

Our partner New River Kinematics continuously develops and enhances SA to further meet customer needs and goals. With this newsletter, we inform you about the latest software customizations.



New SpatialAnalyzer Version: SA 2014.06.17

Slots

Support for both rounded and square slots has been added. Use **Construct > Slots > Enter** to construct round or square slots relative to the working coordinate frame.

From Surface Faces

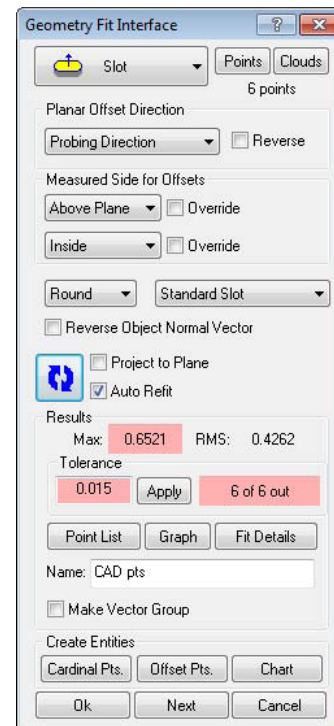
Given a merged CAD surface, you can extract a slot by using the new command **Construct > Slots > From Surface Faces**. Simply click on the interior wall of the slot and the nominal slot will be created.

Geometry fit now supports rounded and square slots. Use **Construct > Slots > Fit to Points** or select the **Slot** geometry type from the **Geometry Fit** dialog.

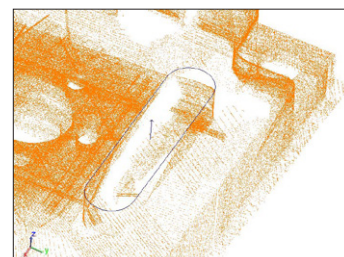
You can construct standard (best fit) slots (rounded or square), as well as max inscribed and min circumscribed slots.

For best results, measure at least 7 points for a slot, spread along both ends and the straight segments.

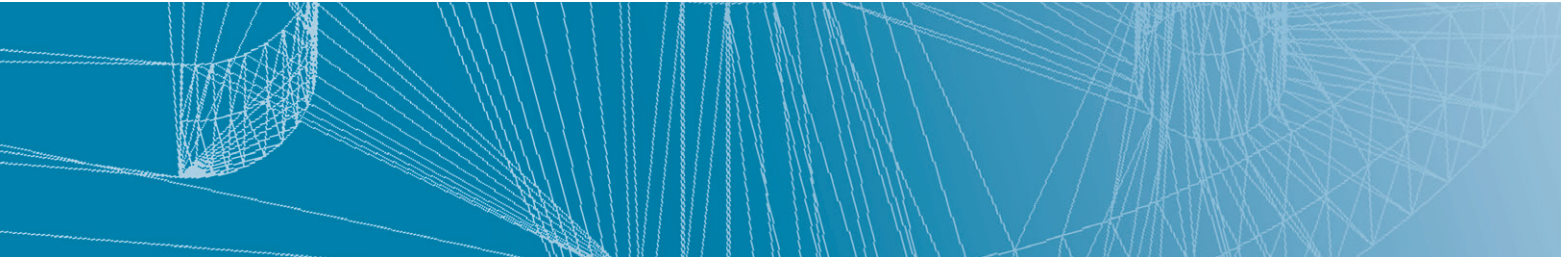
To create a line along the center of one or more slots, use the new command **Construct > Lines > Center of Slot(s)**. You can now create geometry relationships for slots. Icons have been added in the Relationships tab in the Toolkit.



Slot Geometry Fit Dialog

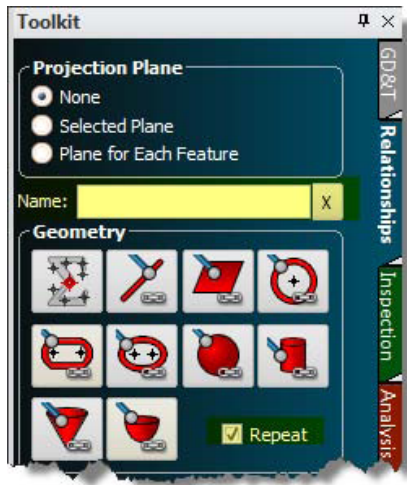


Point cloud



Geometry Relationship Naming/Deletion

Renaming a relationship will cause the objects it created to also be renamed. Deleting a relationship will cause the objects it created to also be deleted. A Name field has been added to the Relationships tab in the Toolkit which allows you to control the name of the relationship you create. If left blank, then the default name will be used.



