Content

Report

1 Introduction

Report is designed to report (show) all deviations of objects (depending on the mean or reference values). The project has to be "preregistered", because Report will use the coordiantes of the objects to calculate correspondences.

Features:

- shows correspondeces of objects
- delete objects
- turn correspondence flag on or off
- shows object quality
- shows point grid size on objects
- shows scan quality and resolution
- shows number of points used for object creation by SCENE

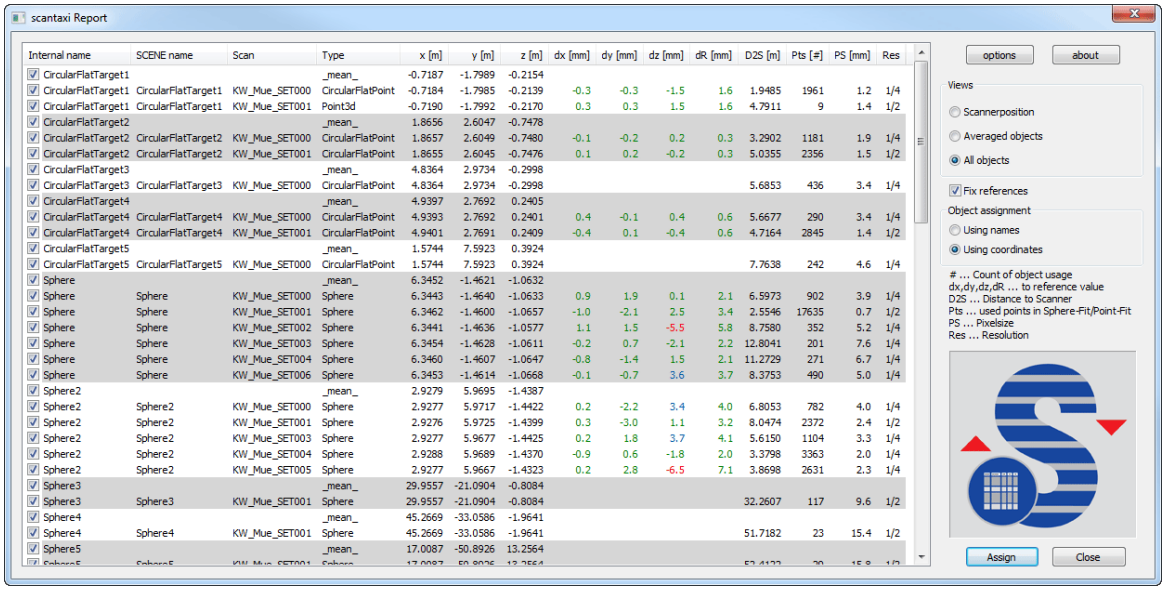


Figure 1: main window

Report

2 Installation

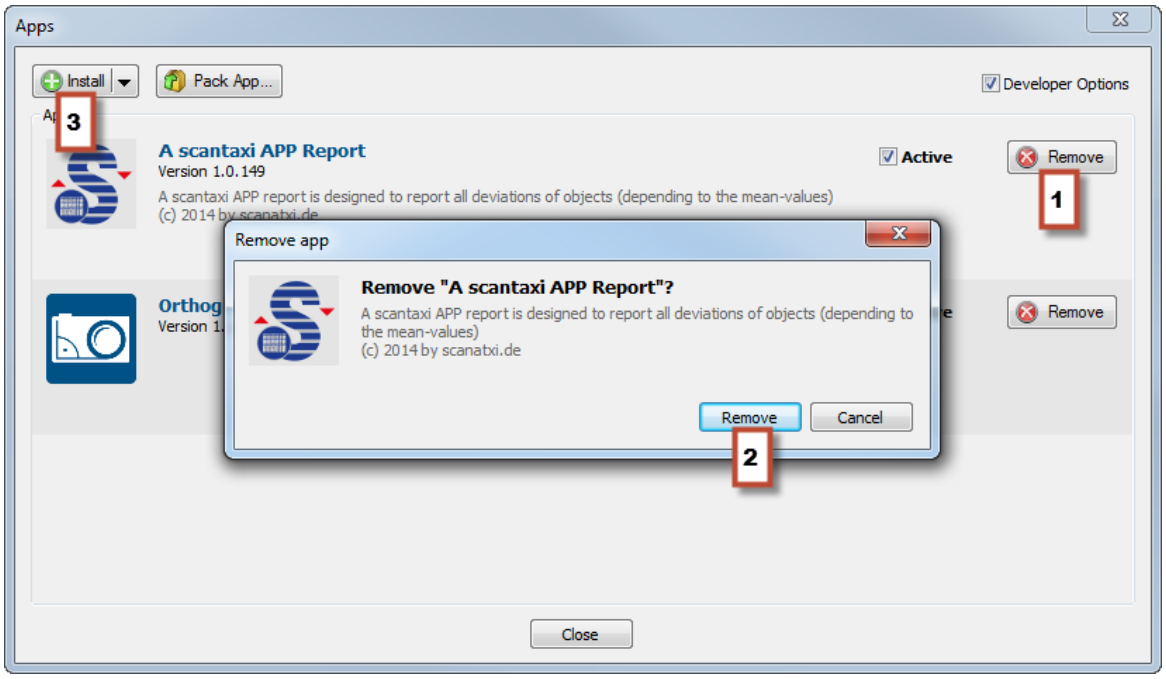


Figure 2: SCENE App Dialog

As part of the installation procedure for the new version, the old version must be removed (1, 2). Following this, Report can be installed via App Manager (3), drag and drop or by double clicking on the app file in the Explorer.

