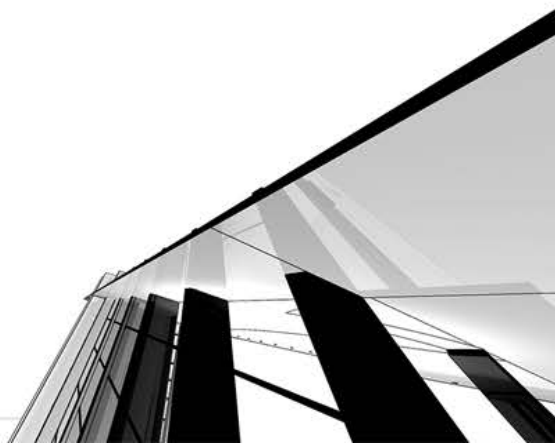
spGauge 2019.1

Upgrade News

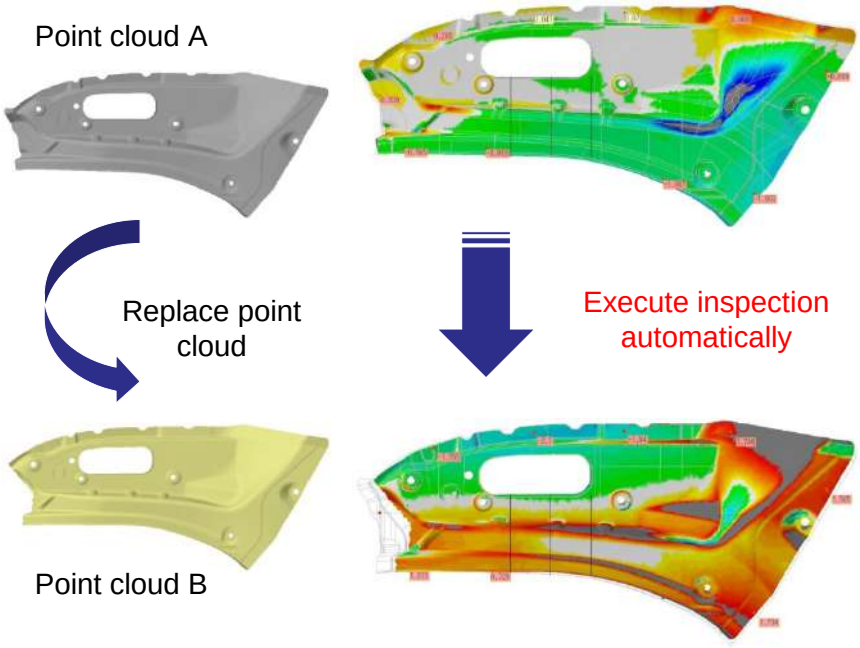


New! Replace Point Cloud

By importing a point cloud file, the already executed inspection registered in the Object Tree is automatically executed.
Applicable to a single point cloud object.