Toolkit

Toolkit Repeat Feature

A Repeat checkbox has been added to the relationships tab of the toolkit (see previous image). When enabled, advancing forward in the Inspection tab or completing a feature with a measurement count limit will automatically create a new feature with the same properties as the last created feature.

This is particularly useful if you have to measure a large number of similar features, such as 100 holes. Simply define the first hole, enable the Repeat option, and as you advance past the first hole, new circle features will be created for you.

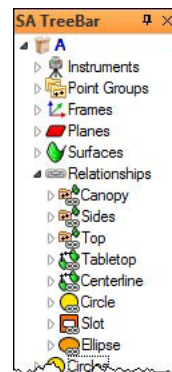
Single Point Circle Geometry Relationships

Support has been added for single point circles in a geometry relationship. As a reminder, single point circles allow you to lay a probe in a hole (assuming the hole diameter is smaller than the probe diameter) and create a circle with a single measurement, based on how far the probe sinks into the hole.

To create a single point circle geometry relationship, create a circle relationship as usual, and enable a projection plane. If the relationship has exactly one point, a single point circle will be created. If you continue measuring additional points, a regular circle relationship will be created instead. Note that the measured point must be on the positive side of the projection plane.

New Relationship Tree Icons

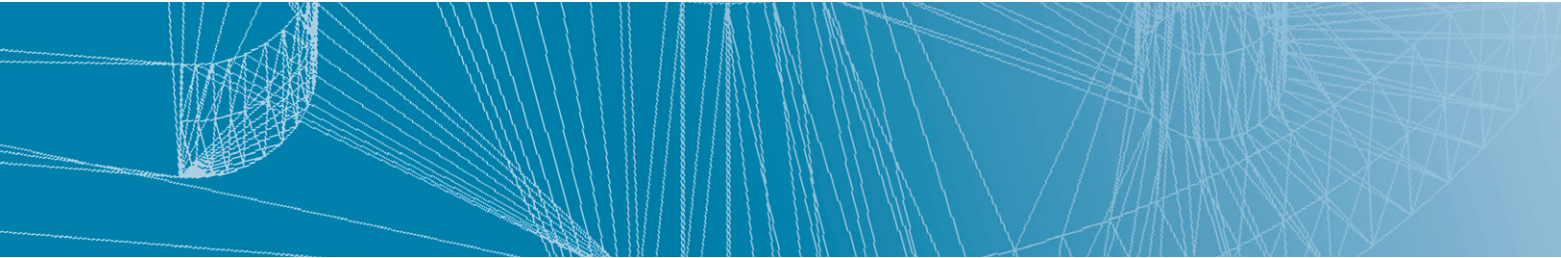
Several new relationship tree icons have been added to help you distinguish among different types of relationships in the tree:




TreeBar

Rewritten MP Editor

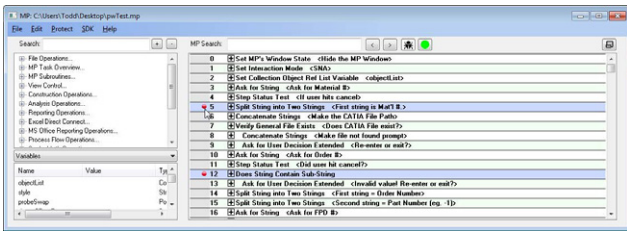
A new, entirely-rewritten MP Editor is available in this release. The new editor brings a huge number of improvements over the previous script editor interface, making script development faster, easier, and requiring less mouse



clicks. For detailed information on using this editor, refer to the chapter “Measurement Plans” in the SA User Manual.

To open the new editor, select **Scripts > Create/Edit Measurement Plan**, then click  to open the new editor.

Note: The new MP Editor is still in beta testing mode—exercise caution if using it with production scripts.



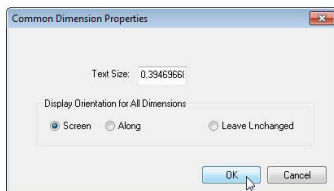
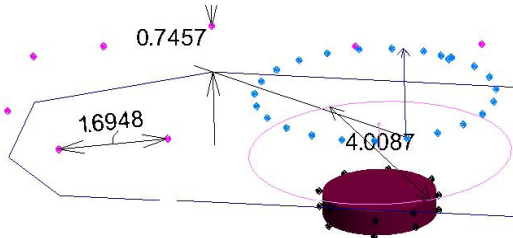
MP-Editor

Dimensions

Dimensions can now be oriented to always face the screen (Screen) in addition to the original setting to have them oriented along the dimension (Along).

This setting can be changed in the properties of a dimension, or you can right-click on the **Dimensions** category in the tree and select **Common Properties** from the context menu to adjust the text size or display orientation for all dimensions in a collection.

