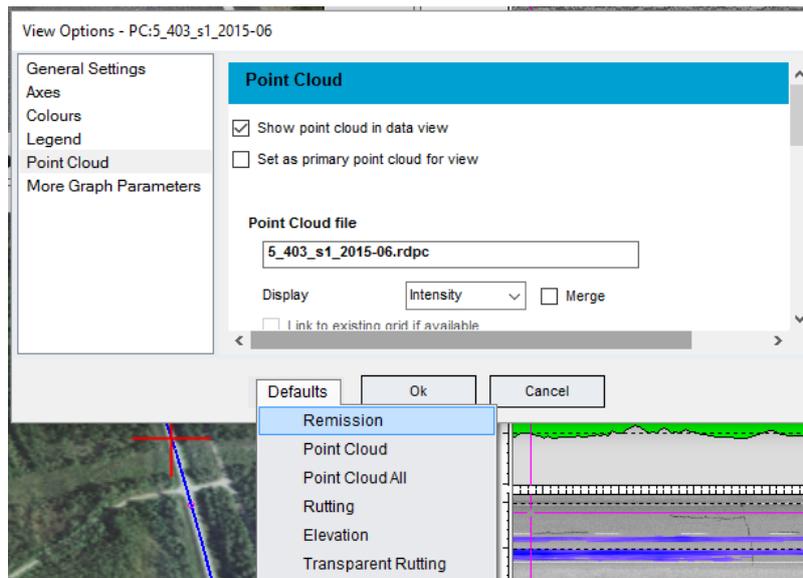




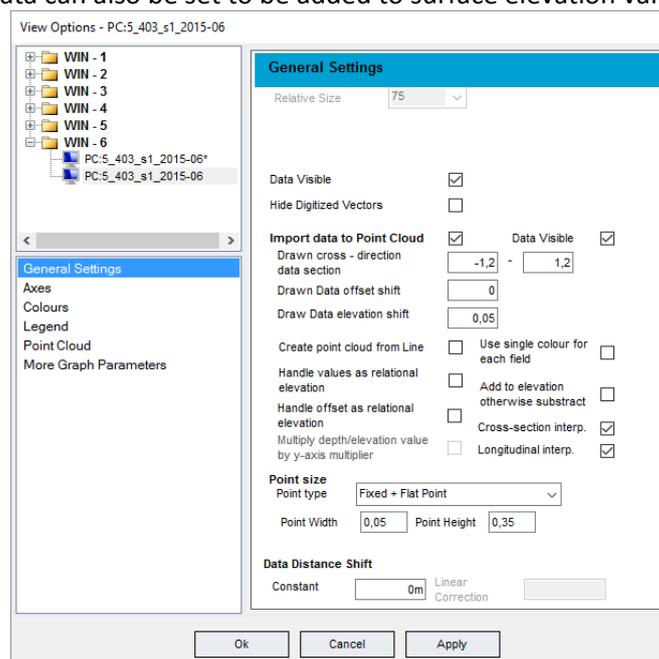
Main new features of Road Doctor® 3.2

Point Cloud

Using the point clouds is easier than ever before in Road Doctor®. All the default settings for major use purposes can now be selected from the defaults menu in the view settings instead of going through the parameter panels and may be forgetting one. Rutting, remission, elevation and point cloud view default settings are available.

