

New SpatialAnalyzer Version: SA 2012.07.09

Download: www.kinematics.com/products/spatialanalyzer/spatialanalyzer-downloads.html

What's New In SA

- **SA Toolkit Bar**

The SA Toolkit bar provides a set of new tabs for quick access to functionality related to GD&T, part inspection, analysis, and reporting.

- **GD&T.**

What was formerly known as the GD&T bar has been brought on as a tab in the Toolkit bar.

- **Relationships.**

The relationships tab enables one-click definition of features (defined by CAD or using primitive geometry) primed for easy inspection using geometry relationships, with or without projection planes. Other relationships can be easily defined as well.

- **Inspection.**

The inspection tab presents all trappable features from all collections—relationships, datums, and feature checks—in a single list. This allows you to easily advance through an inspection routine, trapping measurements for each feature, and instantly providing inspection results against nominal data.

- **Analysis.**

Some of the more commonly-used analysis tools, such as the frame wizard and geometry fitting, are presented together in the analysis tab.



- **Reporting.**

Functionality for creating reports, making dimensions, and creating/annotating callout views is gathered together in the reporting tab.

To display the Toolkit bar, right-click on the menu/toolbar/status bar area of the SA interface and select *Toolkit*.

Reporting Enhancements

- **Headers/Footers & Templates**

You can now define custom headers and footers for your own reports, including elements that update automatically (such as SA version, page number, and date). Headers and footers can contain anything a report body can contain: images, text, tables, and fields—simply drag elements as you would anywhere else on the report (see following image). While in the header/footer edit mode (accessible by double-clicking a header/footer, right-clicking a header/footer or by selecting *Edit>Modify Header/Footer* from the report window), you can resize the header/footer by dragging its divider.

When you're happy with your header and footer, exit the mode by selecting *Edit>Modify Header/Footer* again. This will lock the header and footer in place, although dynamic fields will update as usual. If you'd like to set the report as a template for future reports, right-click the SA report in the tree and choose *Default Template*, or select *File>Make Default Template* from the report window. This can also be done through the *User Options>Reporting* tab. Any additional reports created in the file will match the template's format.

To use the template in other files, you can import the SA file containing the report template into the other file.

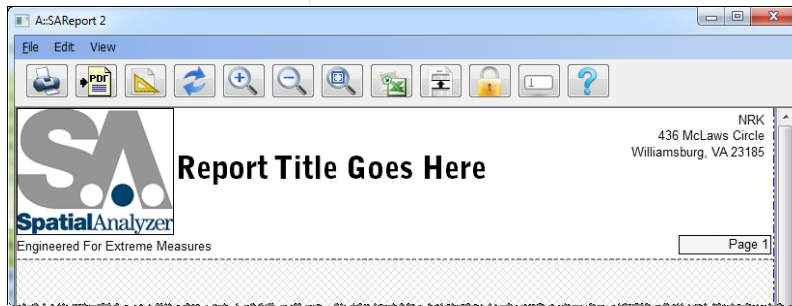
- **Keyboard Zooming**

You can now zoom in and out in the report window using the + and - keys. Zooming to 100% can be accomplished by pressing **Enter**.



• Jump to Page

Quickly jump to any page in your report by pressing **Ctrl-G** (for Go) while in the report window.



• Image Border Control

Disable the display of borders around images from the report's page settings options by clearing the *Draw Images with Border* checkbox.

• Page Settings for Report Templates

Page settings for report templates can now be controlled from the *SA Report Template* properties dialog. In that dialog, click on the *Page Settings* button to define the parameters for the final generated report.

• Assigned Reporting Frames

Individual objects can now be reported/displayed with respect to a specified coordinate frame—not necessarily the active frame. This allows you to have any coordinate frame active while always viewing a given object relative to its assigned coordinate frame.

To assign a specific reporting frame to an object, right-click the object and select *Reporting Frame* from the context menu.

Be aware that the reporting frame applies to reported values in the report bar and reports **only**. For example, when double-clicking a point to view its coordinates, you will always see the coordinates relative to the active coordinate frame, regardless of the point group's assigned reporting frame.

