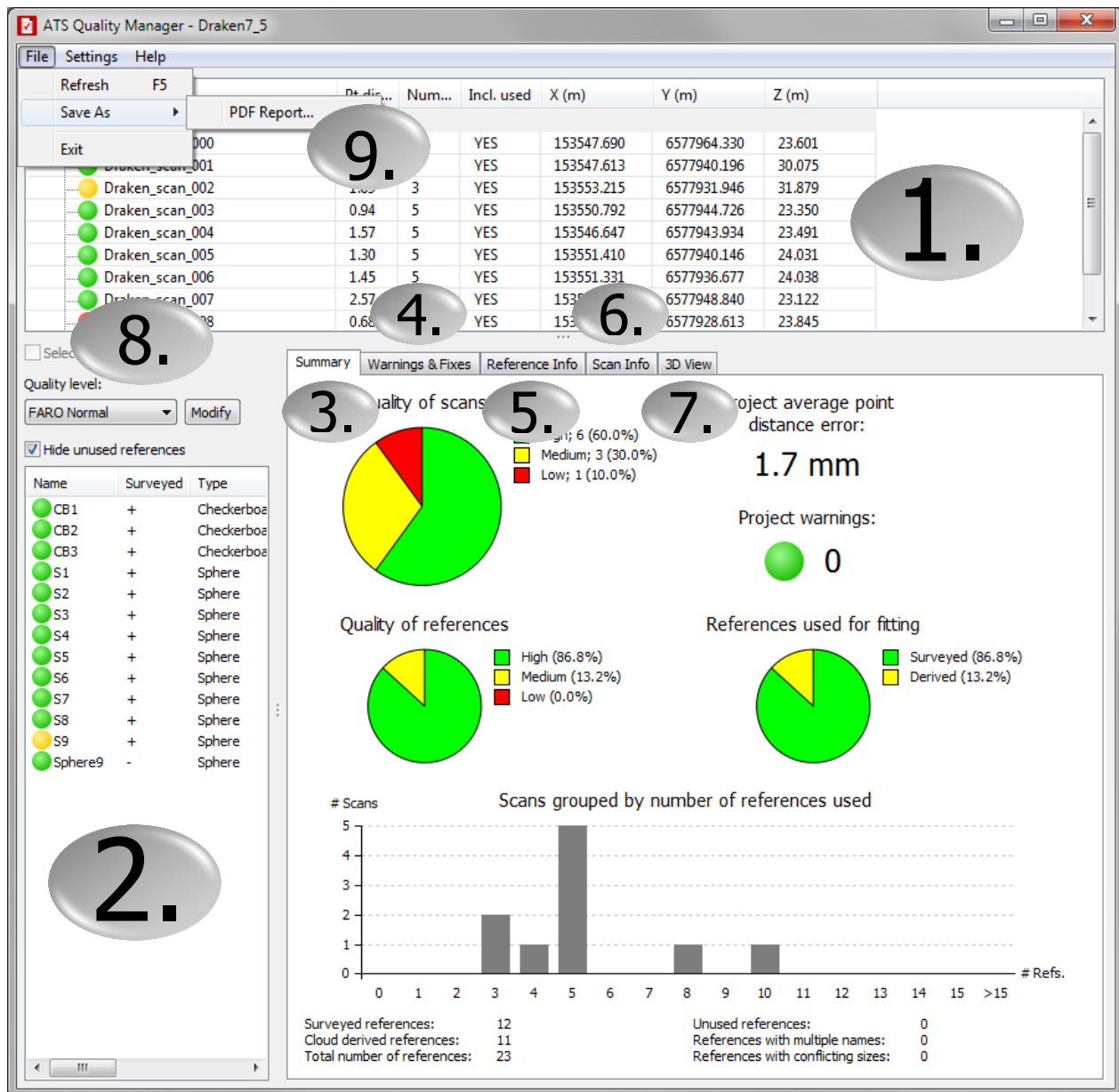


ATS Quality Manager

Quick Start Guide





To find information about a specific part of the program, go to the corresponding chapter.

1. Scan list

The screenshot shows the 'ATS Quality Manager - Draken7_5' window. The main area displays a table of scans with columns: Name, Pt dis..., Num..., Incl. used, X (m), Y (m), and Z (m). The table lists various scans, including 'Draken_scan_004' through 'Draken_scan_009'. Annotations explain the following features:

- Checked parent = checked children.**: Points to the 'Scans' folder icon in the left tree.
- Sort list by clicking on headers.**: Points to the column headers in the table.
- Checked = visible in the 3D View.**: Points to the checked status of 'Draken_scan_009'.
- Will check or uncheck ALL scans.**: Points to the 'Select all scans' checkbox.
- Right-click** and **Double-click**: Actions on the scan list.
- Opens...**: A button that appears after right-clicking or double-clicking.
- Primary reason for decreased quality: number of distinct references**: A tooltip that appears when hovering over a scan.
- Use grip to resize panel.**: Points to a grip in the 3D View panel.
- Opens...**: A button that appears when hovering over a scan in the 3D View.
- Show in 3D (single scan)** and **Show in 3D**: Options in the context menu.
- Open in SCENE**, **Select in SCENE**, and **Update ScanFit**: Other options in the context menu.