scantaxi software: `http://www.scantaxi.de/software.html`
Latest version: `http://www.scantaxi.de/software/report.html`

3 Licensing

3.1 License models

Report is available as:

3.1.1 Full license

- Report can be used without any limitation
- a license can be purchased in the FARO 3D App Center (`http://www.faro.com/faro-3d-app-center`)
- See chapter 4 for activation process

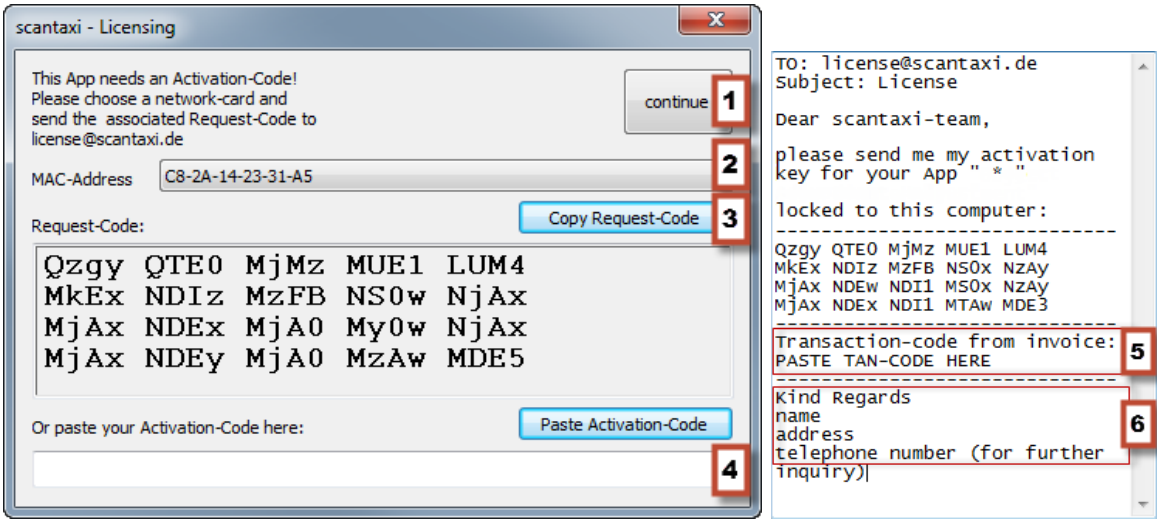
3.1.2 Demo (time trial)

- Report can be tested without any limitations for a week
- the license can be requested under license@scantaxi.de
- See chapter 4 for activation process

Report

4 Activation process

Starting Report without a valid license will prompt the licensing dialog.
A full license can be purchased or an one week trial requested.