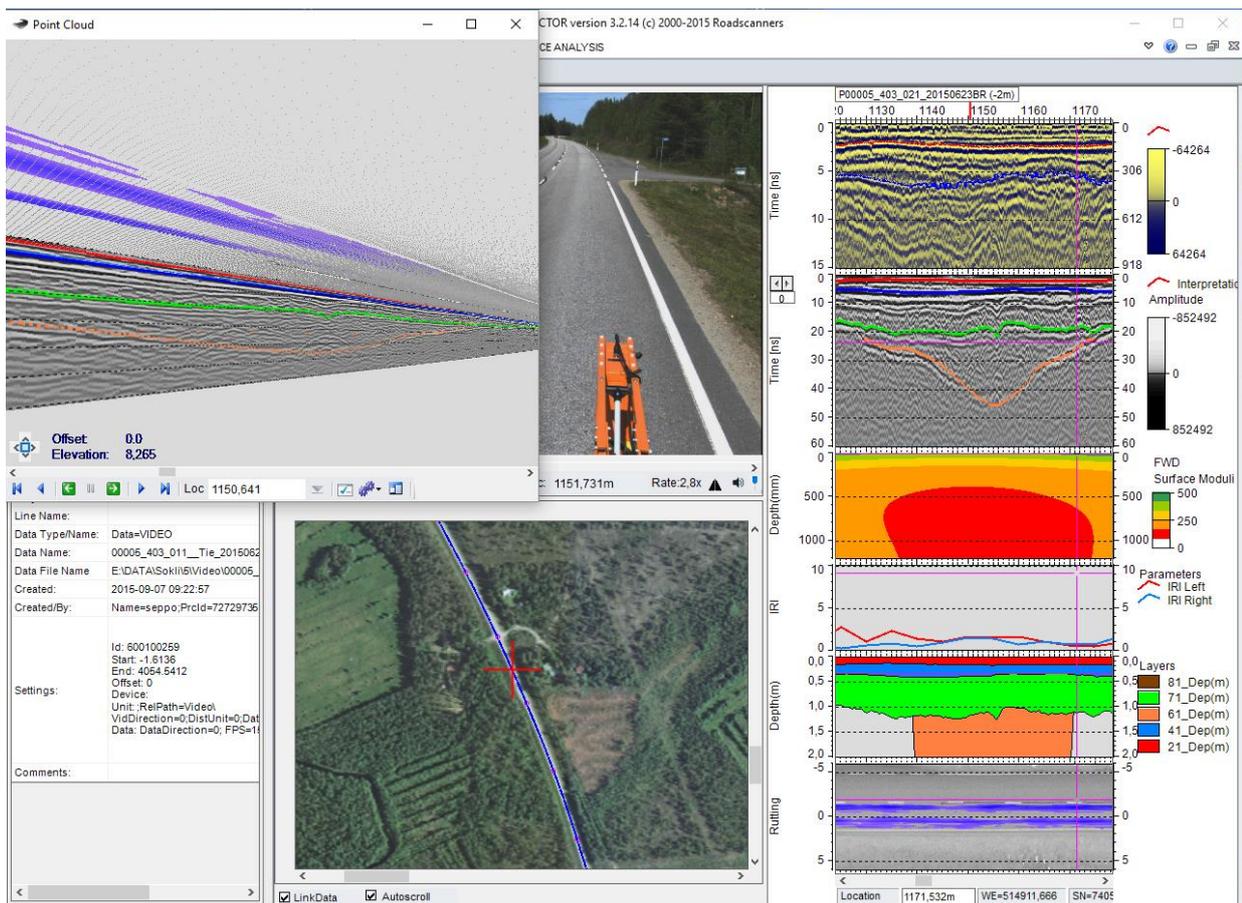


Now, the point cloud display supports also possibility to show databases as lines and as from - to and vertical surfaces. The GPR interpretations can be exported to a database and the results displayed in a point cloud as single colors or as colors varying by depth. Using the data offset row as depth makes possible to turn surface images 90 degrees. The data can also be set to be added to surface elevation value instead of subtracted.



The surface images can now also be interpolated both longitudinally and cross-sectionally, which makes images smoother and more like the same as in the view. There is also a new method for showing the points on the screen. Now a combination of fixed point and flat point can be selected. The near points are shown as flat point and further away points as fixed points.

