

Utilizing GIS software to generate digital twins using data collected by UAVs



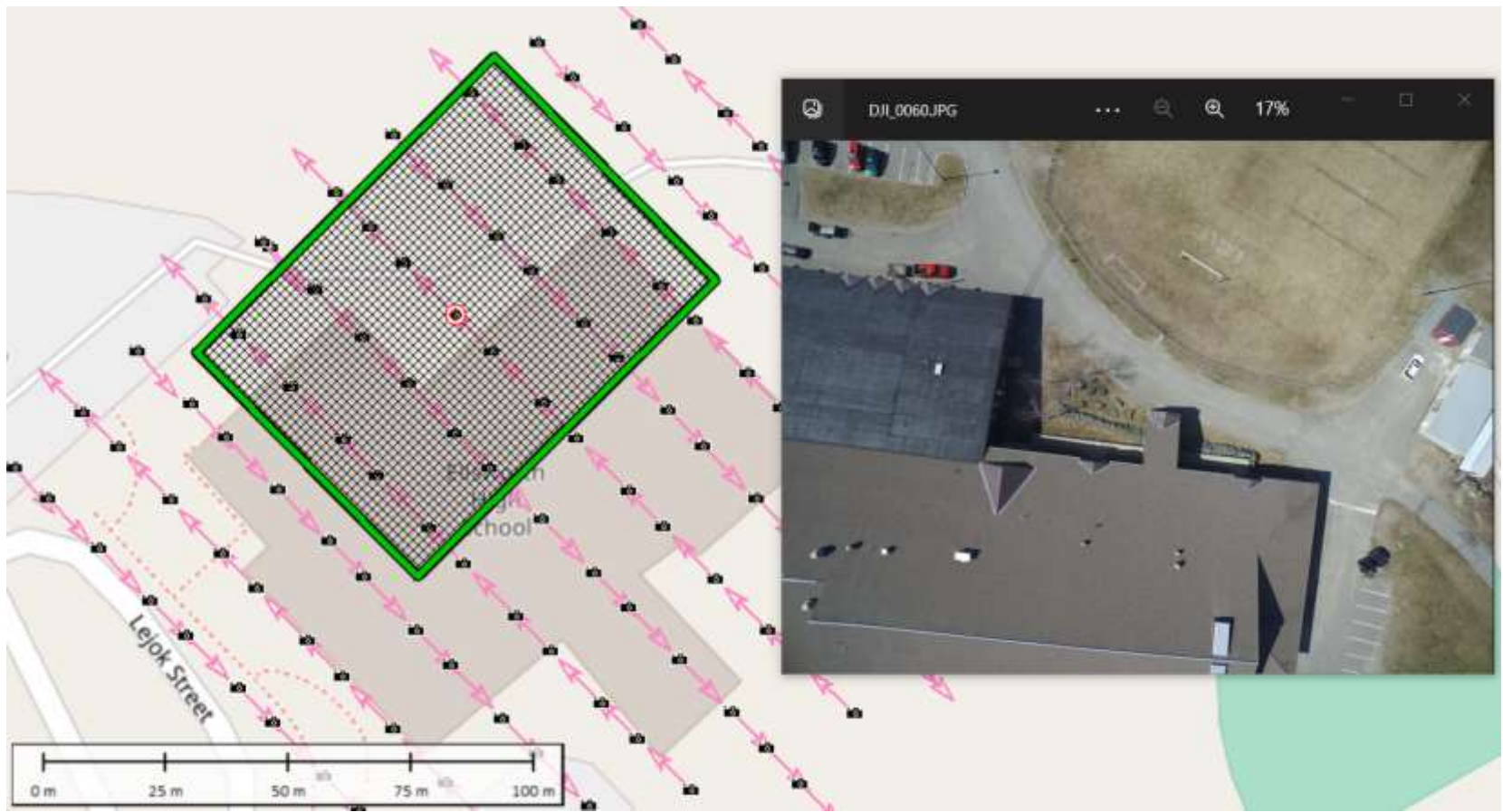