Wenn Sie diesen Newsletter von uns zukünftig nicht mehr erhalten wollen, dann klicken Sie bitte auf folgenden Link: [Abmeldung SA Release Newsletter](#)

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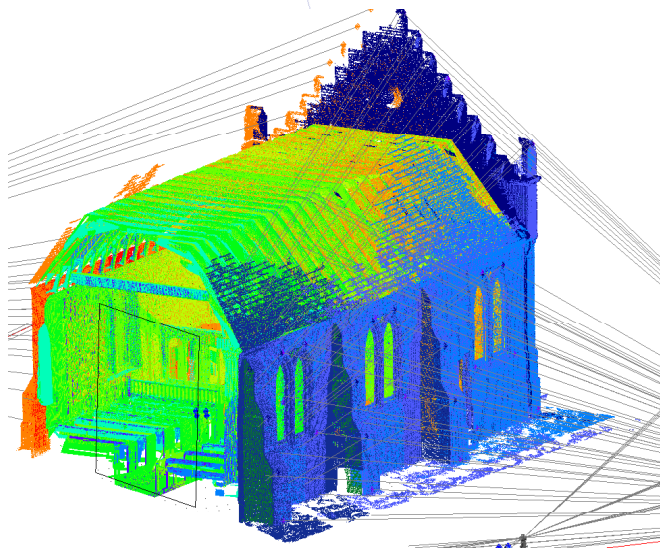
• Clipping Planes

Support for full clipping planes has been added to the graphical view. This is a great option when you want to display a cutaway or cross-section of your data. You can define as many clipping planes as you'd like, and any of them can be active at any one time.

Any number of objects can define the position and orientation of clipping cubes, and each clipping cube can have up to six clipping planes.

You can interactively drag and resize the clipping box to reposition the clipping planes.

For more information on View Clipping, see "View Clipping" on page 71.



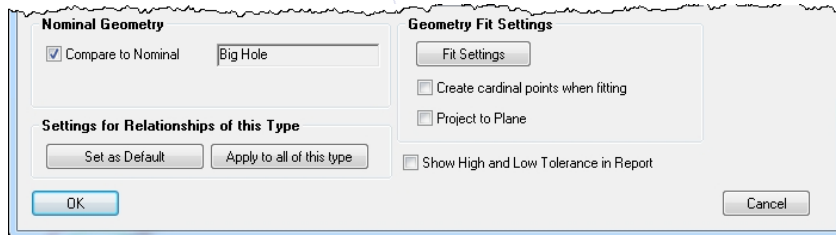
- **GD&T: Fit to Points**

A new creation option has been added to GD&T: SA Objects (fit to points). This enables you to create a form or orientation GD&T check directly from measurements, instead of creating nominal geometry first.

For example, to perform a circularity check on a set of measured points, ensure that *SA Objects (fit to points)* is selected. Click the circularity button, select the measurements, then press Enter. The circularity results will be calculated immediately.

- **Geometry Relationship Features**

Several changes have been made to geometry relationships that improve flexibility and functionality.



- **Projection planes can now be defined for line, circle, and ellipse geometry relationships.**

This can be accomplished by either choosing the *Project to Plane* option in the relationship's properties (above), or clicking the *Projection Plane: Active* checkbox in the Relationships tab of the SA Toolkit bar. In the latter case, the selected projection plane will remain active and apply to all following geometry relationships until the checkbox is cleared.

- **Geometry Relationships can now be switched between “fit only” and “fit and compare” types.**

By selecting the *Compare to Nominal* option (above), you can select nominal geometry to use for “fit and compare” relationships. If you simply want a basic geometry fit relationship, simply clear the checkbox.

- **Nominal Geometry can be created from the relationship properties.**

If you have an existing “fit only” relationship, you can create nominal geometry for it and convert it to a “fit and compare” relationship by clicking the *Create Nominal* button in the relationship’s properties.

- **New menu item for fit and compare relationships.**

- A new menu item (*Relationships>Geometry Comparison>Select Nominal Geometries*) has been added, along with a button on the SA Toolkit’s new Relationships toolbar, that creates fit and compare relationships from SA objects such as planes and circles. This is similar to *Relationships>Geometry Comparison>Fit and Compare to Nominal*, but doesn’t prompt for existing measured points.

