# Newsletter

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 2014.11.11

# Dimensions

# Notation

The ability to append notes to dimensions has been added. Simply double-click on the dimension in the tree and add a note to be displayed in the graphical view.



# Reporting

Dimensions have been added to reports in a tabular form.

Point To Point Dimension Survey::Dim0		
Point A	Point B	
Survey::Cylinder ::6013	Survey::Cylinder ::6065	
Offset None	Offset None	
Reference Frame:	Nominal::WORLD	
Magnitude:	7.1980	

# **Referencing Frames**

With regard to point-to-point dimensions, you now have the option to select a reference frame different from that of the

current working frame. Double-click the dimension in the tree and choose **Select Reference Frame** in the **Point to Point Dimension** properties dialog.



# **Common Properties**

By right-clicking on a dimension and selecting **Manage Settings > Apply Settings to Other Dimensions**, you can set common properties for all dimensions of that same type in a collection.

# 4 Color Vector Group Colorization

A new 4-color go/no-go vector group colorization option has been added to the vector group colorization options. positive side of the projection plane.





#### **ASCII Related Improvements**

#### New Formats

Ten new ASCII import formats have been added, some of which allow importing point notes.

# Exporting

An Export Format Info option has been added to the File > Export > Points (ASCII File) dialog.



You now have the capability to export multiple vectors to a single file.

#### Euler Angle Support

Importing and exporting frames now supports Euler angle formats.

#### Filtering

A field filter has been added to simplify the import selection from the list of available formats. These filters include: points, vectors, frames and planes.

ASCII Import	×
File: C.\Users\Ashley\Desktop\API Scale.txt	
(241.322880, 5.409352, 1.610454	
Select ASCII Import Format Proints Ovectors Orranes OPtanes	File Units Inches •
Filter by Field Name: All fields    Number of Fields: Any	Group name API Scale txt
XYZ (Steat [Offset2]           XYZ (Steat [Offset2]           XYZ (Notes]           Radius: Thetrs((deg) Phi(deg) (polar or spheric)           Radius: Thetrs((deg) Z (cylindinc)           Explored breats XV	Ensure new group     Ensure unique names     Make Point Cloud
PointName XY 20 Motes] PointName XY 20 Mot (1 sigma) PointName XY 20 Mot (1 sigma) PointName XY 27 Mot (1 sigma) PointName XY 27 Mot (1 format Tolerance) PointName XY 27 Mot (1 for X) That TL THd TLd (Point Tolerance)	Comment character(s): #\\$I<>?"[8.
PointName Radius Theta(deg) Phi(deg) (polar or spheric)	

# Callouts

#### Lock All

A **Lock All** option has been added to the **Callout Properties** dialog. When selecting this option, the viewpoint is locked and saved as well as the function Recall Working Frame.



Collection:	Survey	
Name:	Star Flange	
Viewpoir	nt	
Save	Lock	C Lock All
5	Recall Workir	ng Frame
Lear	der Thickness:	1
Bor	der Thickness:	1
	Change F	Font
	Divide Text Wi	ith Lines

#### **Geometry Relationships**

#### **Reverse Normal Vector**

You now have the option to reverse the normal vector for planar geometry relationships in the **Properties** dialog. This can be accessed by double-clicking the planar relationship in the tree and selecting **Fit Settings**.



#### **Geometry Fit Interface Enhancements**

#### **Cloud Points**

In addition to selecting **Clouds** or **Points** when constructing geometry, you can now choose **Cloud Points** to pick individual cloud points for fitting.



# **Discarded Points**

If you would like to display points that were discarded in a fit, select the option **Include Points Discarded from Fit in Geometry Fit Results** under the **Event Reporting** section of the **Reporting** tab in User Options.

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#### Instrument Transformations

#### **Drag Graphically**

You may now access the command **Drag Instrument Graphically** by right-clicking on the instrument either in the graphical view or treebar.



# Minimize Relationships

You may now access the **Minimize Relationships** command by right-clicking on the instrument either in the graphical view or treebar.

#### Jump Instrument

Instrument uncertainty settings now persist when jumping an instrument to a new location.

# Measure Nominals

Locating an instrument using **Measure Nominal Points** now has the option to disable rotations about Rx and Ry.

# **Construct Menu Commands**

#### Point at Center of a Slot

The command **Construct > Points > Center > Slot(s)** has been added which will construct a point at the center of one or more selected slots.



#### **Cylinders Along Lines**

The command **Construct > Cylinder(s) > Along Line(s)** has been added which will construct a cylinder along one or more lines. After one or more lines is selected, you can input the diameter of the cylinder(s).

#### Laser Tracker Interface Enhancements

#### Steady Pt. to SA

A new acquisition mode and measurement profile has been added called Steady Pt. to SA. This allows you to set the RMS requirement, number of retries, and seconds between retries. This mode is primarily meant for automation measurements, so that a user can ensure that a measurement is within a given RMS. If the measurement is outside of the RMS tolerance, then this mode allows the tracker to keep trying until that RMS is reached.

teady Pt To SA	
Save	Save As
Iterate this Profile	1 time(s)
Acquisition	
[1] Steady Point	•
Parameter	Value
RMS Requirement	0.002000
Retries	5
Sec. Between Retr	2.500000
Samples/Pt.	50
Sampling Freque	100.000000
Sample On Contr	
Measure When Be	
Operation	
Send Points to	sa 🗸

#### Leica AT960/AT930: New Interface

A new instrument interface has been added for the Leica AT960/AT930 laser tracker.



This interface supports the new features of this tracker, including IP discovery, updated video drive, and faster power lock. The 960 offers support for the T-Probe, and this is also supported in the interface with button programming, similar to the 901 interface. When using the Instrument Toolbar, you will see a probe icon for the T-Probe. When it is locked on, you can hover over this icon to see full T-Probe information.



### Leica T-Scan

Leica T-Scan 5 is now supported in the T-Scan interface. This requires T-Scan Collect v10.2.

#### Assembly Guidance Laser Projector

#### Filtering Data

You can now filter data by minimum angle, minimum distance, number of points, or none. **None** is the default and is the existing behavior.

#### **Function Keys**

Function keys have been added for quick access to common functions:

- **F3**. AutoAlign
- > F4. Project Next Pattern
- **F5.** Project Current Pattern
- **F6.** Project Previous Pattern
- > F7. Pause Projection
- > F8. Resume Projection

#### Leica Nova MS50

The scanning properties dialog has been modified such that the horizontal/vertical scan resolution is now specified in job units versus device angular units.

#### **New Measurement Plan Commands**

- > Object Existence Test (Check Only). Returns a boolean indicating whether an object exists.
- > Add Collection Instruments to a Ref List Wildcard Selection.

Adds instruments matching wildcard selection criteria to a collection instrument reference list.

- Clear All ASCII Files. Closes and clears out any open file handles.
- Make Average Point Relationship.

Creates an Average Point or Average Point to Nominal relationship.

# Measurement -Timeout

A new timeout argument has been added to the Configure and Measure command. For important details on this argument's behavior, refer to the SA Readme file.

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