# Top New Features in Global Mapper Pro v24
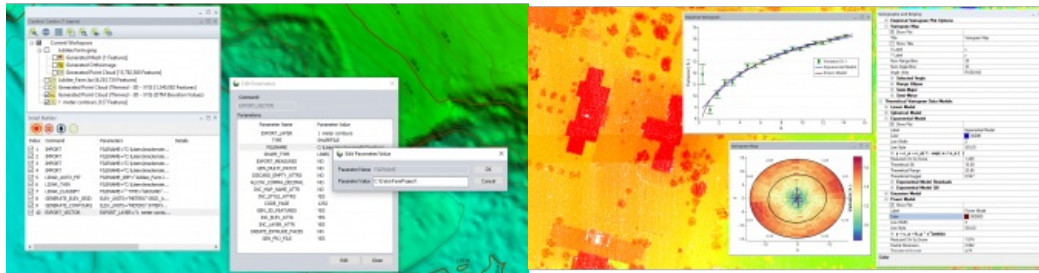
Established as an advanced and comprehensive geospatial software, Global Mapper Pro excels in terrain analysis, point cloud editing, drone-collected image processing and much more. Recent versions of the programme have worked to broaden this functionality to include Python programming language integration, assisted manual classification with Point Cloud Segmentation and manual elevation grid editing with Terrain Painting. Version 24 of Global Mapper Pro continues this work by expanding workflow optimization methods, the Lidar analysis toolset and vector and point cloud advanced analysis and data creation methods. Check out the main new and exciting features in Global Mapper v24 below.
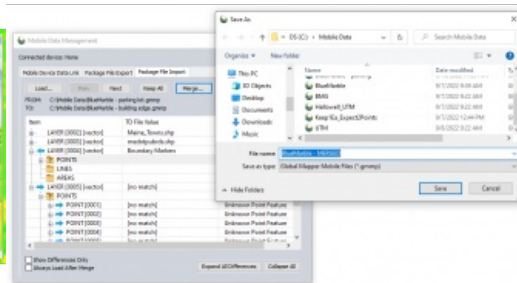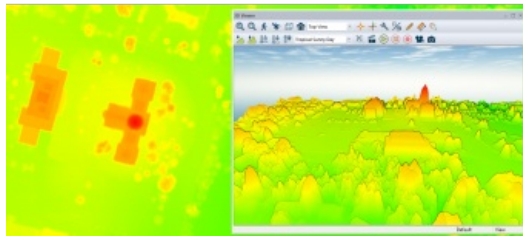
Script Builder
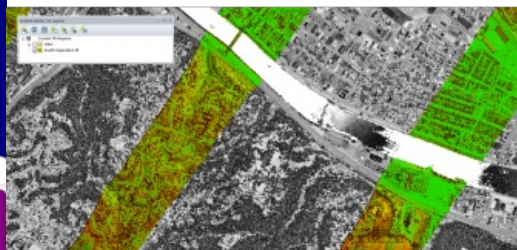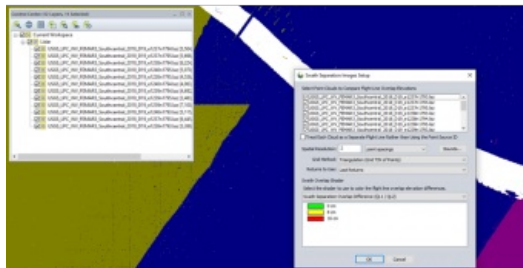
Global Mapper Script, a proprietary and text based method to automate workflows, is not new to Global Mapper. However, in Global Mapper Pro v24 a new Script Builder tool makes the creation of workflow scripts more accessible.Through this new tool, Global Mapper Script commands are recorded based on tools used in the Global Mapper Pro user interface.Enabled from the File menu, the Script Builder records actions and steps taken in the Global Mapper Pro user interface, transforming movements and tool setups to Global Mapper Script. Each command recorded by the builder appears as a line in the dockable tool interface and provides the user with options to edit individual parameters or open a sequence of commands in the Script Editor for manual editing and saving.