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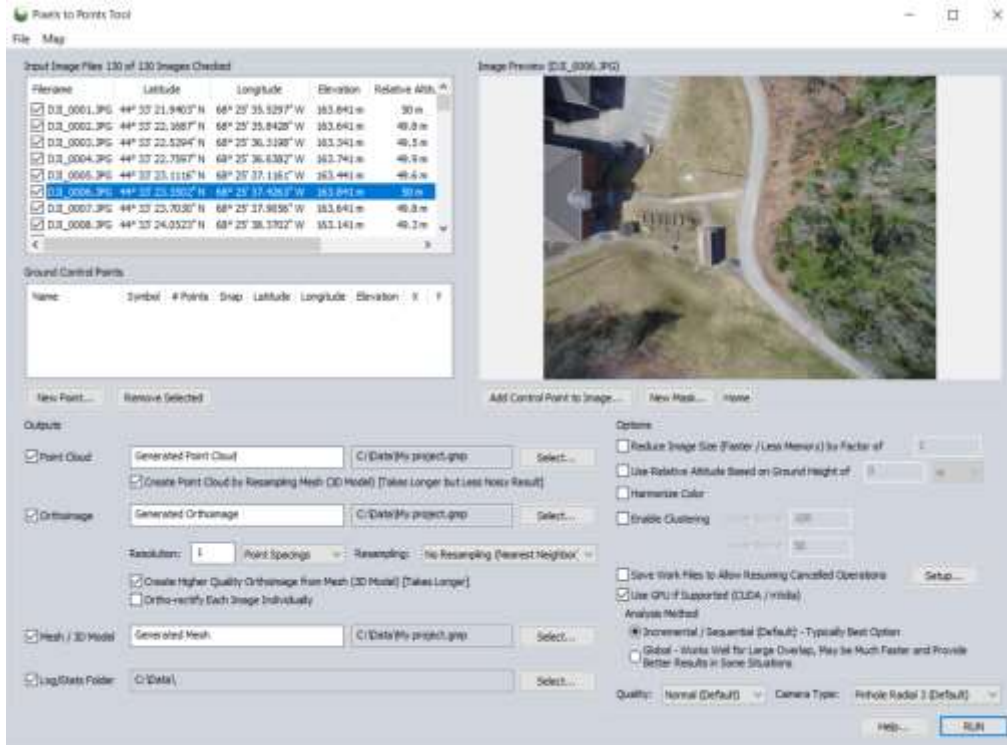
Synopsis