Name	Pt dis...	Num...	Incl. used	X (m)	Y (m)	Z (m)
Scans	[1.74]					
Draken_scan_004	1.57	5	YES	153546.647	6577943.934	23.491
Draken_scan_005	1.30	5	YES	153551.410	6577940.146	24.031
Draken_scan_006	1.45	5	YES	153551.331	6577936.677	24.038
Draken_scan_007	2.57	8	YES	153550.983	6577948.840	23.122
Draken_scan_008	0.68	3	YES	153552.376	6577928.613	23.845
Draken_scan_009	0.89	4	YES	153551.410	6577940.146	24.031

2. Reference list

ATS Quality Manager - Draken7_5

File Settings Help

Name	Pt dis...	Num...	Incl. used	X (m)	Y (m)	Z (m)
Scans	[1.74]					
Draken_scan_000	2.94	10	YES	153547.690	6577964.330	23.601
Draken_scan_001	3.35	5	YES	153547.613	6577940.196	30.075
Draken_scan_002	1.69	3	YES	153553.215	6577931.946	31.879
Draken_scan_003	0.94	5	YES	153550.792	6577944.726	23.350
Draken_scan_004	1.57	5	YES	153546.647	6577943.934	23.491
Draken_scan_005	1.30	5	YES	153551.410	6577940.146	24.031

Select all scans

Quality level: FARO Normal Modify

Hide unused references

Sort list by clicking on headers.

Double-click

Right-click

[name] = unused reference.

Click to hide unused references.

Use grip to resize panel.

Opens...