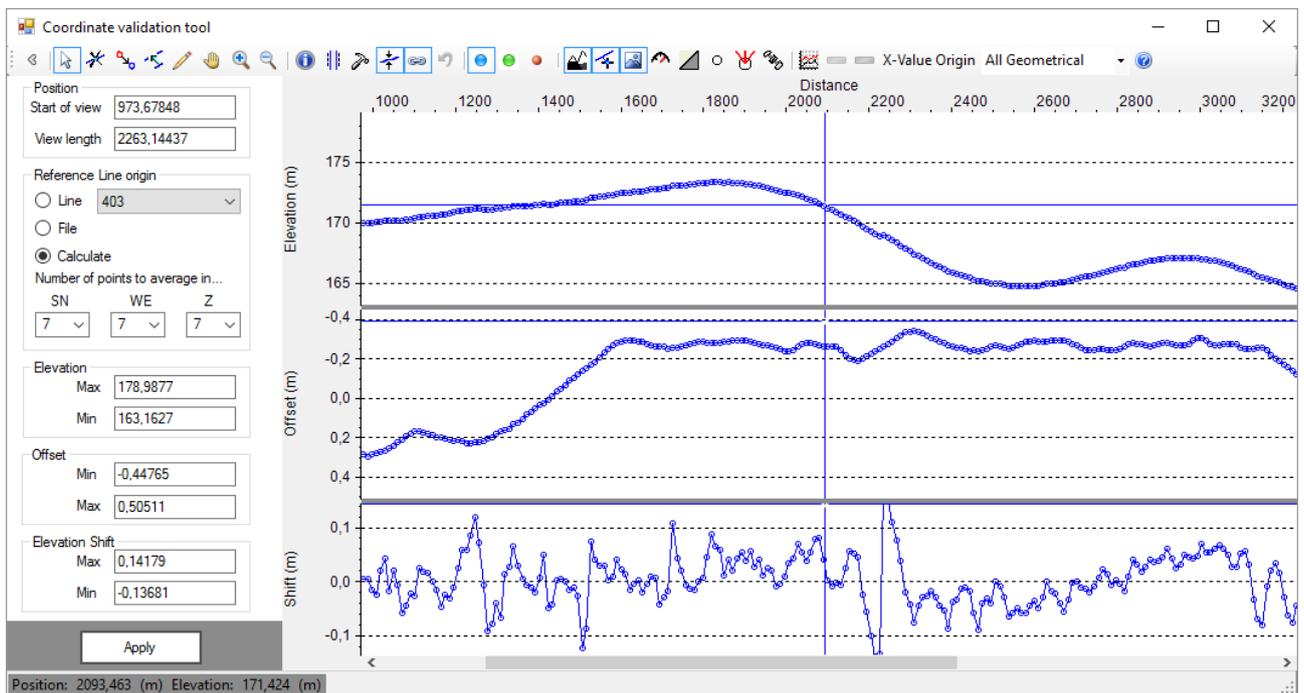
As a special feature also GPR data can be displayed with Point cloud.



Coordinate handling

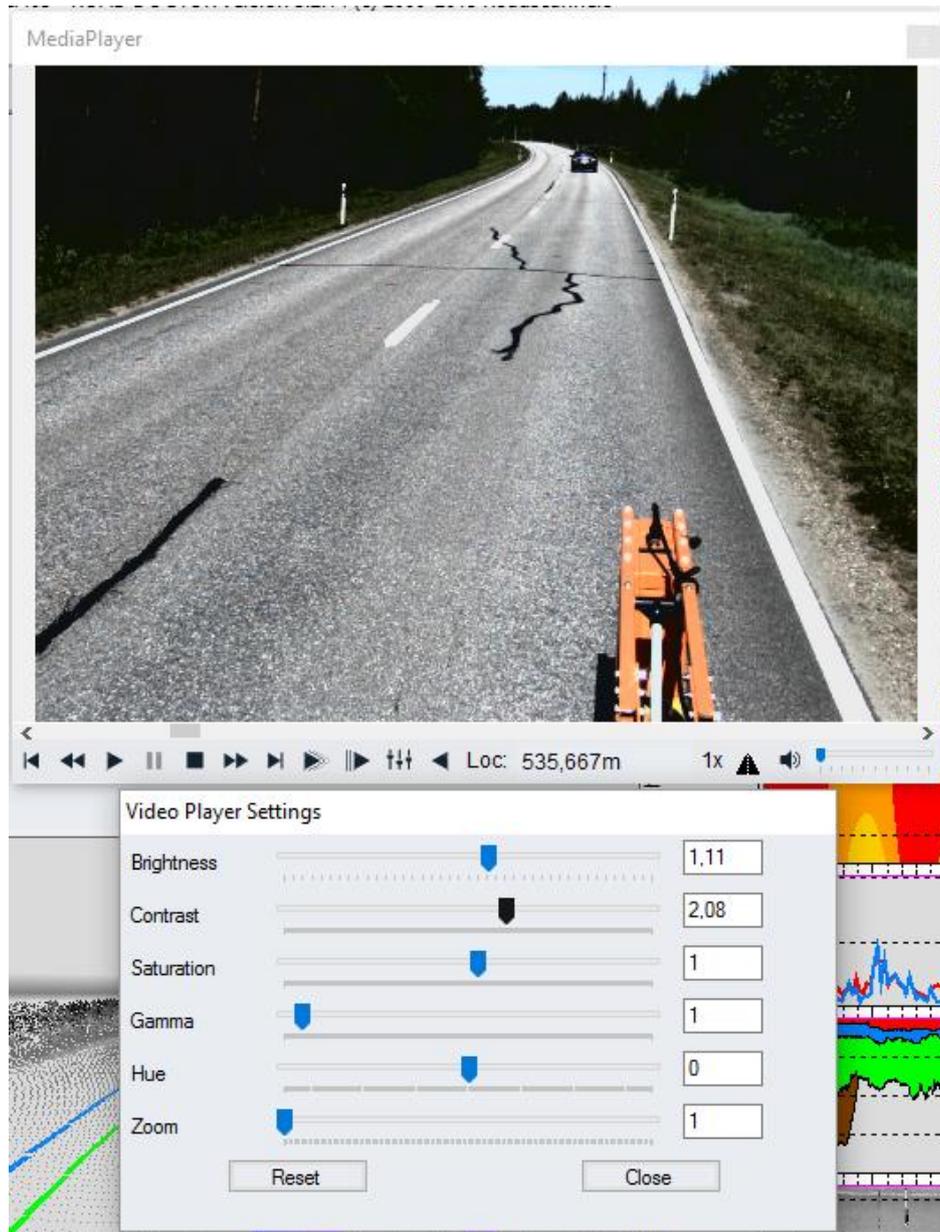
A new tool exists for editing the coordinates in the map view. The coordinates shown in the map view are interactively connected to elevation/coordinate location editing tool. The tool makes possible to compare elevations and positions between two coordinate files or to filtered coordinate file, which is created from the file itself. Also all the GPS quality parameters are visualized. The elevations can be corrected by hand and/or points removed.