Along with the new tool for Global Mapper Script building comes a button option to Copy Script, now appearing in many analysis tool dialog boxes. This new option works separately from the Script Builder but allows users to copy the script command with parameters and values that mirror the tool setup applied in the Global Mapper Pro user interface. This new option dispersed throughout the Global Mapper Pro analysis tools again increases the ease with which users can begin using Global Mapper Script to optimize workflows.

By recording actions taken in the Global Mapper Pro user interface, the Script Builder helps create a Global Mapper Script for a workfl ow.

Variography and Kriging

An advanced method for data densification and prediction, the Variography and Kriging tool in Global Mapper Pro v24 is opened from the Analysis menu. Consisting of multiple dockable windows, the Variography and Kriging tool first displays an empirical variogram for the input vector point or point cloud data, allowing the user to select the input attribute used in the analysis as well as granting full control over the variogram plot through the tool settings. After plotting the calculated variance throughout the dataset, a variogram map and associated values can be displayed and explored.

The Variography and Kriging tool in Global Mapper Pro accepts point cloud or vector point data as an input.

Moving toward the kriging process and data creation, a number of theoretical models are then fitted to the data-driven empirical variogram plot, and users can compare the calculated values and formulas to determine the best fitting theoretical model to use in generating krige

estimates. Using the selected theoretical data model, derived from the input data variance, a kriged prediction layer is created in the workspace containing the estimates alongside an uncertainty measure for each point. With the output layers generated, the estimated values, referred to as generic values, and uncertainty can be visualized through the use of specialized Lidar Daw Modes.

The kriged estimates are generated as a point cloud with options to generate a gridded layer and mesh.

Mobile Data Merging

While Global Mapper Pro is a powerful application, it is an installed programme designed to run on a desktop or laptop that provides the necessary processing power for advanced operations. To use and collect data in the field, Blue Marble produces Global Mapper Mobile, a mobile app available on Android and iOS, as part of the Global Mapper Suite of programmes. In a previous release of Global Mapper, a new Mobile Data Management tool took great strides in streamlining the integration between Global Mapper desktop and Global Mapper Mobile with support for wireless data package transfer. Global Mapper Pro v24 takes this tool even further, introducing a data merging component that assists users in combining collected data from multiple Global Mapper Mobile Package (*.gmmp) files.

Designed as a data merging tool, the Package File Import tab of the Mobile Data Management tool in Global Mapper Pro prompts the user for two files, one to pull data from and the other to merge data to. With the files selected, a table view shows users the differences between the designated FROM and TO files tracked by unique GMMID values generated in saved package files from Global Mapper v24 and the latest version of Global Mapper Mobile.

A new Package File Import tab in the Mobile Data Management tool allows users to more easily merge data from two different package fi les.

Clearly marked by icons in the list of data items, users are able to make decisions about differences between the TO and FROM files, marking which entries to keep and discard from each input package file. With all differences resolved, the data can be merged and exported to Global Mapper Mobile Package (*.gmmp) format before being loaded into the open workspace.

Swath Separation Image Creation

Adding to the set of Lidar analysis tools available in Global Mapper Pro v24 is Swath Separation Image creation. A functionality requested by users of Global Mapper Pro, the Swath Separation Image tool is found on the Lidar toolbar and generates an image of a point cloud showing the vertical separation between overlapping collection swaths or layers. The generated image depicts the intensity value of the point cloud and shades overlap areas with specific colours to display separation at designated vertical offset thresholds.

swath separation image is created in Global Mapper Pro from layers of Lidar data.

A simple to execute tool, Swath Separation Image creation in Global Mapper Pro v24 aligns with the USGS base Lidar specification and automatically exports the generated image to GeoTIFF (*.tif), JPG (*.jpg), JPG2000 (*.jp2), ECW (*.ecw) or PNG (*.png) format at a user-specified location. The saved file is then automatically loaded into the Global Mapper workspace, allowing the swath separation to be explored for data quality assurance purposes.

The generated swath separation image uses designated colours to show the vertical offset between Lidar swaths.

Providing users at all skill levels with advanced tools, Global Mapper Pro continues to be an affordable all-in-one GIS software solution. As a programme used throughout many industries, the new tools available in version 24 are sure to increase the indispensability of Global Mapper Pro as a tool for teams worldwide.

To check out the exciting new functionality in Global Mapper Pro v24, download a free 14-day trial from www.bluemarblegeo.com today! If you have any questions, please contact us!