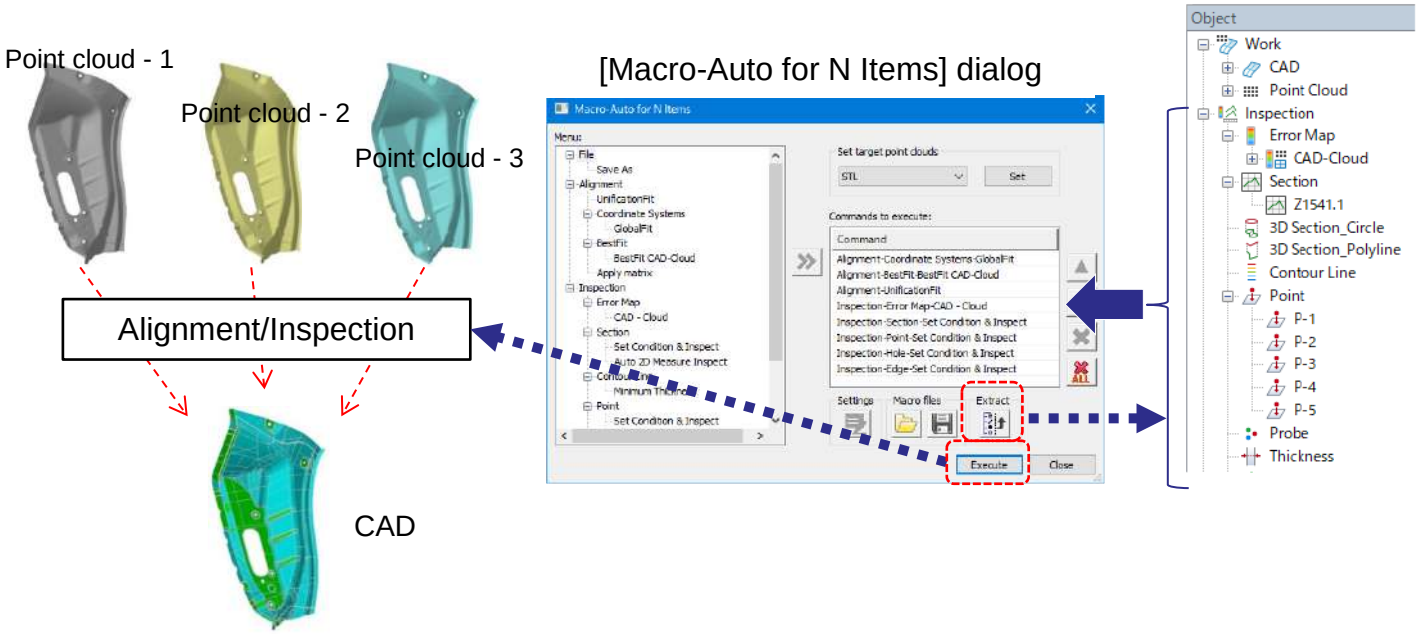
Inspection Items

- Error Map (CAD - Cloud)
- Section
- Auto 2D Measure
- Hole
- Edge
- Point
- Welding Point
- GD&T (Dimensional Tolerance)
- GD&T (Geometrical Tolerance)
- Minimum Thickness



New! Macro-Auto for N Items

N number of point cloud data are automatically aligned with the already imported CAD data and inspection is executed automatically.
You can extract the already executed inspection in the Object Tree as well as the parameters for inspection.
You can apply the alignment matrix of the master data onto the N number of point cloud data.

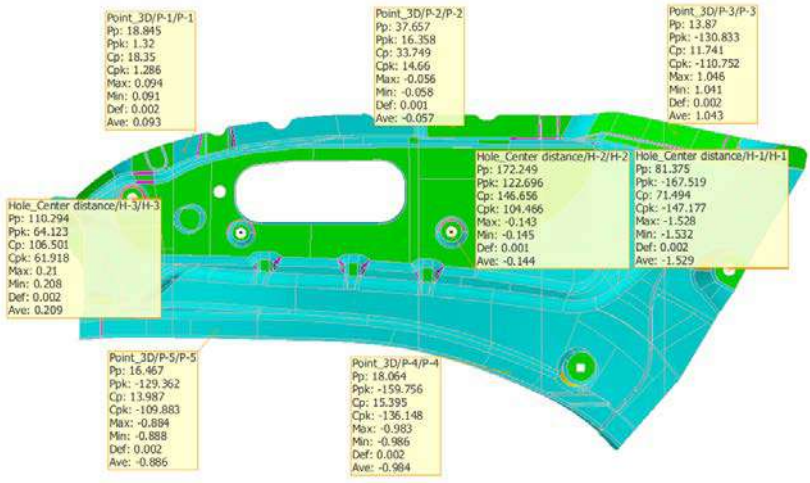


New! Statistical Analysis Result

This feature computes statistical analysis of inspection result of points, holes and trimmed edges.

