

3D Tree segmentation from point clouds (LiDAR, DSM)



This turn-key software extracts single trees from high resolution point clouds. Based on a subdivision of the forest volume the method three dimensionally **segments trees in all forest layers**. The novel and patented 3D-technique leads to outstanding and unrivalled results in forest segmentation in terms of quality and completeness.

Features:

- Dominating trees as well as small trees in lower forest areas are extracted
- Fully automatic and seamless processing of large scale areas
- Utilizes outcomes of full waveform decomposition (i.e. intensity, pulse width)
- Optional: Watershed-based segmentation of canopy surface only
- Results are stored in a shape file per tree.
- Platform: C/C++, Windows or Linux, stand-alone application or as a library for integration

Input data:

- DTM (either raster or random, ASCII)
- LiDAR data (XYZ, optionally intensity and pulse width, ASCII or LAS 1.3)

Output data:

- Tree position
- Tree height
- Crown base height
- Crown volume
- Optional: LiDAR points of segmented trees

Service and Product:

- The software can be
 - o installed as a stand-alone tool for service calculations, or
 - o provided as a library for integration in customer tools
 - Service (offline calculation) can also be provided
 - Extraction of other forest objects is possible as well.
- For further information please contact one of our service members.