Right-click selection in the graphical view has been implemented for dimensions as well.



Dimensions

Google Glass

A Google Glass app is now available which displays watch window data on the glass, allowing it to perform as a Heads-Up Display.

The app is not yet available on the Google app store and requires manual installation. For more information, refer to the chapter “Watch Windows” in the SA User Manual or contact SpatialAnalyzer@vmt-gmbh.de for download and installation instructions.

X	33.3234
Y	64.1496
Z	0.0000
d	72.2885
	A:Cylinder
Point to Objects	18:37:28

Google Glass App

Update to FarOJRE v.4.3.0.

All FARO Tracker users will need to download and update their current Faro Java packages (JRE-Files) manually before you start the next measurements. The complete FarOJRE file which you find typically under C:\FAROJRE is to replace. All types of FARO Tracker and older SA versions are concerned.

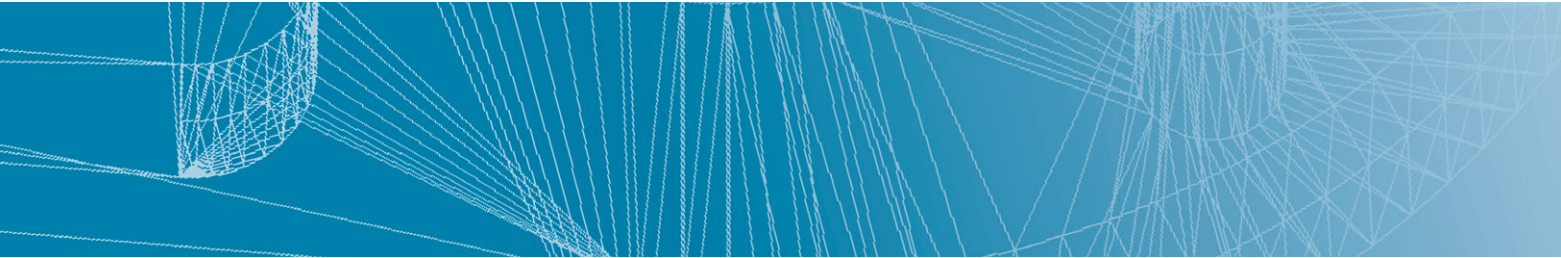
Without updated Java-files the laser tracker doesn't work correctly with SA. Main symptom is that the tracker will still run, but after a while it starts to malfunction. Re-booting both the tracker and computer may temporarily get everything working again, but problem will return.

For download update click [here](#).

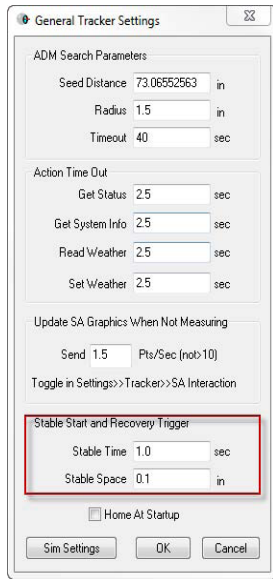
Stable Start and Recovery Triggers

You may now edit the parameters for the stable start and recovery triggers by clicking on the **General Settings** icon. This applies to any measurement's stable start trigger, stable recovery after beam break, measurement restart,





and stable start for measurement modes such as projection planes and hidden points (vector bars).

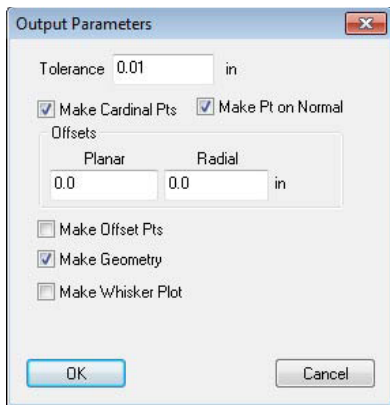


Stable Start Triggers

Cardinal Point Offset

For specialized applications, you can now specify the offsets for cardinal points created through the laser tracker interface or in Measurement Plans through Geometry Fit Profiles.

This control is found in the **Output Parameters** dialog of the tracker interface fit dialog or in the geometry fit profile settings. Both offsets default to 0.0 to preserve existing behavior.