- No. of scanned point clouds
- Min. Max. Gap
- Pp value
- Ppk value
- Cp value
- Cpk value
- Maximum value
- Minimum value
- Standard deviation
- Average

Example of annotations



Example of an exported Excel

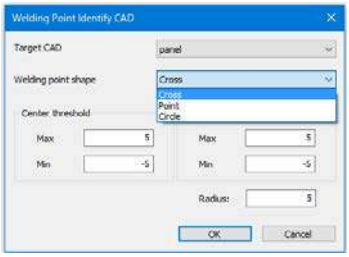
Name	ID	No.	Upper	Lower	Min Max	Pp value	Ppk value	Cp value	Cpk value	Maximum v	Minimum v	Standard d	Average	Sheet-1	Sheet-2	Sheet-3
P-1	P-1	3	0.1	-0.1	0.0031	18.8453	1.3204	18.3503	1.2857	0.094	0.091	0.0018	0.093	0.094	0.094	0.091
P-2	P-2	3	0.1	-0.1	0.0017	37.6571	16.3581	33.7487	14.6603	-0.0559	-0.0576	0.0009	-0.0566	-0.0576	-0.0562	-0.0559
P-3	P-3	3	0.1	-0.1	0.0048	13.87	-130.833	11.7412	-110.752	1.0456	1.0408	0.0024	1.0433	1.0408	1.0433	1.0456
P-4	P-4	3	0.1	-0.1	0.0037	18.0639	-159.757	15.3945	-136.149	-0.9827	-0.9864	0.0018	-0.9844	-0.9864	-0.9827	-0.9841
P-5	P-5	3	0.1	-0.1	0.004	16.4671	-129.362	13.9874	-109.883	-0.8837	-0.8877	0.002	-0.8856	-0.8854	-0.8837	-0.8877

Improvements in Welding Point Inspection

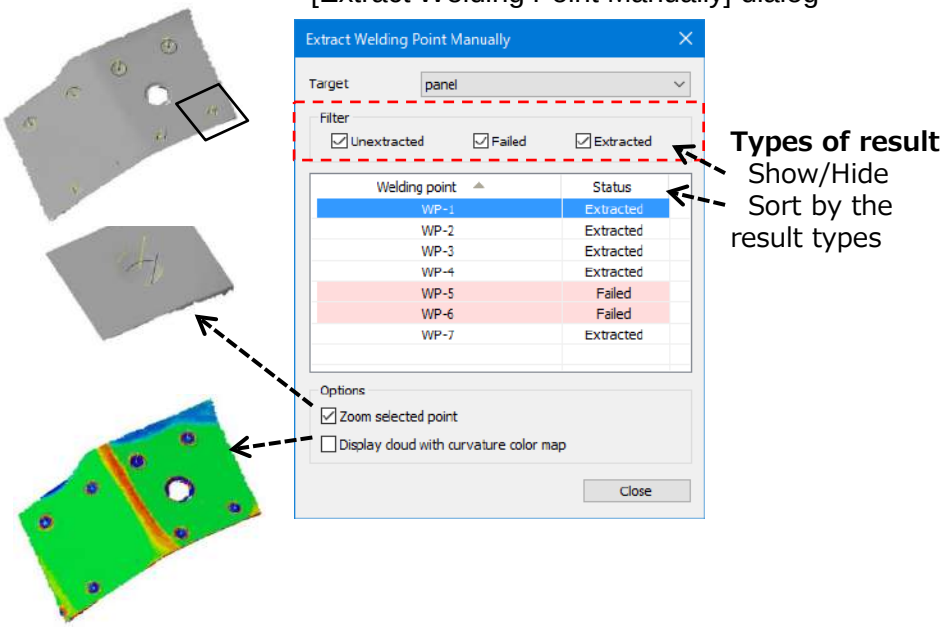
Reinforced automatic identification of welding point's CAD.
Reinforced manual extraction feature.

