What's New In SA

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.



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.



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:		
Magnitude:	7.1980	

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.



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.

C:\Users\Ashley\Desktop\API Scale.txt	
Overwrite Overwrite	C:\Users\Ashley\E
Point Name Collection Group Point Group Point Point	Coordinate System © Cartesian (X/Y/Z) © Cylindrical (P/T/Z) © Cylindrical (P/T/Z)
None Data to Include	© Spherical (R/T/P) Formatting
 Tolerance Coordinate Uncertainties Timestamps Point Offsets Point Notes 	Separator Space Ocomma Decimal Precision Fixed at 6 digits Full (scientific notation)
Measurement Details	Include SA Version and Frame Info Include Axis/Units Info Include Export Format Info

You now have the capability to export multiple vectors to a single file. This applies to Excel files as well.

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 111.326757, 37.660056, 1.569772 241.322880, 5.409352, 1.610454	
Select ASCII Import Format Points Ovectors Frames OPlanes	File Units Inches
Filter by Field Name: All fields Number of Fields: Any	Group name
XYZ	API Scale.txt
XY 2 Offset[Offset2] XY 2 [Notes] Radius Theta(deg) Phi(deg) (polar or spheric) Radius Theta(deg) 2 (cylindric) PointName XY 2	 ✓ Ensure new group ✓ Ensure unique names Make Point Cloud
PointName X Y Z [Notes] PointName X Y Z Offset [Offset2] PointName X Y Z UX UY Uz (1 sigma) PointName X Y Z TX TY TZ Td (Point Tolerance) PointName X Y Z TX W WW [V[Wmg] PointName X Y Z THX TLX THY TLY THZ TLz THd TLd (Point Tolerance)	Comment character(s): #/\\$!⇔?"[]&
PointName Radius Theta(deg) Phi(deg) (polar or spheric) PointName Radius Theta(deg) Z (cylindric) PointName X Y Z GrouoName	Import Cancel

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.



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.

Machine Configuration	Security	Automation
Display Units Analysi		Hidden-Point Bar Database
Logo Filename: C:\Users\Ashley\Desktop\SA.bmp Select Company Byline Engineered for Extreme Measures Default Report Template		
No Default Report Template Specified		
New	Select	Clear
Quick Report Output	Maximum Number o	f Rows Per Table:
C Excel Workbook	1000	
SA Report		
SA Doc	🔽 Quick Reports Inclu	de Current View Image
Default Page Settings	✓ Quick Reports Inclu Quick Reports Inclu Header	-
	ic Event Generation	
Maximum Logged Data P	Points: 3000	
USMN Max Instruments Per	Point 10	
Include Points Discarded from Fit in Geometry Fit Results		
Oł	Cancel	

Instrument Transformations

Drag Graphically

You may now access the command **Drag Instrument Graphically** by rightclicking 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 instru-

ment 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.

Meas Profile Parameters				
Steady Pt To SA				
Save Save As ?				
Iterate this Profile	1 time(s)			
Acquisition				
[[]] 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	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.