- Creating a Digital Twin model for further analysis of environmental impacts and energy security.
 - Solar Panel Placement
 - Water Erosion Control
 - Water Pollution Analysis

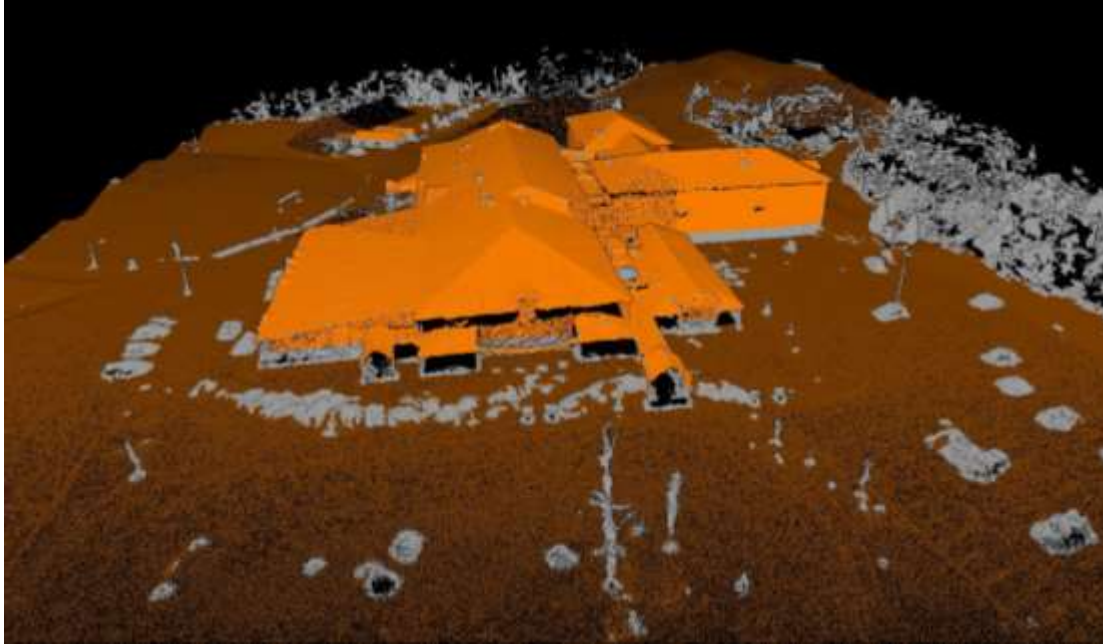


Pixels to Points in Global Mapper Pro



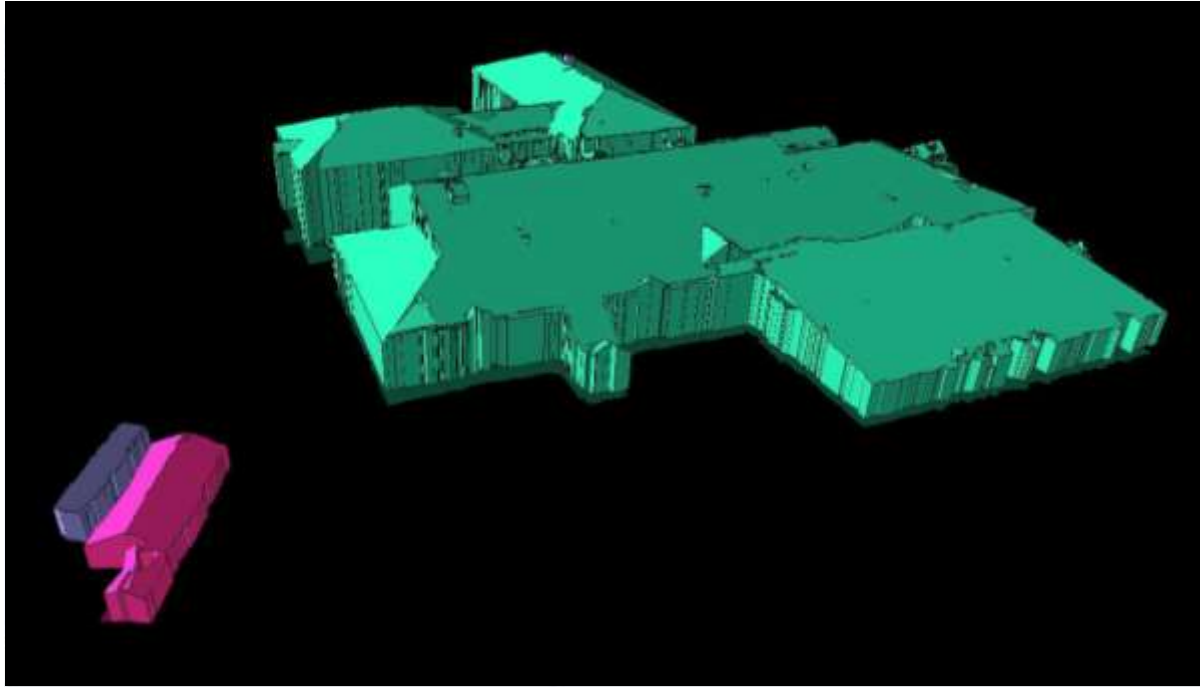
- Import image files
- Select required outputs
- Add control points if available to improve 3D accuracy
- Generated data layers:
 - High-density point cloud
 - Orthoimage
 - Textured 3D model

Ground and Building Classification



- Using Global Mapper's Automated Point Cloud Analysis
 - Segmentation methods better differentiate between clusters of points
 - Multiple classifications can be run together

Building Feature Extraction



- Creates vector features and building classified points
- Options for building footprints, side walls, roof planes, and a 3D mesh model

Point Cloud

Orthoimage

3D Model



Thank you!



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