[Welding Point Identify CAD] dialog

Cross
Added Point
Added Circle



[Extract Welding Point Manually] dialog

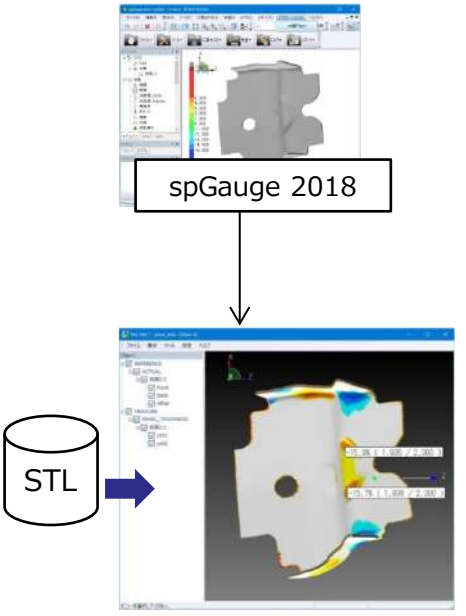


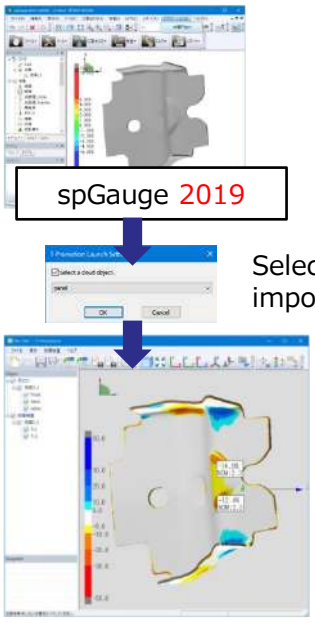
Types of result
Show/Hide
Sort by the result types

Changes and Improvements in Panel Thickness Evaluation

Changed the menu name to [Prototype]-[Panel Thickness].
Data already imported to spGauge can now be handed over.
Separate STL files, each for the front and the back respectively, can be imported.
Added an icon to the toolbar.
Added feature to capture screen and export to Excel.

Notes: This feature is available to users with valid maintenance license from spGauge 2019.1 onwards.

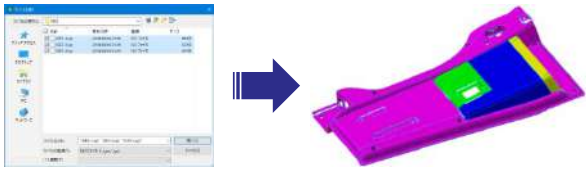




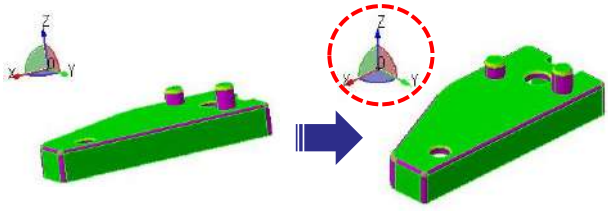
Select an STL file from the already imported files to spGauge

Operation

- **Import multiple IGES point cloud files at once**
  - When importing point cloud, you can now import multiple IGES files at once.

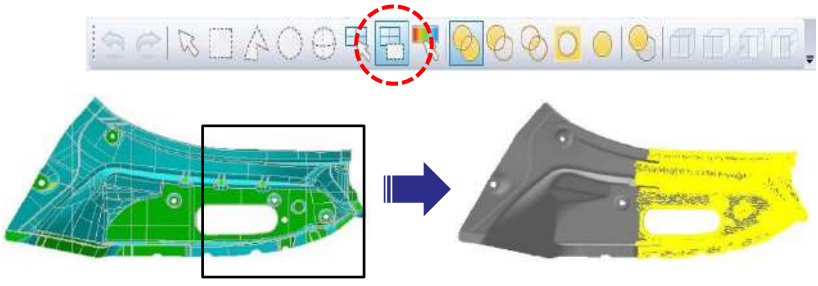


- **Nearest Isometric View Settings**
  - Change the viewpoint to the nearest isometric direction.