- Select a MAC address (2)
- Press "Copy Request-Code" to copy the e-mail to the clipboard (3)
- Copy clipboard to email
- Enter transaction number from invoice (5) and your contact information (6)
- Send e-mail to license@scantaxi.de
- Paste received activation code (4)
- Activate license (1)

Report

5 Report functions

5.1 Scanner position

The scanner position tab will provide an overview of all scans within the project. In this tab you will get the following attributes:

1	Scan	name of the scan
2	x, y, z (m)	coordinates of the scan
3	#	number of objects used in the scan
4	mx, my, mz, mR (mm)	averaged deviation of the objects in the scan
5	Res	resolution of the scan
6	Quality	quality of the scan
7	RecTime	date and time recorded
8	ScPoi (#)	number of scanned points

Scan	x [m]	y [m]	z [m]	#	mx [mm]	my [mm]	mz [mm]	mR [mm]	Res	Quality	RecTime	ScanPts [#]
Tuch_005	10.7481	-0.4108	1.0439	9	5.7	2.6	4.8	7.9	1/2	2x	06.03.2014 12:07:01	175.356.632
Tuch_007	5.4299	14.0699	2.0352	9	2.9	1.8	2.1	4.0	1/2	2x	06.03.2014 12:20:04	175.373.700
Tuch_008	10.9370	17.6297	0.9935	9	2.8	2.1	2.3	4.2	1/2	2x	06.03.2014 12:34:19	175.322.496
Tuch_009	27.3262	16.9000	10.4421	8	2.9	1.8	2.3	4.1	1/2	2x	06.03.2014 14:16:30	175.288.360
Tuch_010	33.0925	4.6288	10.6934	6	1.1	1.9	2.4	3.2	1/4	2x	06.03.2014 14:22:15	43.805.022
Tuch_011	32.5487	-10.1586	10.6936	6	1.8	1.9	2.5	3.6	1/4	2x	06.03.2014 14:27:59	43.856.226
Tuch_012	28.8482	-15.2453	10.5842	6	3.0	1.8	1.1	3.7	1/4	2x	06.03.2014 14:31:21	43.873.294
Tuch_013	29.7971	-22.0279	10.4242	6	2.5	3.7	1.1	4.6	1/2	2x	06.03.2014 14:45:34	175.373.700
Tuch_015	10.4606	18.0165	0.8580	7	3.8	1.7	1.3	4.4	1/2	2x	20.03.2014 10:38:18	176.039.352
Tuch_016	23.4941	18.4022	0.9959	8	4.8	3.0	1.4	5.8	1/2	2x	20.03.2014 10:50:27	176.107.624
Tuch_017	28.1034	27.2171	0.8680	8	3.4	1.7	3.3	5.1	1/2	2x	20.03.2014 11:01:44	176.107.624
Tuch_019	45.6158	25.7616	1.0231	7	1.9	4.3	1.7	5.0	1/2	2x	20.03.2014 11:24:38	176.090.556
Tuch_020	57.6851	26.0614	1.0874	8	4.2	4.5	2.8	6.7	1/2	2x	20.03.2014 11:36:02	176.039.352

