

Feature Analyst and Lidar Analyst 5.0

Overwatch has made available updated versions of its automated feature extraction software extensions, Feature Analyst and Lidar Analyst. These extensions provide geospatial analysts with the ability to automatically extract fully-attributed feature data such as roads, buildings, vegetation, etc. from imagery and Light Detecting and Ranging (Lidar) data. These updates help accelerate geospatial data production within the Geospatial Intelligence, Homeland Security, and commercial mapping sectors.

Feature Analyst 5.0 enables users to accurately extract and attribute features from satellite and aerial imagery. One of the most commonly collected features from imagery are buildings, and to address this need, Overwatch has created the Building Collection Toolkit which can reduce the collection time of buildings by as much as 30%. The Building Collection Toolkit furthers efficiency by automatically computing many of the commonly collected attributes, such as orientation, length, width, and area, while the new Feature Simplification tool streamlines and automates the labor intensive process of accurately incorporating extraction results into an existing database.

The adoption of Lidar technology by the defense and intelligence community has resulted in the need for advanced 3D exploitation tools capable of managing larger, more complex geospatial datasets. Many of the enhancements made to Lidar Analyst 5.0, such as improved bare earth extraction and terrain analysis, were designed in response to the high-density point clouds currently being collected by newer Lidar collection platforms. Lidar Analyst 5.0 has improved memory management, automatic tiling of point clouds, improved detection of point spacing, and the ability to perform on-the-fly re-sampling.

Version 5.0 of Feature Analyst and Lidar Analyst marks the first time both tools can be used in tandem to develop extraction models that can be incorporated into popular GIS software such as Environmental Systems Research Institute's (Esri) ArcGIS. This new capability allows users to augment their existing geoprocessing toolbox and create a complete end-to-end workflow. With the application of these extensions, along with each tool's core capabilities, analysts can leverage the imagery and Lidar data together to achieve higher quality extraction results. The end result is an improved functionality that allows the user to more precisely fix a potential target to a specific location using imagery and high resolution Lidar, optimizing targeting and providing a confident tool with which to validate Battle Damage Assessment.