

# LIS TreeAnalyzer Plugin

## RiSCAN PRO – Single Tree Segmentation and Analysis

3D recording of stocked areas and in particular the evaluation of these data were so far dreams of the future.

Now – with the current generation of RIEGL VZ-i Terrestrial Laser Scanners, e.g. the VZ-600i, and the latest version of RiSCAN PRO and the LIS TreeAnalyzer Plugin – such tasks are not only feasible and exactly calculable but can be satisfactorily completed in a short amount of time!

RIEGL's LIS TreeAnalyzer Plugin enables the automatic extraction of various individual tree parameters from terrestrial point clouds and their further processing in corresponding software packages for forestry applications.

- ▶ fast inventory workflow
- ▶ reliable measurements
- ▶ objective data
- ▶ digital archive for analysis and evaluation at any time

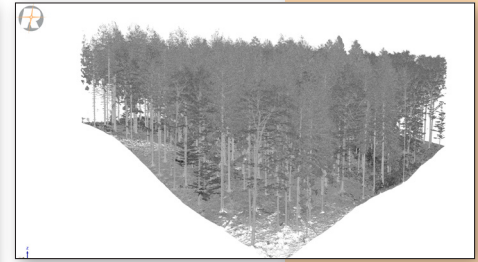


Contact us

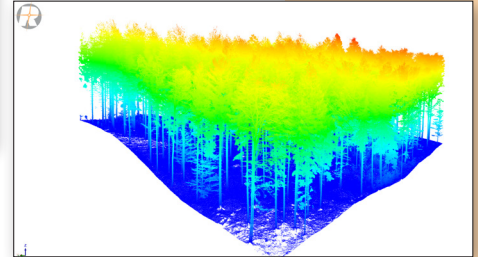




Single scan in forest environment:  
 RIEGL VZ-600i, point spacing 6mm@10m, 25 sec scan time, pictures included



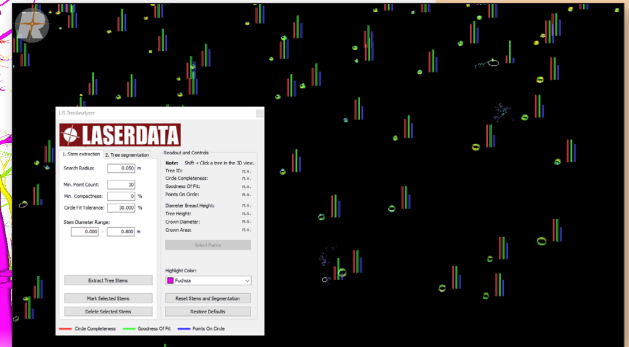
combined point cloud of different scan positions, reflectance colored



colored in the attribute LIS height above ground (normalized height calculation)



Segmented trees colored according to a unique tree ID:  
 Each tree is georeferenced. A so-called pipe model is created for each tree – this is used to perform a highly accurate volume calculation. Branches can also be separated from trunks.



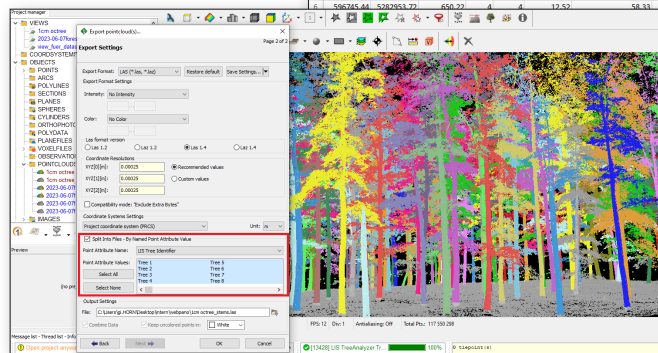
The extraction parameters can be easily adjusted and displayed in the 3D view.  
 The user has full control during this process.

## Key Features

- georeferenced tree position
- tree ID
- volume calculation
- tree height
- crown area
- crown diameter

## System Requirements

The LIS TreeAnalyzer plug-in requires a separate license. For further inquiries please contact your local distributor or sales@riegl.com. RISCAN PRO version 2.25+ is mandatory.



x	y	z	pt_idx	tree_id	tree_height	circle_completeness	crown_area	crown_diameter	dibb	goodness_of_fit	pts_on_circle	slice_height		
2	596737.28	5282951.44	648.72	0	6	17.32	75	8.94	4.79	0.13	100	75.71	1.3	
3	596740.72	5282949.65	649.98	1	20	32.85	88.56	27.46	7.71	0.53	83.23	73.13	1.3	
4	596743.96	5282949.59	650.73	2	15	32.65	55.56	33.03	8.1	0.43	61.51	55.07	1.3	
5	596742.6	5282951.36	650.1	3	24	32.83	94.44	56.79	10.03	0.45	100	47.18	1.3	
6	596745.44	5282953.72	650.27	4	13.52	58.33	13.87	5.67	0.11	100	70.18	1.3		
63.49							63.49	12.75	0.49	100	51.05	1.3		
0.39							0.39	0.76	0.13	70	43.75	1.3		
0.15							0.15	0.45	0.15	63.46	37.5	1.3		
67.36							67.36	11.55	0.31	97.95	50	1.3		
49.7							49.7	10.05	0.55	100	61.23	1.3		
52.38							52.38	9.96	0.39	87.88	69.73	1.3		
26.1							26.1	6.8	0.31	100	78.11	1.3		
36.47							36.47	10.31	0.45	96.31	68.5	1.3		
19.66							19.66	5.69	0.23	100	79.17	1.3		
38.73							38.73	9.57	0.43	87.44	54.97	1.3		
11.66							11.66	5.44	0.37	100	67.46	1.3		
0.26							0.26	0.74	0.17	98.38	73.88	1.3		
22.88							22.88	6.67	0.43	80.7	30	1.3		
17.83							17.83	5.99	0.21	100	47.62	1.3		
20.49							20.49	5.98	0.37	100	85.23	1.3		
42.5							42.5	9.31	0.41	94.7	57.26	1.3		
21.85							21.85	7.27	0.43	100	69.1	1.3		
7.13							7.13	4.77	0.19	91.43	61.76	1.3		
15.53							15.53	5.25	0.15	100	64.63	1.3		
65.45							65.45	11.68	0.49	79.19	51.98	1.3		
24.36							24.36	7.17	0.37	99.6	91.74	1.3		
60.98							60.98	10.13	0.39	96.34	69.52	1.3		
30.04							30.04	7.52	0.35	99.56	75.5	1.3		
19.32							19.32	5.64	0.19	100	78.08	1.3		
3.56							3.56	2.84	0.09	100	67.57	1.3		
15.41							15.41	5.75	0.13	89.71	60.38	1.3		
102.87							102.87	14.71	0.51	79.52	46.89	1.3		
46.73							46.73	8.81	0.35	100	66.67	1.3		
14.96							14.96	5.11	0.19	100	74.77	1.3		
91.67							91.67	33.3	7.59	0.39	63.97	1.3		
97.22							97.22	36.95	7.89	0.47	47.11	1.3		
17.1							17.1	77.78	18.15	9.21	0.17	100	63.81	1.3
32.67							32.67	97.22	105.09	12.87	0.63	87.14	53.92	1.3

Export the extracted parameters as .shp, .dxf or .csv for further analysis and calculations. Each individual tree can be additionally exported as a 3D point cloud.