Figure 3: Scan position tab

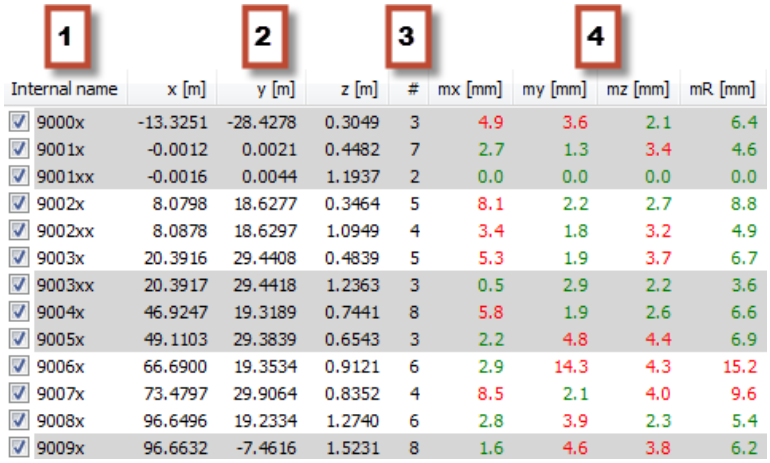
If a line is double clicked, the Report automatically jumps to the all objects tab all objects of the double clicked-scan and sorts it by scan name.

Report

5.2 Averaged objects

This tab gives an summarized overview of the objects in the project.

1	Checkbox	use object for calculation
1	Internal Name	internal name
2	x, y, z (m)	mean of the object group
3	#	object count
4	mx, my, mz, mR (mm)	deviation



Internal name	x [m]	y [m]	z [m]	#	mx [mm]	my [mm]	mz [mm]	mR [mm]
9000x	-13.3251	-28.4278	0.3049	3	4.9	3.6	2.1	6.4
9001x	-0.0012	0.0021	0.4482	7	2.7	1.3	3.4	4.6
9001xx	-0.0016	0.0044	1.1937	2	0.0	0.0	0.0	0.0
9002x	8.0798	18.6277	0.3464	5	8.1	2.2	2.7	8.8
9002xx	8.0878	18.6297	1.0949	4	3.4	1.8	3.2	4.9
9003x	20.3916	29.4408	0.4839	5	5.3	1.9	3.7	6.7
9003xx	20.3917	29.4418	1.2363	3	0.5	2.9	2.2	3.6
9004x	46.9247	19.3189	0.7441	8	5.8	1.9	2.6	6.6
9005x	49.1103	29.3839	0.6543	3	2.2	4.8	4.4	6.9
9006x	66.6900	19.3534	0.9121	6	2.9	14.3	4.3	15.2
9007x	73.4797	29.9064	0.8352	4	8.5	2.1	4.0	9.6
9008x	96.6496	19.2334	1.2740	6	2.8	3.9	2.3	5.4
9009x	96.6632	-7.4616	1.5231	8	1.6	4.6	3.8	6.2

Figure 4: Averaged objects tab

If a line is double clicked, Report automatically jumps to all objects tab of the double clicked group and sorts it by internal name.

Report

5.3 All objects

All objects in the project can be viewed in this tab. Every object group gets an additional mean value.

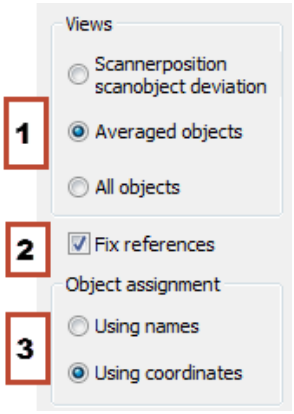
1	Checkbox	use object for calculation
1	Internal name	internal name
2	SCENE name	name in SCENE, where this object is from
3	Scan	object can be found in scan
4	Type	object type
5	x, y, z (m)	object coordinates
6	dx, dy, dz, dR (mm)	object deviation
7	D2S	distance from scanner to object
8	Pts (#)	used points for object detection
9	PS (mm)	point grid size on object in the scan
10	Res	scan resolution

