

Integrating Geospatial Operations into Next Generation Design Processes

Ted Knaak (USA)

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SUMMARY

As traditional infrastructure design methods migrate from 2D to 3D modeling, this presentation aims to show a collaborative process integrating geospatial operations across downstream transportation design processes to deliver Digital As-Built (DAB) at minimum cost and maximum quality where and when they are needed.

The latest geospatial technologies such as mobile LiDAR, UAV and others quickly acquire large amounts of raw data in the form of point clouds, calibrated images and more. While this raw form of data supports the development of high quality DABs, experience has consistently demonstrated the need for a well-defined and productive process for the extraction of features, assets and topographies necessary to construct a DAB. Moreover a significant level of geospatial expertise is required to establish a traceable lineage from the raw data and any extracted DAB to documented survey control to assure the quality of every DAB. These processes are typically executed by a team within geospatial operations to deliver a DAB meeting “specific” requirements from downstream operations valid at that time. While this collaboration has proven successful at producing an “initial” DAB, the need for an on-going collaborative process across operations becomes obvious if the value of the raw geospatial data is to be fully exploited throughout the project life cycle.

We’ll look at the new TopoShare™ Geospatial Data Catalogue and how it serves a critical role in the execution of a comprehensive DAB process. We will then introduce the TopoShare™’s unique ability to effectively communicate every instance of geospatial project data across downstream operations. This communication workflow makes possible the documentation and maintenance of quality standards of DBA centered design process.

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