Quality of scans

Quality of references

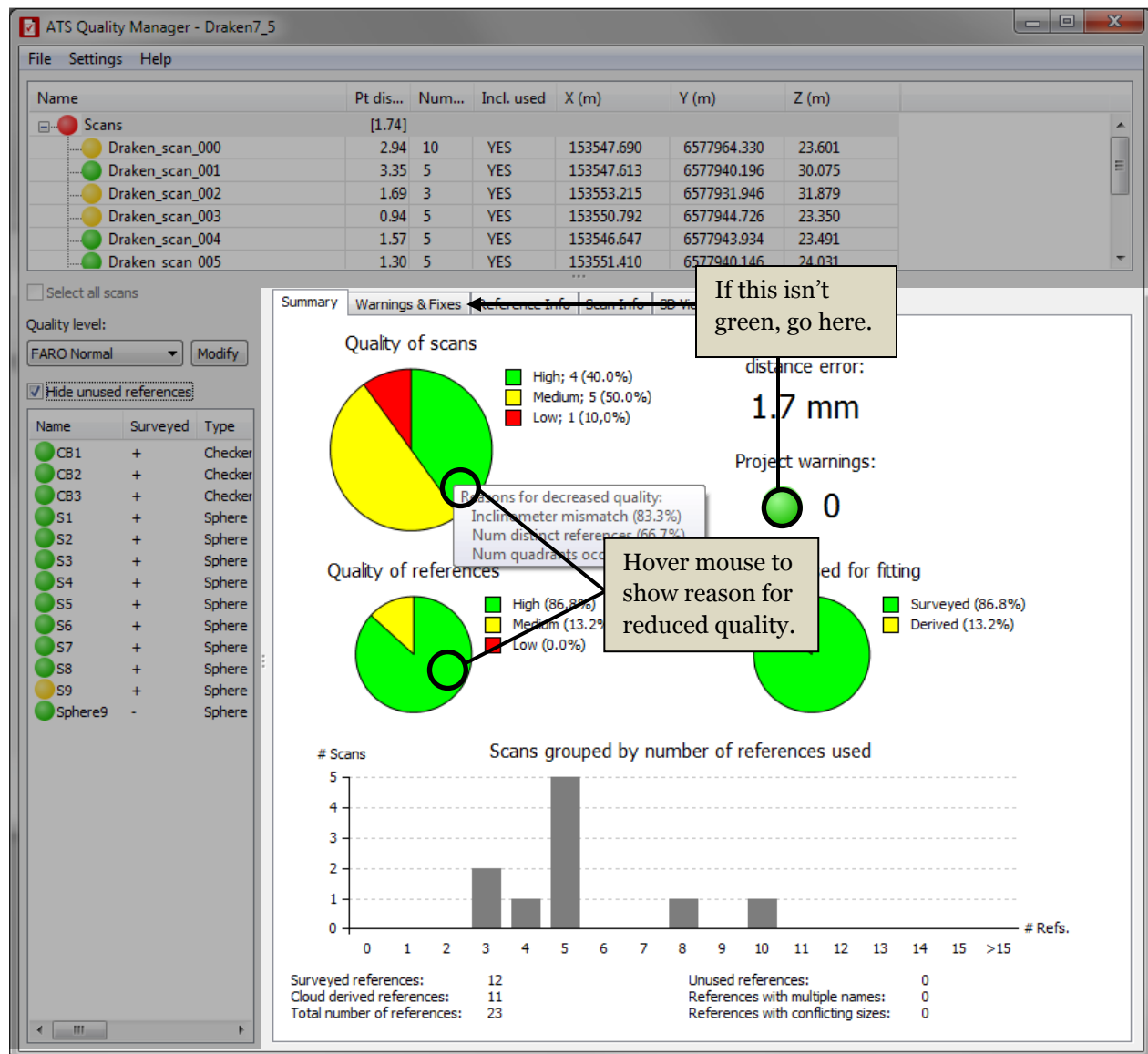
Scans grouped by number

Surveyed references: 13
Cloud derived references: 11
Total number of references: 24