1	2	3	4	5			6				7	8	9	10
Internal name	SCENE name	Scan	Type	x [m]	y [m]	z [m]	dx [mm]	dy [mm]	dz [mm]	dR [mm]	D2S [m]	Pts [#]	PS [mm]	Res
9000x			_mean_	-13.3251	-28.4278	0.3049	3.1	1.8	0.1	3.6				
9000x	9000x		_Reference_	-13.3220	-28.4260	0.3050								
9000x	9000x	Tuch_000	Sphere	-13.3281	-28.4311	0.3028	6.1	5.1	2.2	8.3	25.2009	49	7.4	1/2
9000x	9000x	Tuch_002	Sphere	-13.3253	-28.4264	0.3068	3.3	0.4	-1.8	3.8	16.5833	508	4.8	1/2
9001x			_mean_	-0.0012	0.0021	0.4482	0.2	-0.1	-0.2	0.3				
9001x	9001x		_Reference_	-0.0010	0.0020	0.4480								
9001x	9001x	Tuch_002	Sphere	-0.0010	0.0035	0.4549	0.0	-1.5	-6.9	7.1	21.7822	311	6.4	1/2
9001x	9001x	Tuch_004	Sphere	-0.0010	0.0024	0.4470	-0.0	-0.4	1.0	1.1	15.9263	129	4.7	1/2
9001x	9001x	Tuch_005	Sphere	-0.0057	0.0004	0.4471	4.7	1.6	0.9	5.1	10.7782	842	3.2	1/2
9001x	9001x	Tuch_007	Sphere	-0.0030	0.0011	0.4461	2.0	0.9	1.9	2.9	15.1649	699	4.4	1/2
9001x	9001x	Tuch_008	Sphere	0.0029	0.0016	0.4443	-3.9	0.4	3.7	5.4	20.7510	316	6.1	1/2
9001x	9001x	Tuch_015	Sphere	0.0007	0.0039	0.4501	-1.7	-1.9	-2.1	3.3	20.8334	353	6.1	1/2
9001xx			_mean_	-0.0016	0.0044	1.1937	0.6	-2.4	4.3	5.0				
9001xx	9001xx		_Reference_	-0.0010	0.0020	1.1980								
9001xx	9001xx	Tuch_038	Sphere	-0.0023	0.0069	1.1895	1.3	-4.9	8.5	9.9	16.3391	563	4.8	1/2
9002x			_mean_	8.0798	18.6277	0.3464	6.2	1.3	0.6	6.4				
9002x	9002x		_Reference_	8.0860	18.6290	0.3470								

Figure 5: All Objects Tab

Double clicking a scan switches Report to scan position tab. Every further double click will show the averaged object tab.

5.4 Settings / additional functions



(a) Settings

1 meter			1 meter
1 cm			0.001 meter
1 mm			0.0001 meter
1 yard	3ft	36 inch	0.9144 meter
1 foot		12 inch	0.3048 meter
1 inch			0.0254 meter
1 yard US	3ft US	36 inch US	3600/3937 meter
1 foot US		12 inch US	1200/3937 meter
1 inch US			100/3937 meter

(b) basis of calculation

Figure 6

1. Tab selection

   switching between Report types

2. Fix references

   If checkbox is set, all devialtions will be calculated to the reference values (if existing)/ if unchecked, deviations will be calculated according to the mean values.

3. Using names/coordinates for object assignment

   There are two means of object assignment: either with objects or with object coordinates. Object names must be assigned correctly. If they are not correct, assignment using coordinates should be used instead.

