

New SpatialAnalyzer Version: SA 2022.1

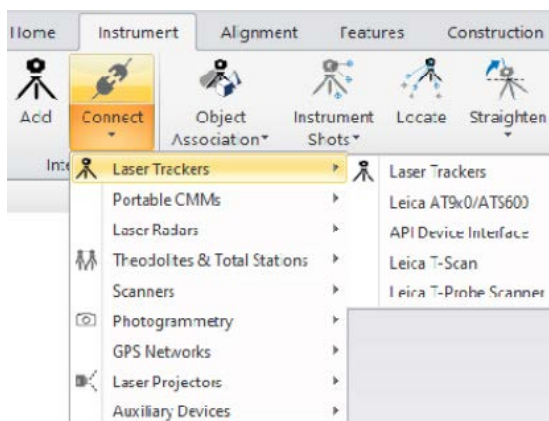
One of the significant advantages of SpatialAnalyzer is that development occurs at a brisk pace. New feature requests, bug fixes, and changes are implemented quickly, giving you the opportunity to start taking advantage of newly implemented features in a very short period of time.



INTERFACE IMPROVEMENTS

SA Ribbon Bar

Instrument >> Interface >> Connect - Interface modules are now filtered by type to simplify and clarify instrument selection.



INSPECTION IMPROVEMENTS

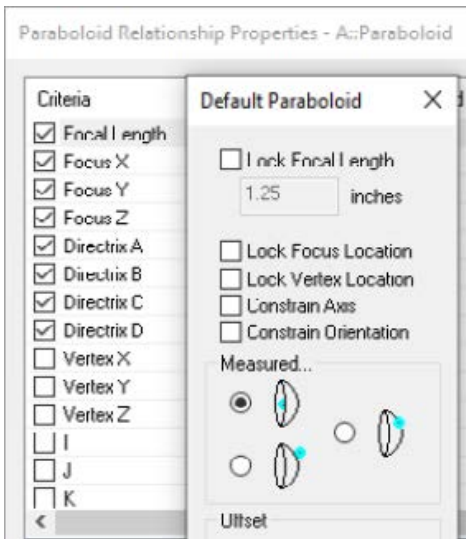
Comparison Features

Geometry Relationships with a pre-defined nominal references now offer a new selection option: “Measured Geometry”. This geometry to geometry comparison still offers the ability to create cardinal points, vectors, and dynamic reports, and can be converted back to a full Fit and Compare relationship at any time.



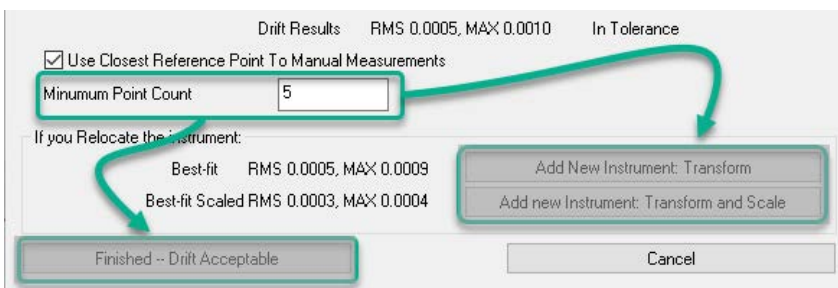
Geometry Fit Expansion

GR-Paraboloids now offer improved fit controls. This version adds the ability to constrain the fit process, fully holding the nominal axis or the nominal orientation during the fit process. These controls should be very helpful in antenna applications.



Minimum Point Count Added to Drift Check

At customer request there is now a minimum point count threshold that can be set within a Drift Check. When enabled, this control ensures the minimum number of points are measured in order to accept or realign based on the drift.



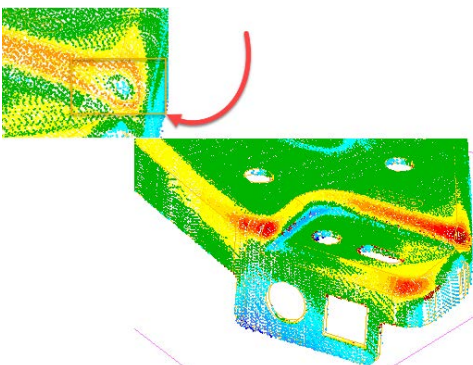
Drift Check: <https://youtu.be/yeqdxTFztng>

CLOUD BASED INSPECTION

Probing Direction in CAD Comparisons

In prior versions of SA clouds were directly compared to the closest CAD surface. This could cause issues with thin sheet metal parts where the data is closer to the back side of the CAD.

In this version the probing directly has been incorporated in this comparison process ensuring that only the measured CAD surfaces are considered.

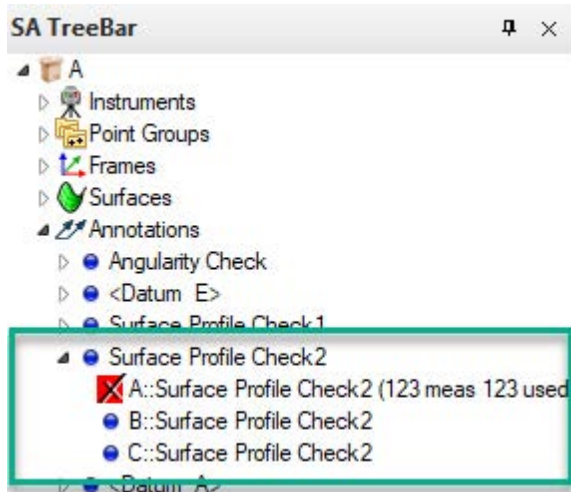


GD&T INSPECTION UPDATES

Organization and Access Improvements

In this version the ability to relocate existing annotations from one collection to another has been added.