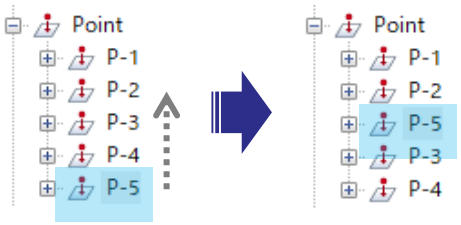
- **Select point cloud by specifying multiple faces**
  - When partially removing or copying point clouds, you can specify multiple faces to select point cloud in vicinity.

Selection Toolbar



About Tree

- **Drag & drop to reorder the point inspection or feature geometries**
  - The location of point inspection and feature geometry in the Object Tree can be moved by dragging & dropping.



- **Keep the active position when defining GD&T**
  - After defining dimensional and/or geometrical tolerances, the Object Tree at the defined location becomes active.

- **Configuring the number of decimal places in matrix property**
  - Now you can change the number of place after the decimal point in the amount of moving or rotating in the property of a matrix. (Conventionally, it was fixed to 3 digits.)

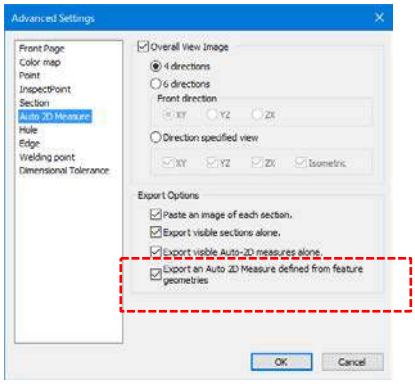
- **The position of merged point clouds**
  - After merging multiple point clouds, the original position is preserved.

Result Report

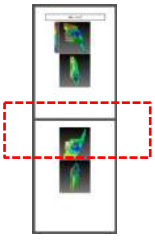
- **Export round hole diameter**
  - Added diameter to the round hole result report.

Type	Standard Value	Threshold		Result	Deviation	OK or NG
		Max	Min			
Flush		0.500	−0.500	−1.154	−1.154	NG
Gap		0.500	−0.500	1.628	1.628	NG
Diameter	9.991	0.500	−0.500	10.454	0.463	OK

- **Automatic 2D measure feature geometry**
  - Now the automatic 2D measure's feature geometry's inspection result is exported to the result report.

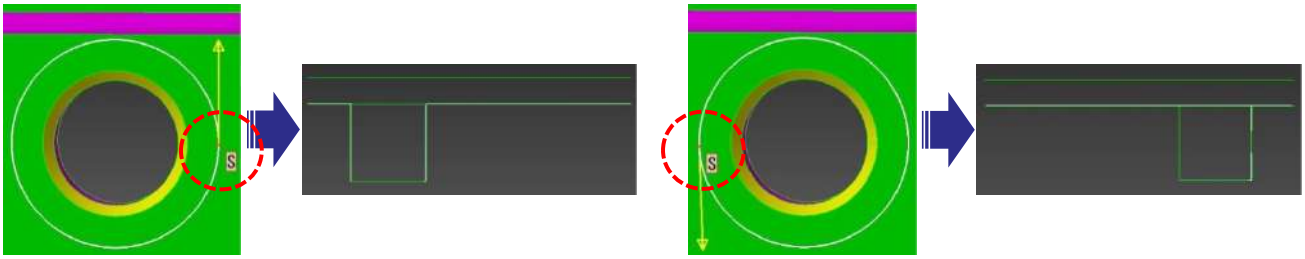


- **Improvement on image layout between pages**
  - An image will no longer be split between two pages.



Inspection

- **Specify the starting position of 3D cross section extension**
  - Now you can specify the starting position [S] in the [Extended Display] of 3D cross section.

