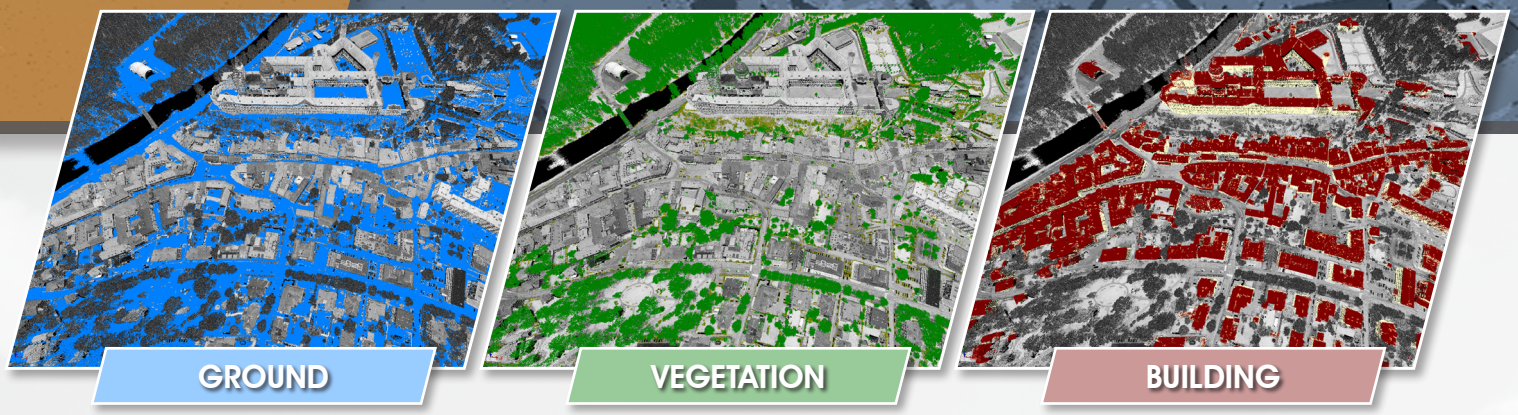
LIS ALS Classification Plugin

RiPROCESS – Airborne LiDAR Point Cloud Classification

This plug-in facilitates the classification of point cloud data into ground, building and vegetation points.

It is fully integrated into the RiPROCESS data processing software package and works directly on the project's RDB2 point cloud data. Data export and tiling for classification in third-party software are not required. Data analysis is further streamlined by multi-threaded processing.



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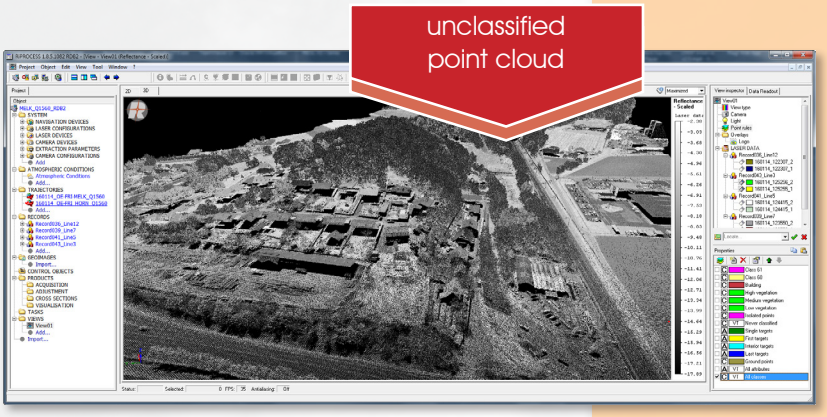
Data Preparation

The classifiers work either on the whole project data, selected flight strips or a user-defined region of interest. Data tiling with overlap is performed on-the-fly, the classification result is written back to the individual data records without overlap. The assigned classification identifiers correspond to the ASPRS LAS standard.

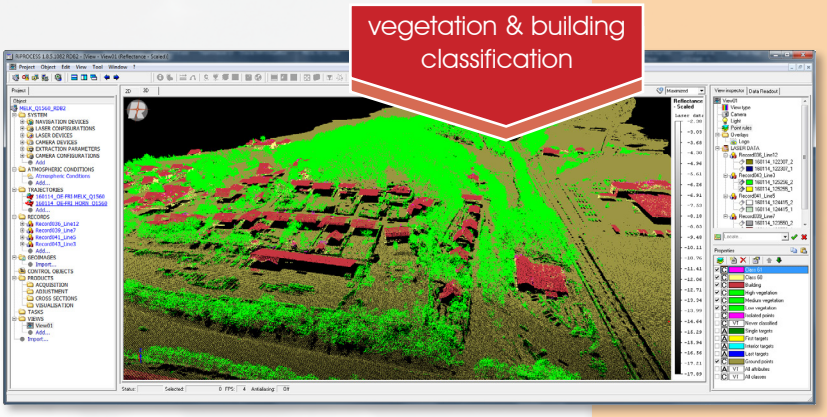


Ground Classifier

The ground classifier, based on a progressive TIN densification, separates ground and non-ground points. It provides three default settings for flat, sloped and steep terrain, which can be easily modified. Additional fine tuning of parameters is possible in the advanced settings. Besides the point classification the classifier also computes the height above ground of each point and stores it as additional attribute for further classification and analysis tasks.

Vegetation & Building Classifier

The building and vegetation classifier further separates all non-ground points into the classes building, vegetation and undefined. Buildings are detected by point cloud segmentation and analysis of the local point neighborhood. Additional filters can be used to remove vegetation remains from building roofs and to clean building facades. Vegetation points can be filtered by local point density and sliced into low, medium and high vegetation.



ASPRS LAS class codes:
1 unclassified | 2 ground | 3 low vegetation | 4 medium vegetation | 5 high vegetation | 6 building