Report

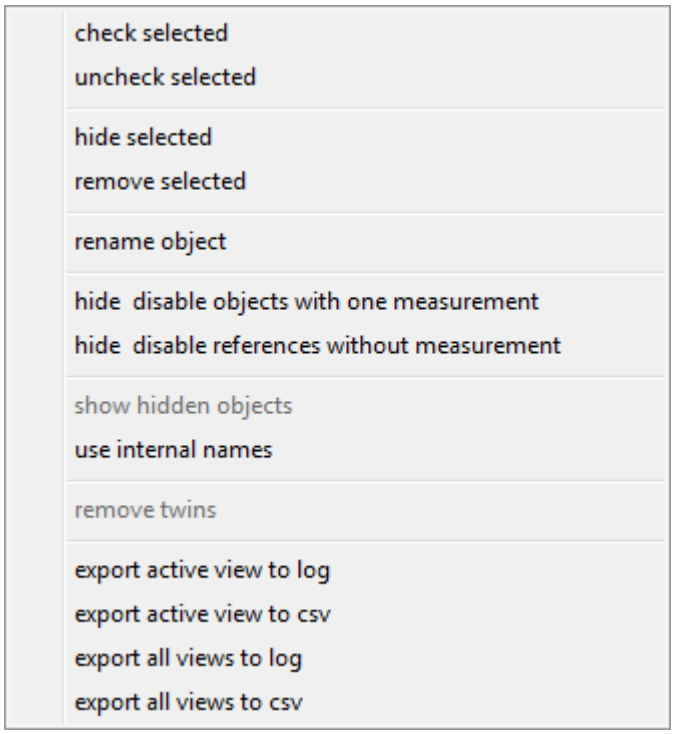


Figure 7: Additional functions

Additional functions can be reached by right clicking in the Report.

- check selected
  selected objects will be checked and enabled[1]
- uncheck selected
  selected objects will be unchecked and deactivated[1]
- hide selected
  selected objects will be hidden and excluded from calculations;
  the "show hidden objects" function makes them visible[2]
- remove selected
  selected objects will be removed and excluded from calculations;
  objects will also be removed from SCENE if changes are assigned[1]
- rename object
  object groups can be renamed easily[1]

[1] Changes will be applied in SCENE

Report

- hide & disable objects with one measurment
  objects with only one measurement will be hidden and deactivated[1]
- hide & disable references without measurement
  references in scans without any measurement will be hidden and deactivated[1]
- show hidden objects
  this function makes hidden objects visible, so that they can be used for calculations
- use internal names
  in the case of different names in object groups, Report can adjust and apply them to SCENE[1]
- remove twins
  if objects are too close or double-marked, Report will remove them in SCENE[1]
- export active view to log
  exports active view to .txt file
- export active view to .csv
  exports active view to .csv file, for use with Excel
- export all views to log
  exports all views to .txt file
- export all views to .csv
  Exports all views to .csv file, for use with Excel

[1] Changes will be applied in SCENE
[2] Changes will not be applied in SCENE

Report

5.5 Options

1. set unit

   Unit can be selected which will be used in report and export. (Fig. 6b)

2. set limit values

   Deviations from mean or references are marked in different colors. Limits can be set seperatly for each axis.

3. object search radius

   Distance between objects to determine shared identity.
   Search radius will be used, if using coordinates for object assignment is activated.

4. assign options

   - ignore name changes - name changes will be ignored
   - ignore remove status - objects will not be removed

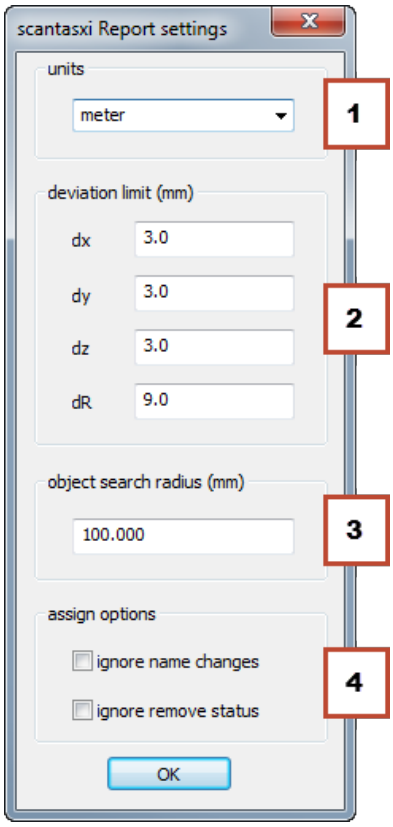


Figure 8: options

6 Known issues

- Unloading the app while running will cause SCENE to crash

7 End User License Agreement

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