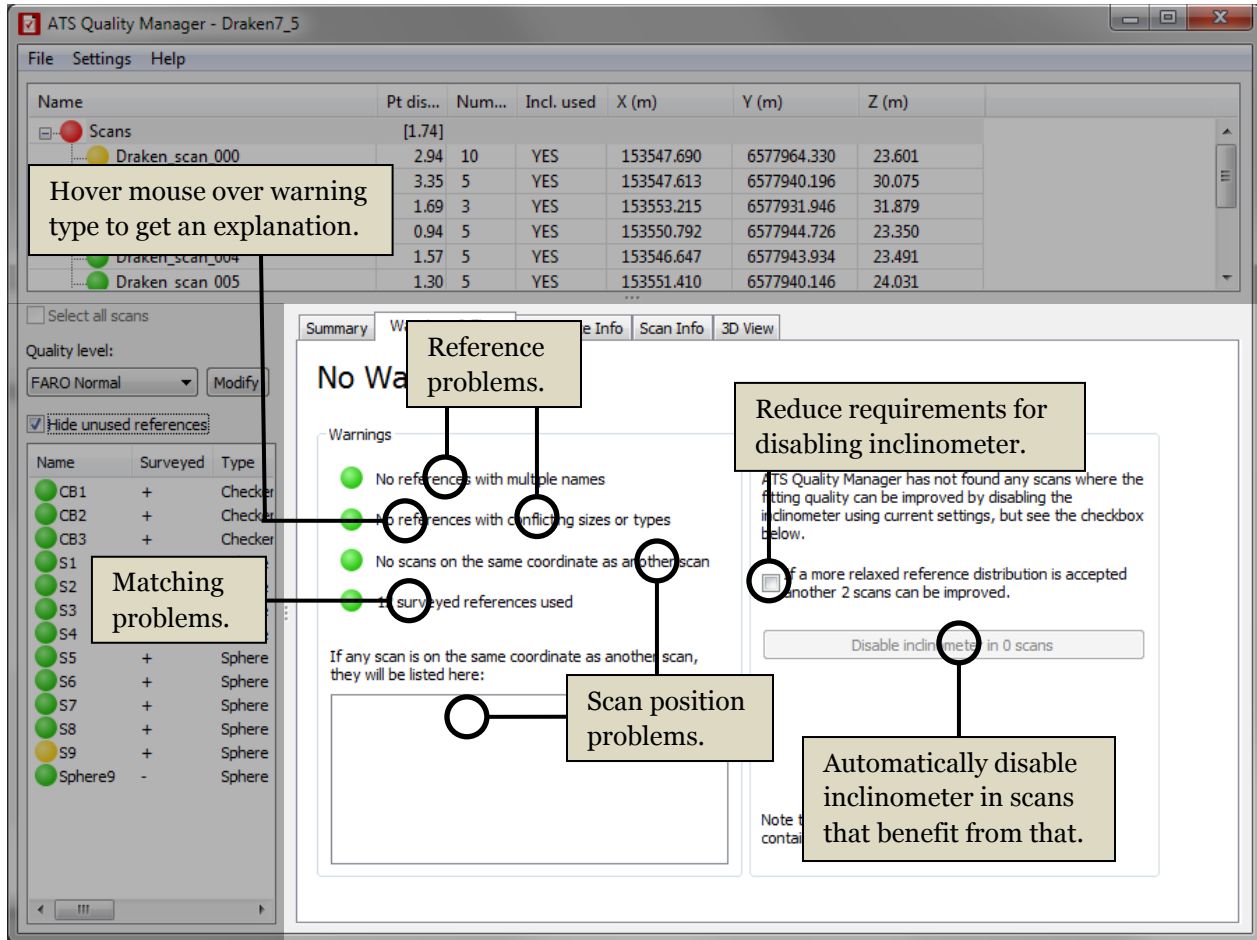
Show in 3D view

Select in SCENE

3. Summary tab



4. Warnings & Fixes tab



ATS Quality Manager - Draken7_5

File Settings Help

Name	Pt dis...	Num...	Incl. used	X (m)	Y (m)	Z (m)
[1.74]						
Draken_scan 000	2.94	10	YES	153547.690	6577964.330	23.601
	3.35	5	YES	153547.613	6577940.196	30.075
	1.69	3	YES	153553.215	6577931.946	31.879
	0.94	5	YES	153550.792	6577944.726	23.350
Draken_scan 004	1.57	5	YES	153546.647	6577943.934	23.491
Draken_scan 005	1.30	5	YES	153551.410	6577940.146	24.031

Hover mouse over warning type to get an explanation.

Quality level: FARO Normal Modify

☒ Hide unused references

Name	Surveyed	Type
CB1	+	Checker
CB2	+	Checker
CB3	+	Checker
S1		
S2		
S3		
S4		
S5	+	Sphere
S6	+	Sphere
S7	+	Sphere
S8	+	Sphere
S9	+	Sphere
Sphere9	-	Sphere

Matching problems.

No Warning problems.

Warnings:

- No references with multiple names
- No references with conflicting sizes or types
- No scans on the same coordinate as another scan
- 2 surveyed references used

If any scan is on the same coordinate as another scan, they will be listed here:

Scan position problems.

Reduce requirements for disabling inclinometer.

ATS Quality Manager has not found any scans where the fitting quality can be improved by disabling the inclinometer using current settings, but see the checkbox below.

☐ If a more relaxed reference distribution is accepted another 2 scans can be improved.

Disable inclinometer in 0 scans

Automatically disable inclinometer in scans that benefit from that.

5. Reference Info tab

ATS Quality Manager - Draken7_5

File Settings Help

Name	Pt dis...	Num...	Incl. used	X (m)	Y (m)	Z (m)
Draken_scan_004	1.57	5	YES	153546.647	6577943.934	23.491
Draken_scan_005	1.30	5	YES	153551.410	6577940.146	24.031
Draken_scan_006	1.45	5	YES	153551.331	6577936.677	24.038
Draken_scan_007	2.57	8	YES	153550.983	6577948.840	23.122
Draken_scan_008	0.68	3	YES	153552.376	6577928.613	23.845
Draken_scan_009	0.89	4	YES	153550.157	6577929.862	23.816

Select all scans

Quality level: FARO Normal Modify

Hide unused references

Name	Conflicts	Surveyed
CB1	+	
CB2	+	
CB3	+	
S1	+	
S2	+	
S3	+	
S4	+	
S5	+	
S6	+	
S7	+	
S8	+	
S9	+	
Sphere9	-	

Summary Warnings & Fixes Reference Info Scan Info 3D View

S8

Position: 153549.715, 6577937.959, 23.816 [m]

Reference type: S8

Reference size: 70 [mm]

Conflicting name reported.

No conflicting size or type reports.

Reference is used by 7 scan(s).

Reference is surveyed.

Also known as: CB4

Scans that use this reference:

Name	Type	Size [mm]	# pts	Length [m]	Tot. mis. [mm]
Draken_scan_004	Sphere	70	5	2.84	0.5
Draken_scan_005	Sphere	70	5	2.84	0.8
Draken_scan_006	Sphere	70	5	2.84	0.6
Draken_scan_007	Sphere	70	8	2.17	1.1
Draken_scan_008	Sphere	70	3	11.07	2.0
Draken_scan_009	Sphere	70	4	9.75	0.4
Draken_scan_009	Sphere	70	4	8.16	0.6

Use this information to resolve duplication or size issues.

Double-click

Opens...

Right-click

Show in 3D view

Open in SCENE

Select in SCENE

6. Scan Info tab

ATS Quality Manager - Draken7_5

File Settings Help

Name	Pt dis...	Num...	Incl. used	X (m)	Y (m)	Z (m)
Draken_scan_003	0.94	5	YES	153550.792	6577944.726	23.350
Draken_scan_004	1.57	5	YES	153546.647	6577943.934	23.491
Draken_scan_005	1.30	5	YES	153551.410	6577940.146	24.031
Draken_scan_006	1.45	5	YES	153551.331	6577936.677	24.038
Draken_scan_007	2.57	8	NO	153550.983	6577948.840	23.122
Draken_scan_008	0.68	3	YES	153552.376	6577928.613	23.845
Draken_scan_009	0.89	4	YES	153550.157	6577929.862	23.816

Select all scans

Quality level: FARO Normal Modify

☒ Hide unused references

Name	Conflicts	Surveyed
CB1	+	<input checked="" type="checkbox"/>
CB2	+	<input checked="" type="checkbox"/>
CB3	+	<input checked="" type="checkbox"/>
S1	+	<input checked="" type="checkbox"/>
S2	+	<input checked="" type="checkbox"/>
S3	+	<input checked="" type="checkbox"/>
S4	+	<input checked="" type="checkbox"/>
S5	+	<input checked="" type="checkbox"/>
S6	+	<input checked="" type="checkbox"/>
S7	+	<input checked="" type="checkbox"/>
S8	+	<input checked="" type="checkbox"/>
S9	+	<input checked="" type="checkbox"/>
Sphere9	+	<input checked="" type="checkbox"/>

Click to enable or disable.

