

TreesVis (v059c) – Product Sheet

TreesVis – What is it?

1. TreesVis – What is it?

TreesVis is a powerful processing, analysing and visualisation software for LIDAR laserscanning data. It can handle both fullwave data and common first/last-pulse data sets. All processing steps from reading raw data, calculating digital terrain models (DTM) and digital surface models (DSM) to 3D-visualisation of the results are integrated. While through DTM calculation the results are a digital height model from the real bare ground without vegetation, a DSM displays the height of the uppermost surface with vegetation and artificial buildings.

The software is developed with focus on the special purposes of forestry applications. Special features are implemented that for example aim on purging your forest stands from unwanted objects like buildings.

TreesVIS provides the comfort of a graphical user interface (GUI) (Fig. 1) as well as the control of a shell-output to monitor the detailed processing steps (Fig. 2). The GUI comes in common Windows style and is easy to use due to its self explaining menus.

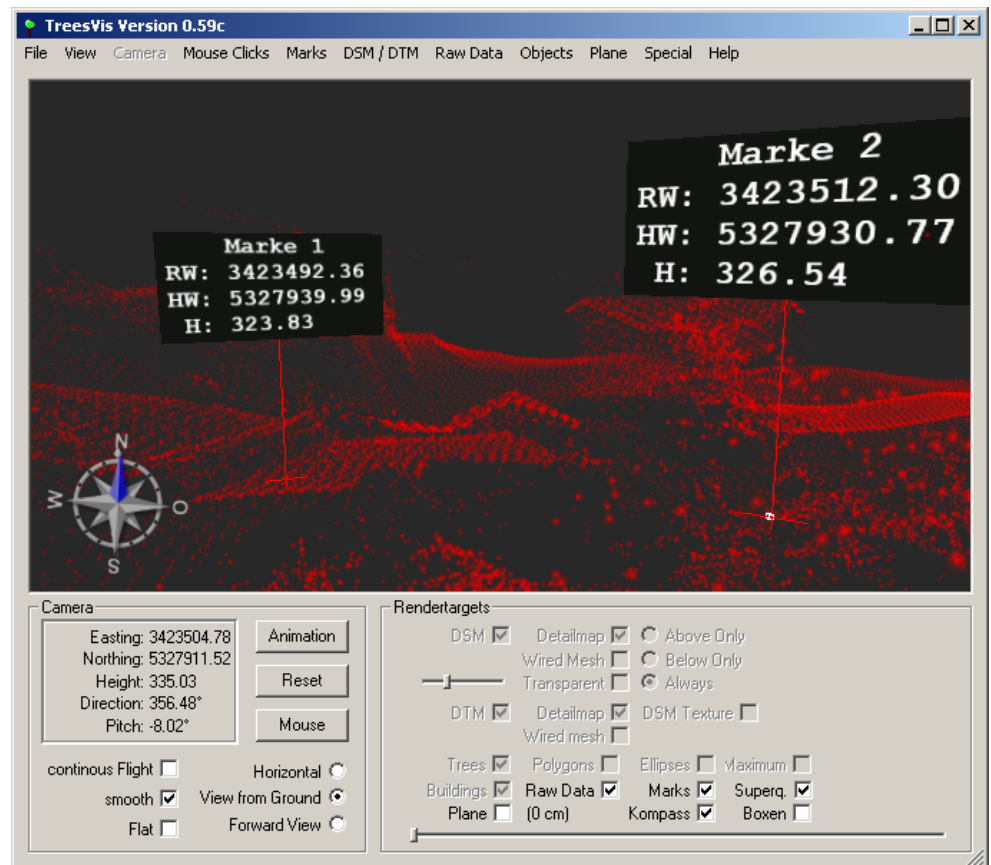


Fig. 1: GUI with rawdata loaded and terrainmarks set

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TreesVis
TreesVis Version 0.59c
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This copy of TreesVis is licensed for:
Name       : Holger
Company    : daheim
License type : All users
Program type : Full program

Hardware - Vertexprocessing
... Pure-Device!
Vertex-Shader
Sie sollten schon zwei Marken gesetzt haben...
1314323 Rohdaten geladen
Klick auf Rohdatenpunkt bei:
Rechtswert: 3423491.22
Hochwert  : 5327941.8
Hoehe     : 323.77

