

TerraScan New Features

What's New in Terrasolid Jan 2020

Webinar

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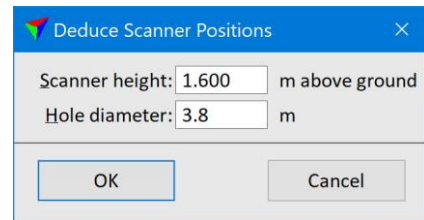
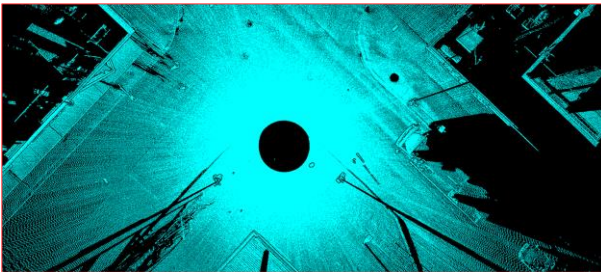
Various Improvements

- **Thin points** has new choices for point to keep: **First echo** and **Last echo**
- Thin points has **Keep whole pulse** option
- **Note** text field added to **Modify Tree Cells** and to **Output Trees**
- **Increase by file** setting added to group id in importing trajectories
- **Classify / By class** supports multiple source classes
- Support for **GPS seconds-of-day** and **UTC seconds-of-day** source time stamps when importing trajectories or converting trajectory time stamps

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Deduce Scanner Positions

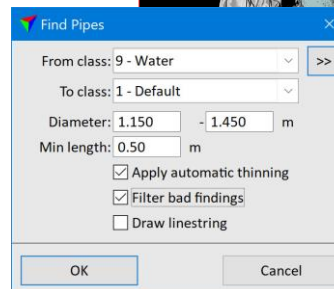
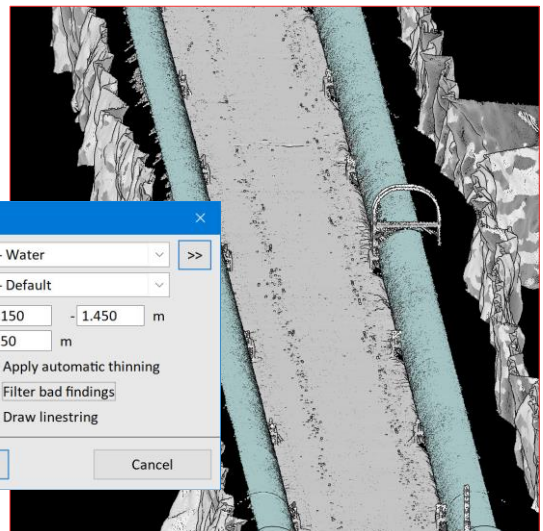
- Menu command in **Manage** Trajectories
- Creates trajectory information for tripod mounted scanner data where:
 - Each scan has its own **Line** number in the point cloud
 - Scanner appears as a circular void area without points
- Routine computes average xy of points in one line and then searches for void area



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Find Pipes

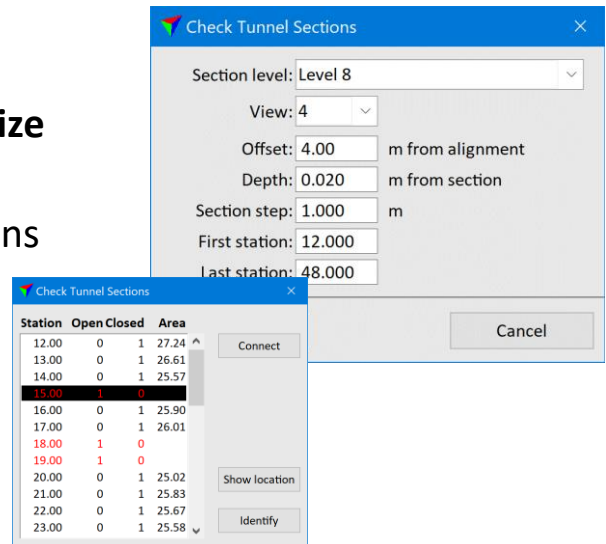
- Finds circular pipes from the point cloud
- Classifies points
- Produces an optional centerline vector
- Note: Compute Normal Vectors before running **Find Pipes**



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Check Tunnel Sections

- Tool for checking tunnel cross sections generated with **Vectorize Tunnel Sections**
- Gives a traversable list of sections
- Creates cross section view automatically
- **Connect** button for connecting vectors



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'Add using files' in Define Project

- Creates a project definition (=list of blocks) from a collection of FastBinary or GeoTIFF files
- Use this if you get tiled point clouds but have no corresponding project definition
- Reads bounding box from each file and uses that as block boundary
- Steps before running this tool:
 - Create project definition with same file format as point cloud files
 - Save project in same folder with point cloud files

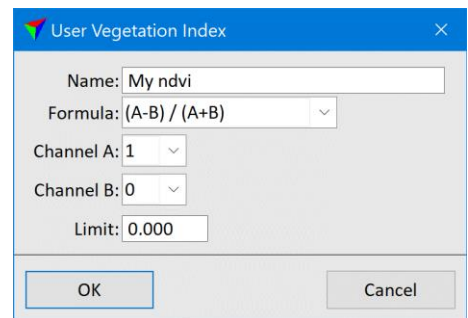
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Find Danger Objects Improvements

- Option to report only the closest wire hit for each laser point
- New fields in **Output Report**:
 - Xy distance – horizontal distance between laser point and hit on wire
 - Z difference – vertical difference between laser point and hit on wire

User Defined Vegetation Indexes

- **Scan Settings** tool has **User Vegetation Indexes** category where user can define vegetation
- Handful of mathematical formulas to choose from
- User chooses which channels to use
- Built-in **Normalized difference vegetation index** assumes channel order: red, green, blue, near infrared
- Built-in **Visual band vegetation index** assumes channel order: red, green, blue
- User vegetation indexes work with any channel order



Move Section Improvement

- **Almost full depth** option added to **Move Section**
- Added because **Full depth** option can cause problems when user zooms in and out in the cross section view with mouse scroll wheel
- After zoom in and zoom out, cross section does not match original precisely
- Next **Move Section** with **Full depth** will then potentially leave a small gap between consecutive cross sections viewed

Write Buildings to Database



- Writes vectorized buildings to 3DCityDB database
- Replaces if building exists already in the database
- Write geometry (=vector model) and optionally textures

Write Buildings to Database dialog box configuration:

- Database: jyvaskyla
- Write: Selected buildings
- Level: LOD2
- Write method: Add to database
- Write textures

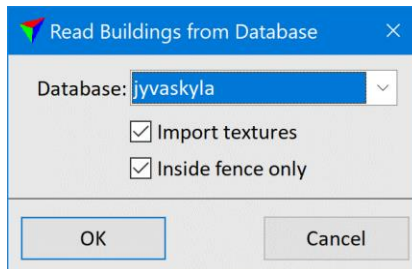
City Database Source dialog box configuration:

- Database type: 3DCityDB 4.0
- Name: jyvaskyla
- Connect string: jyvaskyla
- Coordinate system: 3880
- Building id field: BUILD_ID
- Texture theme: terra_texture

Read Buildings from Database



- Reads buildings from 3DCityDB database into design file
- Reads both vector model and texture
- Stores building database id so writing can replace old information in database



Delete Database Buildings



- Deletes selected buildings from database
- Use this when buildings have been demolished or database building is bad