Hover mouse to show reason for reduced quality.

Summary Warnings & Fixes Reference Info Scan Info 3D View

Draken_scan_007

Position: 153550.983, 6577948.840, 23.122 [m]

Orientation: 0.01689, -0.00277, 0.99985

Angle: 105.46005 [°]

Point distance: 2.57 [mm]

Point drift: 0.0 [mm]

Absolute long. mismatch: 1.69 [mm]

Longitudinal mismatch: -0.88 [mm]

Orthogonal mismatch: [mm]

Angular mismatch: 0.01689 [°]

Angular mismatch: 1.560586 [NOT USED] [°]

Matched references angle distribution (in X-Y plane)

Need 4 or more for top quality (inclinometer counts as one).

3D View

Update ScanFit Open in SCENE

Num distinct references: 4

Occupied quadrants: 2

Double-click

Right-click

Show in 3D view

Enabled

Select in SCENE

Need 3 or more for top quality (inclinometer counts as one).

Name	Surveyed	Type	Size [mm]	# pts	Length [m]	Tot. mis. [mm]	Long. [mm]	Orth. [mm]	X [m]
CB1	+	Checkerboard	-	-	2.68	3.2	-1.2	3.0	1535
CB2	+	Checkerboard	-	-	2.08	5.6			
S2	+	Sphere	70.0	217	9.60	3.2			
S6	+	Sphere	70.0	536	6.00	1.0			
S7	+			150	10.99	2.0			
S8	+			150	11.07	2.0			
S9	+			45	19.44	2.6			
Sphere9	-	Sphere	70.0	2768	2.71	0.9	-0.2	0.9	1535

7. 3D View tab

ATS Quality Manager - Draken7_5

File Settings Help

Name	Pt dis...	Num...	Incl. used	X (m)	Y (m)	Z (m)
Draken_scan_003	0.94	5	YES	153550.792	6577944.726	
Draken_scan_004	1.57	5	YES	153546.647	6577943.934	
Draken_scan_005	1.30	5	YES	153551.410	6577940.146	
Draken_scan_006	1.45	5	YES	153551.331	6577936.677	
Draken_scan_007	2.57	8	NO	153550.983	6577948.840	
Draken_scan_008	0.68	3	YES	153552.376	6577928.613	
Draken_scan_009	0.89	4	YES	153550.157	6577929.862	

Select all scans

Quality level: FARO Normal Modify

Hide unused references

Name	Conflicts	Survey
CB1	+	+
CB2	+	+
CB3	+	+
S1	+	+
S2	+	+
S3	+	+
S4	+	+
S5	+	+
S6	+	+
S7	+	+
S8	Name	+
S9	+	+
Sphere9	-	-

Summary Warnings & Fixes Reference Info Scan Info 3D View

Right click on scan/reference and select "Show in 3D view" to zoom in on it.

Right button = rotate camera around anchor.
Left button = pan camera.
Scroll = zoom.

Show or hide items by clicking their checkboxes.

Camera anchor (turns dark when below grid).