Road Doctor's Map view now saves always a georeference file with map images. This makes linking the thematic maps to other mapping software much easier. Also the single map image linking operation now supports georeferenced files.



Video

A new video player is included. Road Doctor® uses now libVLC-media player library for displaying videos (http://www.videolan.org/vlc/libvlc.html). This gives possibility to changes the contrast, brightness, color saturation and gauss correction in videos. A video can also be zoomed and the running speed changed. Nice feature is also that the video can now be taken out of the view to external window on the screen.



New Features for GPR

Multiprocessor support makes almost all on-line GPR processing faster than before. With many operations the speed advantage is a multiple of number of cores in the computer's CPU. Specially, multichannel data processing is much faster than before.

The GPR Data buffering operation makes possible to display and analyze multi-channel data quickly on the screen. The buffered data section, which can be much longer than the data shown on the screen, is processed and loaded in to memory for very quick access. Viewing 100 channels 3D bridge data on the screen is as fast as viewing single channel GPR data. The interpretation is much faster than before, because there is no need to wait for the next screen to show up. Also any view, where are many GPR-profiles displayed can get benefit of this feature.

RD Horizontal Axis Parameters

View Length: 50m Make As Default

Major Tick Mark: 10m Use Default

Minor Tick Mark: 1m Set Autom. Tickmarks

Use GPR Data Buffer Reset Data Buffer Press <Alt> to load new Data to Buffer

GPR Buffer Length: 5000m

Axes Name: Distance [m]

Distance Unit: m Separator: <+>

Read Chainage based on Areal Coordinates-file Settings

Show Section Instead of km or mi

Ok Cancel

On Screen GPR Processing

Operations (Double click to Add to List)

----- 1-D Operations -----

- DCC : Amplitude Dc Level Correction
- BGR : CAL Background Removal, Calculated from Data itse
- BGR : PRE Background Removal, Predefined Background
- AMP : Signal Amplification
- VFI : Vertical Time Domain Filtering
- VFF : Vertical Frequency Domain Filtering
- ARI : Arithmetic Operation
- HL : Hilbert Transform
- ELV : Bouncing Removal Operation