Klick auf Rohdatenpunkt bei:
Rechtswert: 3423492.35
Hochwert  : 5327940.04
Hoehe     : 323.88

Klick auf Rohdatenpunkt bei:
Rechtswert: 3423505.77
Hochwert  : 5327917.59
Hoehe     : 331.69

Klick auf Rohdatenpunkt bei:
Rechtswert: 3423512.26

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Fig. 2: Output and control window

Key features

Working with rawdata

Visualisation and navigation

DSM and DTM extraction

2. Key features

2.1 Working with rawdata

- Rawdata can be imported as ASCII or binary
- Additionally ASCII data can be easily converted into binary
- Exportation of rawdata to XML
- There are advanced functions to union sets of rawdata, filter or separate them relating to the DTM or DSM

2.2 Visualisation and navigation

- Realtime visualisation of pointdata or DTM/DSM-surfaces
- Comfortable navigation through the data in camera view either by keyboard or by mouse or both simultaneously
- Adaptable view features like illumination or camera settings and saving them in different profiles
- Recording of movies for presentation
- Setting of pointmarks in the terrain and retrieving of 3D-coordinates from every point
- Create transects through the terrain
- Separate loading of tree and buildings polygon data

2.3 DSM and DTM extraction

- Extraction of DSM, DTM and nDSM (Difference DSM-DTM) Data with customized settings
- Consider terrain adjusted methods for computation
- Tile function for large areas with huge amounts of data with the preferred rectangular tile size

- Select the DSM/DTM area in a rectangle of arbitrary size and rotation angle. This option is important to save disk space.
- Excluding of existing building polygons that won't be considered in the DTM or DSM extraction
- Setting options for colour, illumination and shadow of the DSM/DTM