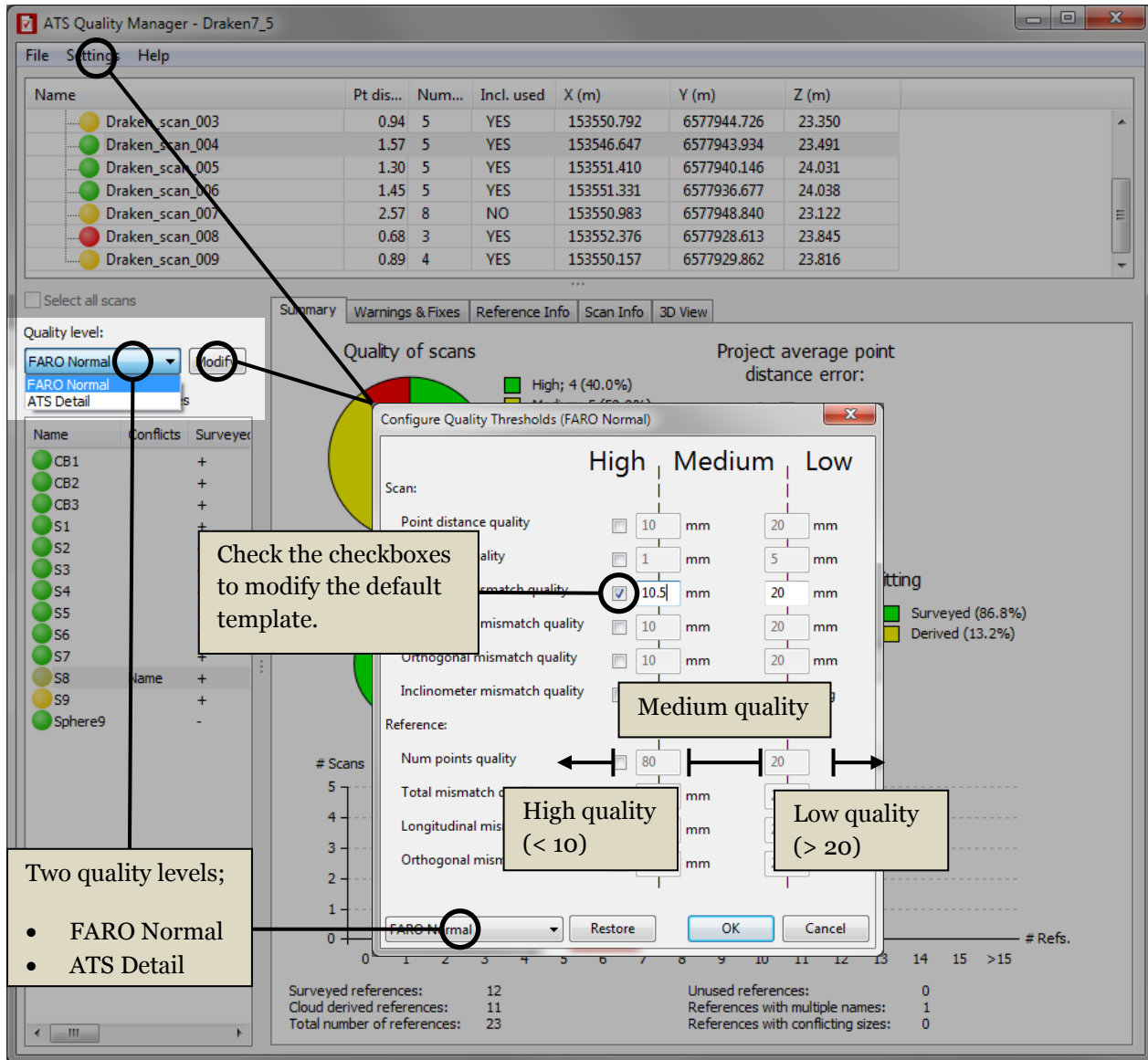
Show or hide configuration panel.

Hide Configuration

Labels

- ☒ Line length & quality
- ☒ Reference names (global)
- ☒ Reference names (scan)
- ☒ Scan names
- ☒ Objects
- ☒ Lines
- ☒ References (global)
- ☒ References (scan)
- ☒ Scans
- ☒ Quality Colored Lines
- ☐ Mismatch Fields

8. Quality level



The screenshot shows the ATS Quality Manager interface for project 'Draken7_5'. The main window displays a table of scans and a 'Quality of scans' pie chart. A 'Configure Quality Thresholds (FARO Normal)' dialog box is open, showing thresholds for High, Medium, and Low quality levels. Annotations highlight the 'Quality level' dropdown, the 'Modify' button, and the 'Check the checkboxes to modify the default template' instruction. A callout box explains the two quality levels: FARO Normal and ATS Detail. Another callout box explains the quality thresholds: High quality (< 10), Medium quality (10 to 20), and Low quality (> 20).

Name	Pt dis...	Num...	Incl. used	X (m)	Y (m)	Z (m)
Draken_scan_003	0.94	5	YES	153550.792	6577944.726	23.350
Draken_scan_004	1.57	5	YES	153546.647	6577943.934	23.491
Draken_scan_005	1.30	5	YES	153551.410	6577940.146	24.031
Draken_scan_006	1.45	5	YES	153551.331	6577936.677	24.038
Draken_scan_007	2.57	8	NO	153550.983	6577948.840	23.122
Draken_scan_008	0.68	3	YES	153552.376	6577928.613	23.845
Draken_scan_009	0.89	4	YES	153550.157	6577929.862	23.816

Quality level: FARO Normal (selected), ATS Detail

Quality of scans: High; 4 (40.0%), Medium; 5 (50.0%), Low; 4 (40.0%)

Project average point distance error: 1.30 mm

Configure Quality Thresholds (FARO Normal)

