by enabling them to purchase imagery from any of the growing number of aerial oblique data providers, said Richard Baumgartner, vice president of business development at Icaros. For too long, the purchase and use of oblique imagery have been limited by proprietary collection systems and metadata formats, he added.

Data

Access to additional oblique vendors will reduce data costs in the long run. In addition, IMT lets users unlock the full potential of their imagery by combining 3D analysis capabilities with their GIS data. The tool is specifically designed to make highly accurate vertical and horizontal 3D measurements of structures and surfaces, including calculating distances, areas, slopes and azimuths in complex 3D features.

Baumgartner explained that oblique imagery is already used extensively in tax assessment and public safety applications, but many other markets are waiting to be served by off-nadir image data. The Icaros vision is to expand the use, visualisation and analysis of oblique aerial images into the entire spectrum of GIS markets. Oblique analysis of structures can be beneficial to a host of new applications such as facility management, pipeline corridor infrastructure monitoring, energy audits, economic development, and asset management.

Applications

Asset and facility management are the next big applications for oblique imagery within the emerging 3D GIS market, said Baumgartner.

As GIS users continue the move to 3D, oblique imagery will be critical for constructing accurate image-based realistic 3D models. IMT enables users to manipulate and view oblique imagery while leveraging other geospatial data layers within their GIS environment. This capability allows users to navigate multi-image scenes in three dimensions while zooming and panning. The IMT software also provides an optional Icaros Digitizer Tool (IDT) for generating 3D models.

IDT provides additional tools to extract physical building structures and digitise them into open format models, such as Collada, Obj, and Ply, textured from the source imagery, said Baumgartner. Automated 3D model generation from oblique imagery is at the intersection between imagery and GIS.

To view a demonstration of the IMT, visit Icaros in stand no. 4.009 Hall 4.1 at Intergeo, being held from 7-9 October in Berlin, Germany. Go to www.intergeo.de for more information.