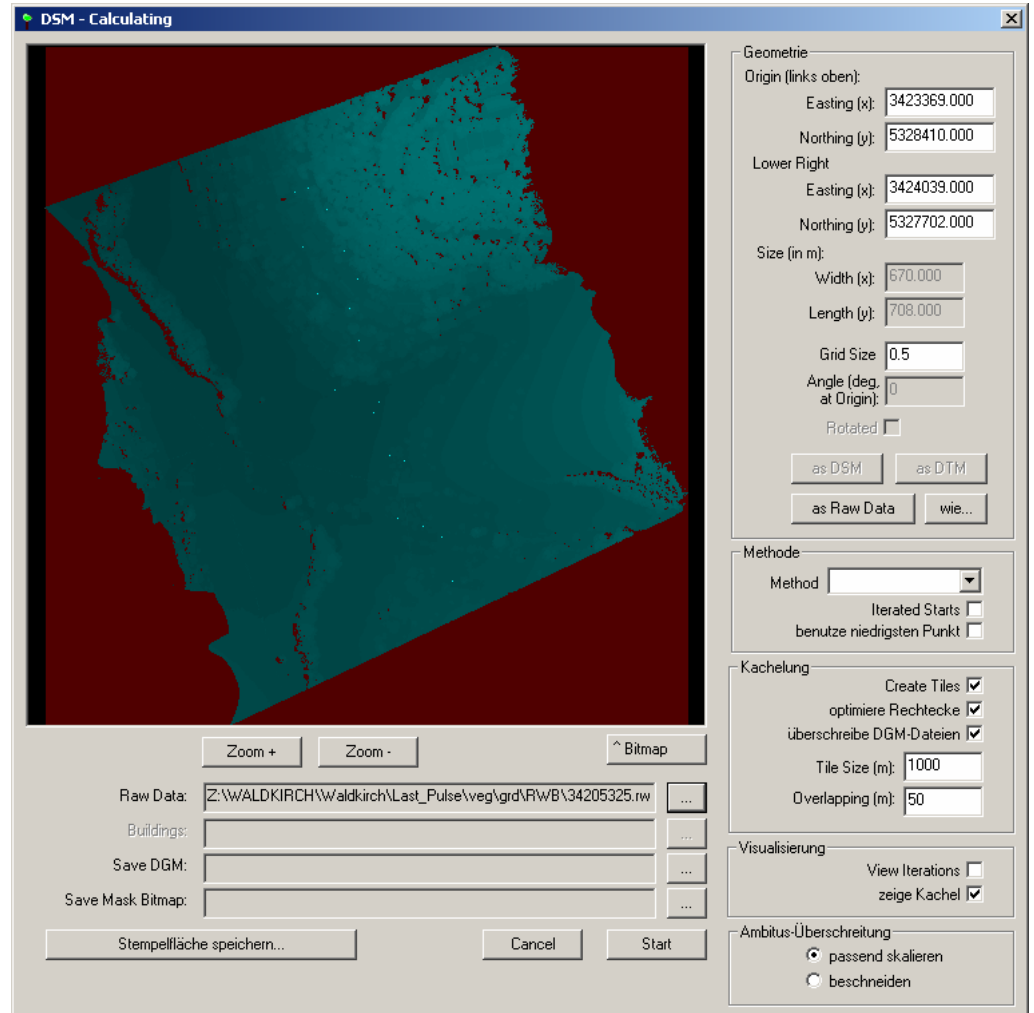


Fig. 3: Settings for DSM calculation

Special features

2.4 Special features

- Automatic fullwave analysis with all pulses
- Real-orthophoto computation
- Sun position calculation

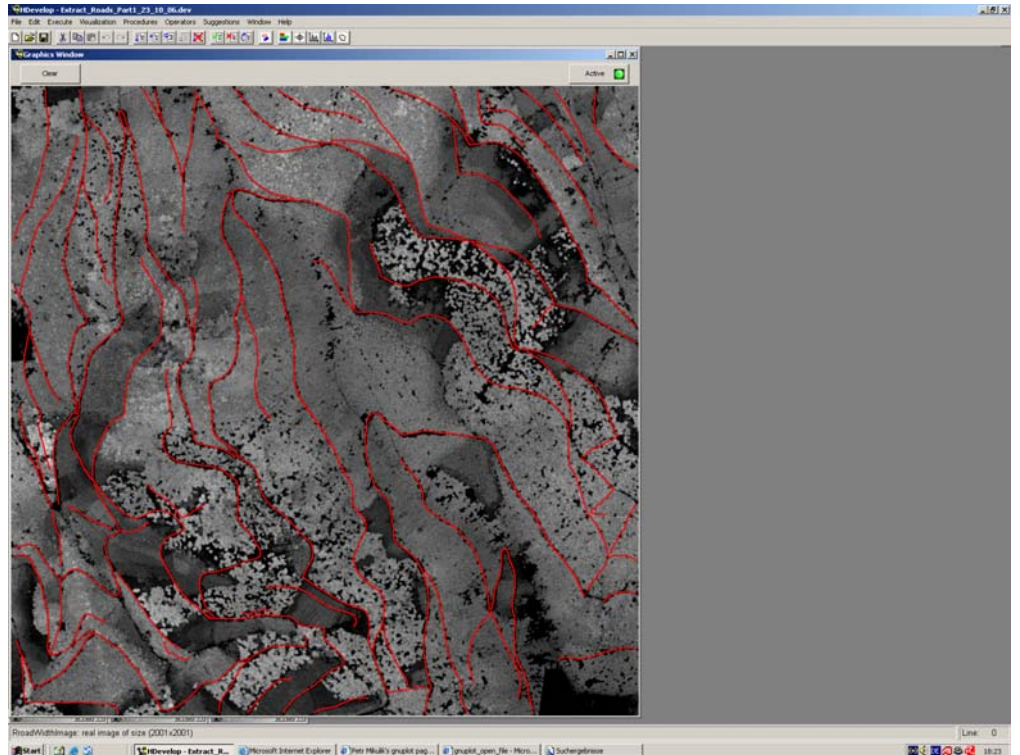


Fig. 4: Delineation of forest roads in HALCON

Separate modules with HALCON

2.5 Separate modules with HALCON

There are separate modules available in combination with a HALCON licence. These are:

- Tree delineation
- Forest stand delineation
- Forest road and path delineation (Fig. 4)

FeLis Data Services

3. FeLis Technology Research Transfer Center Data Services

The FeLis Technology Research Transfer Center provides a special service for LIDAR products. Based on the software we generate different information and map products with focus on meeting the customers individual demands. Please contact us for detailed information.

Supported file formats

4. Supported file formats

Due to the implemented gdal-library TreesVis supports all common raster formats. This enables a direct interchange with most GIS and image processing systems.

TreesVis System Support

5. TreesVis System Support

- Windows NT, 2000, XP
- DirectX 9.0 support

Recommended minimum:

- 1 GB RAM
- Graphic card with 256 MB RAM
- Pentium IV processor