Scan: Point distance quality: 10 mm, 20 mm

Match quality: 1 mm, 5 mm, 10.5 mm, 20 mm

Mismatch quality: 10 mm, 20 mm

Orthogonal mismatch quality: 10 mm, 20 mm

Inclinometer mismatch quality: 10 mm, 20 mm

Reference: Num points quality: 80, 20

Total mismatch: 10 mm, 20 mm

Longitudinal mismatch: 10 mm, 20 mm

Orthogonal mismatch: 10 mm, 20 mm

High quality (< 10), Medium quality (10 to 20), Low quality (> 20)

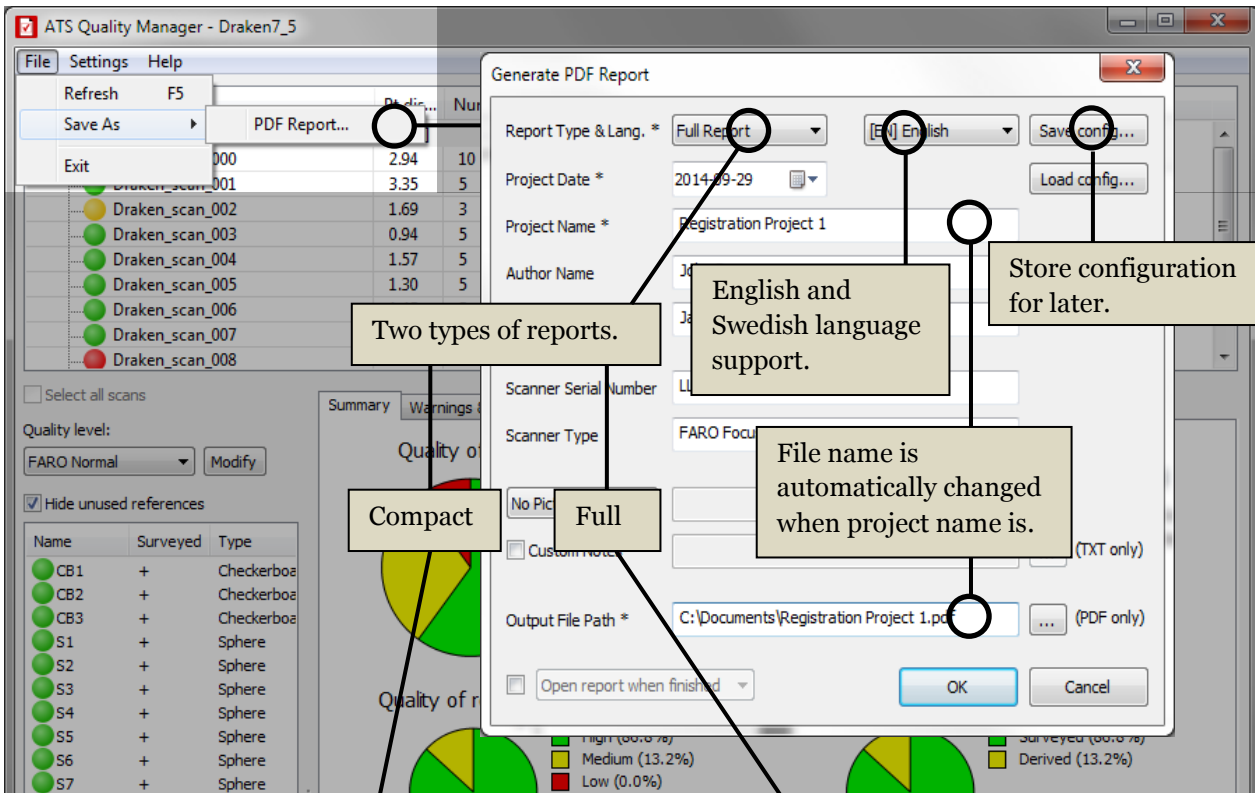
Two quality levels; FARO Normal, ATS Detail

Check the checkboxes to modify the default template.

Surveyed references: 12, Cloud derived references: 11, Total number of references: 23

Unused references: 0, References with multiple names: 1, References with conflicting sizes: 0