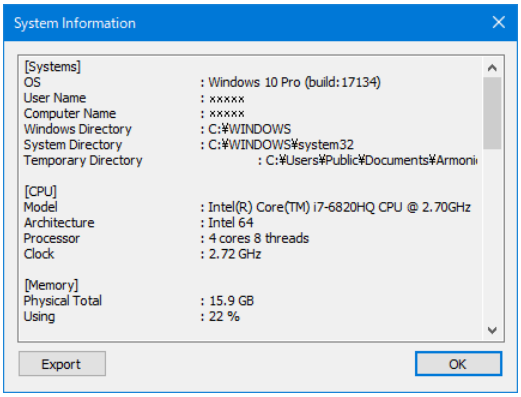


- **Increased the number of rows when exporting error map file**
  - Increased the maximum number of rows that can be written to Excel.
    Excel 2003 and before: 65,536 rows (2 to the power of 16th)
    Excel 2007 and after: 1,048,576 rows (2 to the power of 20th)

- **Changed group tree's <Statistical Analysis> to <Variation>.**

Overall

- **System Information**
  - Display the information on OS, PC, CPU, Memory, Disk, Network, Graphics etc.



- **Renewed the splash screen and the desktop icon**

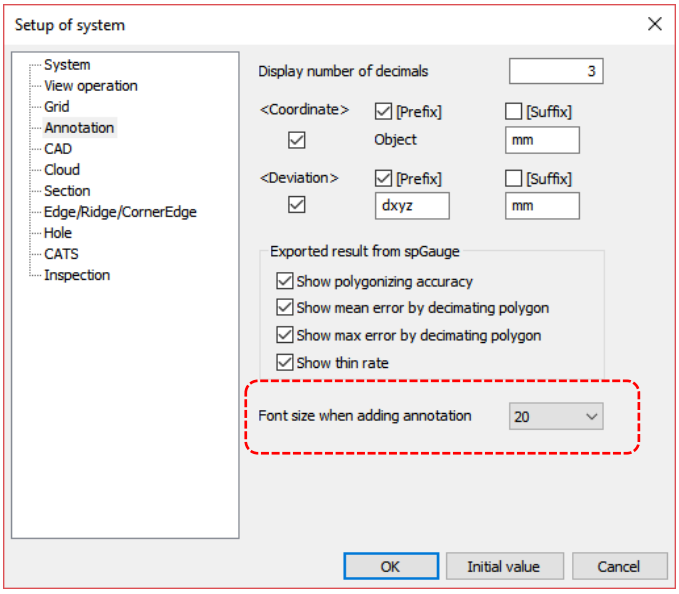
Splash screen

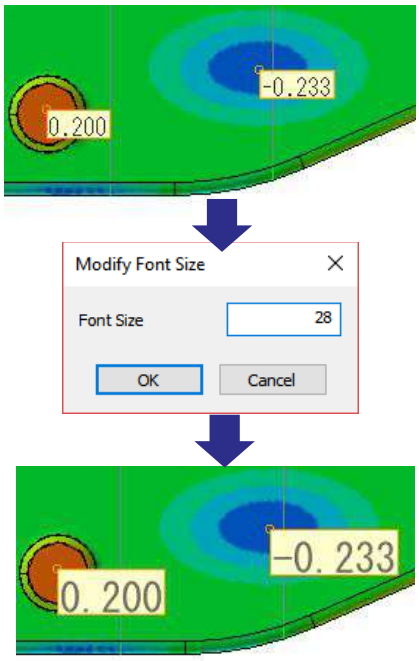
Desktop icon

- Export logs (daily)
- Export logs (alignment)

Annotation font size settings

- The font size used in [Annotation]-[Add] can now be configured.
- The font size of the displayed annotations can now be modified.





Options

Updated the versions of CAD data (optional licenses) that could be imported.

CAD	Supported versions
CATIA	R8 - V5-6R2017 (R27)
NX (UG)	V11 - NX11
Creo Parametric (Pro/E)	V16 - Creo 3.0
SOLIDWORKS	98 - 2017
Parasolid	12.0 - 29.0
JT	8.1, 9.0, 9.1, 9.5

Resolved Issues

✓ **[File]-[Import]-[TBL]**

Addressed issue where, under certain circumstances, the import of TBL file fails when [Edit]-[System Setting]-<Polygon>-<Remake polygon after reading TBL file.> is selected.

✓ **[Report]-[Save As ViewerLight DSLX]**

Addressed issue where, under certain circumstances, execution of [Save As ViewerLight DSLX] fails after thinning out a discrete point cloud.

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