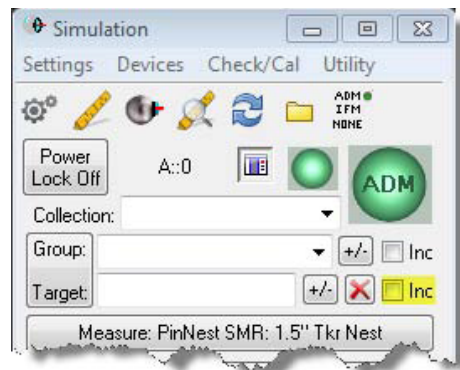
Output Parameters dialog

User Interaction Mode

Laser trackers are now aware of SA's User Interaction mode. If set to Silent, the interface will suppress most error messages that require user interaction. This is meant for automation, where user interaction is not desired.

Auto-Incrementing Point Names

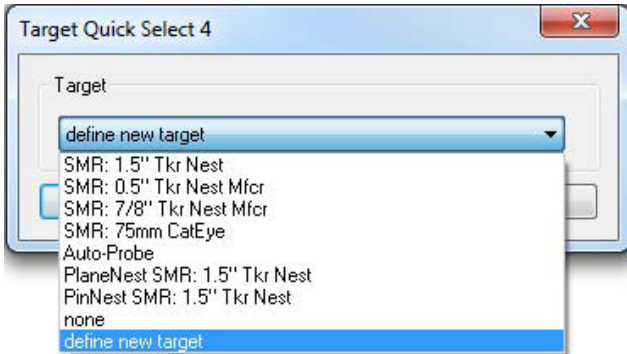
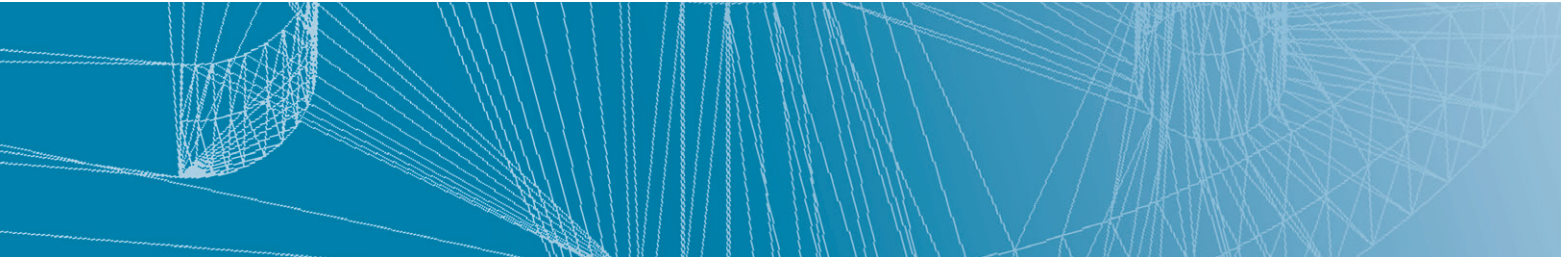
A check box option to auto-increment point names has been added. This setting does not persist. Each time the interface starts, it will be enabled to increment the point name (consistent with existing behavior). The primary purpose of this feature is to take multiple observations for the same point. It does not apply to spatial or temporal scans, or to measurements initiated from SA (such as auto-measure).



Auto-Incrementing Point Names

Tracker Toolbar

You can now access the **Reflectors and Targets** dialog from the Toolbar. Right-click a target quick select and choose **Define New Target**.

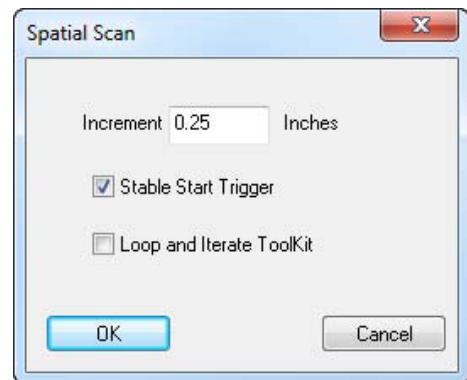


Target Quick Select

Loop and Iterate Toolkit has been added as an optional parameter for Spatial Scan in the tracker toolbar. This allows you to measure a set of circles defined in the Toolkit without returning to the computer between each iteration. When checked, this option sets the spatial scan to a stable start trigger, loop stop trigger and profile iterations to zero. It also iterates toolkit trapping to the

next circle after each loop. When unchecked, this option sets the spatial scan to beam break stop trigger, one iteration, and no longer iterates the trapping from the toolkit. To navigate to this option, simply right-click on the spatial scan icon in the toolbar.

For additional fixes and improvements, refer to the SA Readme file.



Loop and Iterate Tool Kit

DOWNLOAD THE LATEST SpatialAnalyzer VERSION

Please note: You download the actual full version of SpatialAnalyzer, but you can use only the full functionality if you have an actual software license key. In other cases you can only work with the SA viewer.



Download the new version [here...](#)