9. Creating a PDF report



Report

Name	X	Y	Z	dX	dY	dZ	Dist.
BYG660_P0001							
(0_1)_1002	141397.372	6397317.858	3.112	2.5	1.9	-2.7	4.11
(0_1)_Checkerboard2345	141391.327	6397326.103	2.576	-1.8	0.1	-0.3	1.78
(0_1)_Checkerboard2346	141394.289	6397326.081	3.082	-1.5	0.2	-1.9	2.40
(0_1)_Checkerboard2350	141391.030	6397317.784	2.110	-1.9	0.5	-1.4	2.41
(0_1)_Sphere	141393.071	6397322.661	1.270	0.3	4.0	-1.3	4.25
2003	141389.376	6397317.814	2.981	0.6	1.3	1.1	1.77
2004	141393.376	6397326.083	2.660	-0.6	-1.3	-1.1	1.77
BYG660_P0002							
(0_1)_Checkerboard213	141390.128	6397325.875	3.000	0.9	-0.3	0.0	1.03
(0_1)_Checkerboard20	141390.131	6397326.230	2.090	0.4	0.4	0.0	0.53
(0_1)_Checkerboard2345	141391.329	6397326.104	2.577	0.4	0.3	0.3	0.64
(0_1)_Checkerboard2346	141394.291	6397326.080	3.084	0.8	-0.2	1.0	1.30
(0_1)_Checkerboard2350	141391.043	6397317.783	2.113	1.9	-0.5	1.4	2.41
(0_1)_Sphere	141393.070	6397322.652	1.272	-0.3	-4.0	1.3	4.25
1099	141390.892	6397324.187	2.787	-0.7	-0.8	-0.9	1.39
2001	141399.111	6397324.114	2.987	-0.6	2.1	3.6	4.15
2003	141389.373	6397317.813	2.976	-1.2	0.3	-3.5	3.72
2004	141393.379	6397326.082	2.662	2.8	-1.6	0.8	3.08
BYG660_P0003							
(0_1)_1002	141397.368	6397317.854	3.112	-1.5	-1.7	-2.0	3.06
(0_1)_Checkerboard213	141390.126	6397325.880	3.000	-1.3	4.5	-0.2	4.69
(0_1)_Checkerboard2345	141391.330	6397326.103	2.576	1.3	-0.4	0.0	1.36
(0_1)_Checkerboard2346	141394.291	6397326.080	3.084	0.6	-0.0	0.9	1.10
1062	141397.684	6397317.716	2.603	-0.4	-0.4	-3.0	3.09
2001	141399.110	6397324.114	2.986	-2.4	1.8	3.0	4.24
2004	141393.379	6397326.083	2.661	2.8	-1.3	0.0	3.12
BYG660_P0004							
(0_1)_1002	141397.368	6397317.855	3.113	-1.9	-1.0	1.0	2.33
(0_1)_Checkerboard21	141397.251	6397341.440	2.430	0.8	-0.0	-3.6	3.69
(0_1)_Checkerboard213	141390.126	6397325.873	2.997	-0.7	-3.0	-2.8	4.16
(0_1)_Checkerboard2	141387.182	6397329.895	2.160	-1.1	-1.1	2.0	2.52
(0_1)_Checkerboard20	141390.129	6397326.229	2.087	-0.9	-1.2	-3.4	3.70
(0_1)_Sphere5	141390.255	6397342.207	3.119	-1.0	4.5	-7.0	8.41
1083	141397.149	6397341.442	2.956	4.5	-1.6	-8.5	9.75
1097	141397.002	6397330.953	1.989	-0.2	5.9	-2.4	6.40
1098	141387.187	6397329.417	3.059	-0.3	-6.0	1.7	6.56
1099	141390.893	6397324.186	2.790	0.2	-1.8	2.3	1.98
2001	141399.109	6397324.116	2.984	-3.8	3.7	1.3	6.23
2003	141389.373	6397317.813	2.988	-0.7	-0.2	4.6	4.62

Produced with ATS Quality Report

BYG660_P1_010

Position (m): 141421.635, 6397345.001, 5.467
 Orientation: -0.00143, 0.00158, -1.00000
 Angle (°): 124.85110

Point distance (mm): 7.38
 Point drift (mm): 0.000000

Longitudinal mismatch (mm): -2.97
 Orthogonal mismatch (mm): 5.08
 Angular mismatch (°): 0.045592
 Inclinator mismatch (°): 0.003722
 Inclinator used in match: YES

Num distinct references: 5 + inclin.
 Num quadrants occupied: 3 + inclin.

Matched references

Name	Surveyed	Type	Size	Dist.	Long.	Orth.	dX	dY	dZ
(1_C2_1)_Checkerboard2798	-	Point	0	5.0	-5.9	8.2	0.2	-5.0	-0.9
(1_C2_1)_Sphere477	-	Sphere	73	4.4	-1.8	4.8	0.8	-3.4	-2.6
(1_C2_1)_Sphere478	-	Sphere	73	6.5	-5.8	6.5	0.4	-6.0	-2.7
418	+	Point	0	4.2	0.4	4.1	-0.6	-3.8	-1.6
420	+	Point	0	3.5	2.0	2.9	-1.9	-1.4	-2.6
423	+	Point	0	10.6	3.7	10.0	-5.7	-9.0	-0.2
429	+	Point	0	16.9	-16.4	4.2	8.3	14.1	4.4

10. Good to Know

- Press backspace to go to previous tab.
- It's possible to open a scan in ATS Quality Manager by right clicking it in SCENE and choosing Show in ATS Quality Manager.
- ATS Quality Manager works in SCENE 5.2 and 5.3, not 5.1 and earlier.
- There exists a demo version of ATS Quality Manager. In the demo version only 5 scans can be opened and PDF reports can't be created.