Feature checks links are now associated with their corresponding annotations in the tree. This provides the ability to expand the annotation and directly access the feature checks built from this annotation.



GD&T Annotations: <https://youtu.be/62mO3GIYd7k>

IMPORT IMPROVEMENTS

New CAD Import Libraries

- ▣ Autodesk Inventor 2022,
- ▣ Creo 8.0,
- ▣ FBX 7500
- ▣ NX 1980 series,
- ▣ Parasolid 33.1

Vector Import Improvements

The speed of importing vectors from a text file has been greatly increased.

Expand Point Set Use for Large Data Sets

Point Sets are more efficient than point groups for saving large data sets with thousands of points. In this version we have added:

- ▣ Ascii import options allowing the import of points as Point Sets
- ▣ Expanded our query capabilities to allow point sets to be handled as objects in a points to objects query or relationship. This facilitates closest point comparisons.

REPORTING IMPROVEMENTS

Move Collections Logging

Extended logging to capture all variants of moving items through the **Move** option within the collection right-click menu.

Fabricated Measurements

When measurements are associated with an instrument using the **Fabricate Measurements** option, the measurement details are now captured. The fabrication method parameters: inject error, limit distance, and min/max are all recorded.

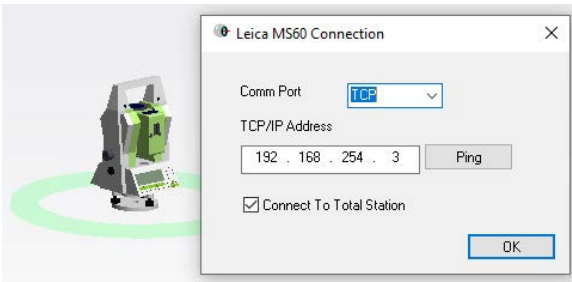
INSTRUMENT UPDATES

Total Stations

Added NEW! Leica Total Station Interface.

A new interface has been added to improve support for Leica Total Station:

- ▣ Leica MultiStations such as the MS60
- ▣ Robotic Total Stations such as the TS16 and TS30
 - These instruments can now be run using the [Leica Total Station](#) interface as well as the Theodolite Manager. This new interface supports:
- ▣ Measurement profiles to measure single points, stable points, and spatial scans.
- ▣ For the MS60, the [Nova Scan](#) measurement profile supports Rectangle, Polygon and Dome scans in any configuration and can be saved with custom configurations.
- ▣ Turn ATR On / Off and Tracking On / Off using buttons on the Instrument dialog
- ▣ Clockwise and Swing checkbox in Power Search settings to allow left and right Power Search
- ▣ It also adds the ability to use SA Remote with Total Stations.

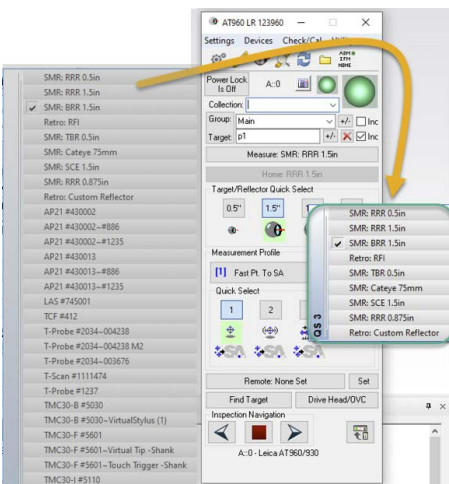


TS interface comparison: <https://youtu.be/uDBnefiGRMM>

Trackers

Improved Quick Select Display

A user noted that if too many 6D probes are present, the quick select list gets hard to manage and use. All current 6D targets that we automatically switch to upon beam lock will no longer appear in the list.



Expanded High Point Measurement Profile

High Point measure profile now supports 6D targets.

Leica LMF Trackers (AT960 and ATS600)

Added the ability to connect to trackers using serial number. The MP Command will now accept either serial number or IP in the IP address field.

Leica ATS600

Patch Scan gets a new parameter - **Patch Angle**. Patch Angle defaults to 45 degrees, to optimize measurement of Contrast Targets mounted vertically.

PCMM Arm

Users can now manually calibrate an arm’s graphical model and save the solution into a file to ensure an accurate arm display. This is very helpful for arms that do not have a predefined encoder zero point.

On loading the SA job next time, the application verifies if the arm model has a pre-saved calibration file in the <C:\Analyzer\Data\Persistence directory>. If found, the calibration offsets will be applied to the arm’s graphical model.

Faro USB

Updated Instrument.lst file to correct calibration parameters for FARO models to facilitate the graphic solution.

The Faro Quantum Max is now fully supported, including scanner transform retrieval from both scanner mounts. Faro Drivers v.6.9 or later are recommended.

Both 2meter and 3meter arm models were added to support the Quantum Max arm lineup.

To toggle between probing and scanning, you can now just hold down both arm buttons. Just press and hold both buttons until you hear the long press notification beep (about 2 seconds), then release.

Laser Radar

Nikon Metrology APDIS MV400 Laser Radar

Laser Radar APDIS MV400 has been integrated with Nikon CLR SDK v10.05.05.6082. The interface application appearance:

- ▣ Narrower interface layout
- ▣ Updated toolbar icons to improve visibility
- ▣ Improved target manager

