

Icaros Uses TatukGIS SDK to Develop New Aerial Geospatial Data Viewer



Aerial geospatial solutions provider Icaros has selected the TatukGIS Developer Kernel (DK) to develop the next-generation geospatial data viewer component of its OneButton software product, which is used to process raw aerial images collected from manned and unmanned aircraft into readily usable GIS-compatible maps. The Icaros OneButton product is used by some of the largest private and government organisations worldwide operating in a range of industries.

In addition to licensing the TatukGIS Developer Kernel (.NET edition) for the Icaros software development team, [Icaros](#) collaborated extensively with TatukGIS on the early development and prototyping of the DK based version of the OneButton Viewer application. Collaboration included customised [TatukGIS](#) development and implementation

for rendering of the PLY data format for 3D photomesh objects (e.g. buildings, bridges, infrastructure, terrain, etc.) generated from aerial drone imagery, and 3D view fly-through and playback features. Additionally, TatukGIS periodically fulfilled Icaros' requests to develop and add DK support for multi-page GeoTIFF file formats which are used for various multi-spectral applications.

Photogrammetric and computer vision algorithms

Known as an easy-to-use products for remotely sensed data, Icaros OneButton uses advanced photogrammetric and computer vision algorithms to automatically create fully georeferenced products in 2D and 3D, while combining highly optimised performance to produce exceptionally fast and accurate results. Outputs that can be produced from OneButton include orthomosaics, Digital Elevation Models (DEMs), true colour 3D point clouds, orthorectified multispectral band mosaics, thermal images, and controlled oblique imagery. Outputs are GIS ready for use with third-party GIS and analytics software packages.

Icaros partners with Harris Geospatial Solutions as a worldwide reseller of the OneButton software product line. The combination of Icaros' OneButton and Harris' ENVI provides customers with a complete and continuous workflow for processing aerial imagery into accurate georeferenced 2D & 3D maps and models, and producing application-specific analytics to solve challenging problems related to everything from agriculture and forestry to utilities and city planning.

Wide range of applications

Besides its OneButton product, Icaros is a comprehensive aerial geospatial solutions provider, offering photogrammetry software products, image data acquisition and processing services, analytic services and training to help companies, organisations, and government agencies make better decisions using current and accurate aerial geospatial information. Icaros' aerial remote sensing, mapping, and GIS services provide clients with tailored solutions to support a wide range of land-use and natural resource management applications. Icaros also manufactures comprehensive mapping and surveillance solutions for the Unmanned Aerial Vehicle (UAV) industry.

Icaros customers in the private sector include organisations working in precision agriculture, forestry, energy and strip mining, real estate visualisation, construction, and engineering projects. Public sector customers include national government agencies, global NGOs, and supporting companies involved in homeland security, surveillance & emergency management, aircraft flight training/simulation, and military mission planning.