----- 2-D Operations -----

- HFL : Horizontal Low Pass Filtering (Averaging)
- HFH : Horizontal High Pass Filtering (Background removal)
- MIG : Migration

Apply to Multiple

Apply

OK

Cancel

Remove old .pro-file

Reset Parameter Locations

Parallel Processing used

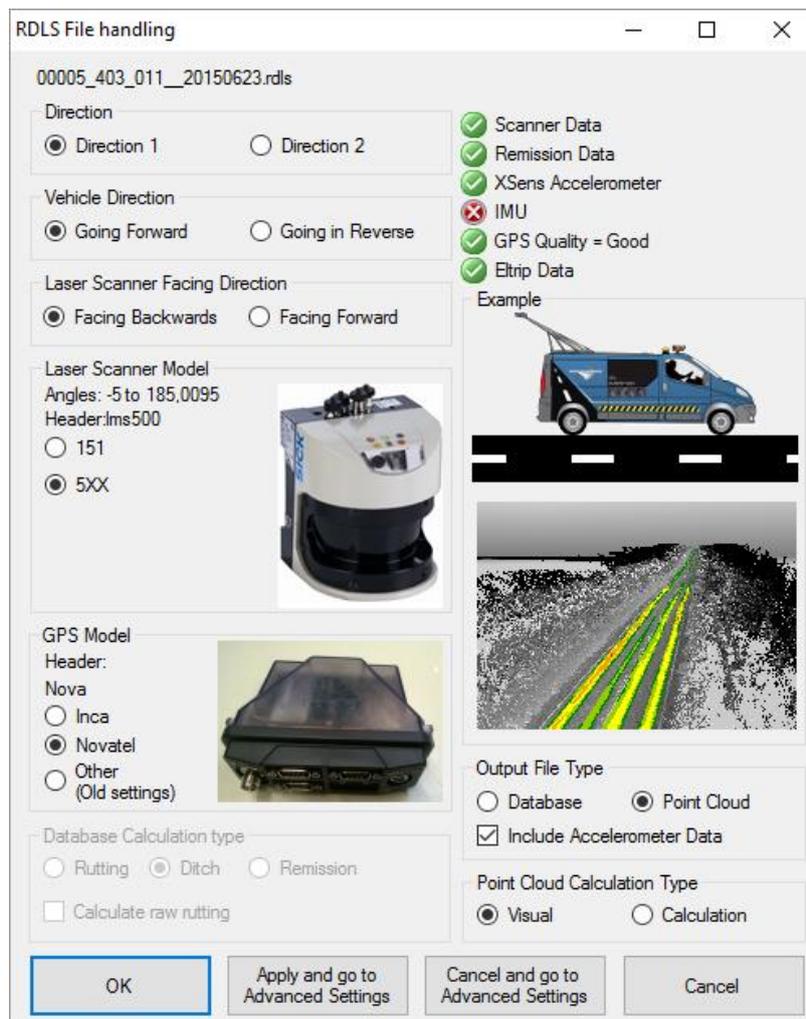
Previous Data Next Data

Selected Processing Operations

Num	Act	Oper	Type	1stTra	LastTra	1stSmp	LastSmp	
1	X	BGR	CAL	1	40752	1	1024	BLc=7169;Lc
2	X	VFI	BOX	1	40752	1	1024	HP=120.471
3	X	MIG	KIR	1	40752	1	1024	Wid=51;ErV

Road Doctor® Survey Van Laser Scanner data handling

The laser scanner data reading operation has been made much more user friendly with animated images. The laser scanner data reading operation supports now also IMU, if it is connected and data collected. IMU makes possible to correct the laser scanner position much better than before.



Falling weight deflectometer

Now the Elmod™ link is working in Road Doctor as it used to work in the previous versions or Road Doctor®.

Database support

Road Doctor® now supports also PostgreSQL and SQLServer. Also data filtering operation were made active for all databases.

Drag and Drop support and GPS support in views

Road Doctor® supports now drag and drop for text and excel files and also for GPR files. The program automatically opens table view or GPR view depending on the data type. A Road Doctor project file .rdp can be dropped and a project opened in that way. As a new feature an .rdbat file is supported as drag and drop and also as a batch file. Rdbat-files include information that Road Doctor® can use to open one or several previously made views automatically on the screen. These views can be synchronized with GPS.