- **New option to clear point associations.**

Point associations for any type of relationship can now be cleared by selecting the new *Clear Point Associations* context menu item. This is available for both individual relationships and the parent relationship category in the tree. (From the SA Toolkit’s Relationships tab, you can also choose to delete the cleared points from the file).

New MP Commands

For details on these new MP commands, see the MP Command Reference.

- **Reporting Operations>Report Bar>Add Custom Tables to Report Bar.** Adds one or more custom tables as tabs in the Report
- **Reporting Operations>Custom Report Tables>Set Custom Table Cell Font.** Sets the font for a specific cell in a custom table.
- **Reporting Operations>Custom Report Tables>Delete Custom Table.** Deletes a custom table from the tree.
- **Reporting Operations>Set Scale for Picture.** Assigns a scale value to a picture to control its size when added to a report.
- **Reporting Operations>Append Items to SA Report.** Sequentially adds one or more items to an SA report.
- **Reporting Operations>Make New SA Report.** Creates a new, empty SA report (using a defined template, if one exists).
- **Reporting Operations>Output SA Report to PDF.** Exports an SA report to a PDF file.
- **Utility Operations>Copy Directory.** Copies a directory from one location on the file system to another, optionally replacing the destination folder's contents.
- **Utility Operations>Set Notification Cancel Override.** When enabled, the *Cancel* button and "X" in the corner of the window are not displayed in dialogs resulting from any "notification" command (such as Notify User String).
- **Utility Operations>Set Automatic Backup State.** Enables or disables full file and measurement automatic backups.

- **Utility Operations>Move Robot/Machine through Path.** Commands a robot/machine to pass through a sequential set of coordinate frames, optionally interpolating between those frames as linear segments or as a smooth spline.
- **View Control>Set View Clipping Plane.** Creates a clipping plane on a specified object.
- **Construction Operations>Frames>Construct Frames – Average of Other Object Frames.** Creates a frame with the average position and orientation of the supplied frames.
- **Construction Operations>Other MP Types>Decompose Transform into Vectors (Origin and Axes).** Converts a transform value into four vectors: one for the origin and one for each of the three axes defining the transform.
- **Construction Operations>Other MP Types>Make a World Transform Operator (from Transform and Scale).** Converts a separately supplied transform and scale factor in to a single world transform operator.
- **Process Flow Operations>Ask for User Decision Extended.** Provide a question or prompt and a series of choices to appear in buttons. Clicking a button will jump to a specified step. Similar to “Ask for User Decision”, except allows many more than three potential answers.
- **Analysis Operations>Query Frame to Frame.** Queries the delta between two coordinate frames.
- **Analysis Operations>Query Point to Objects.** Compares a point to one or more objects and returns the resulting deviation.
- **Analysis Operations>Remove i-th Object From Collection Object Name Ref List.** Removes the specified object from a collection object name reference list.

- **Analysis Operations>Remove i-th Point Name From Point Name Ref List.** Removes the specified point from a point name reference list.
- **Analysis Operations>Auto Filter Points/Groups/Clouds to Surface Faces.** Filters a set of points, groups, and/or clouds to a series of provided surfaces. Equivalent to the Construct>...>Auto Filter to Faces commands.
- **Instrument Operations>Dock Instrument Interface.** Docks or undocks an instrument interface to the SA user interface.

New MP Editor Features

- **Recent Files.** A list of recent files are now displayed in the MP Editor.
- **Moving Blocks of Steps.** An entire block of MP steps can now be moved up or down in the MP Editor. Select the steps you'd like to move, then click the up or down arrow to move the set of steps as a unit.

New Features for SA Machine on request



- Events

SpatialAnalyzer Webinar

21. August 2012 at 20 Uhr German time via Internet

Our partner New River Kinematics /USA offers a SpatialAnalyzer Webinar free of charge!

In cooperation with Quality Digest the new features of version SA 2012.07.09 will be presented and as well the new functions.

For more information read here:

<http://www.kinematics.com/about/events.php>



4. Advanced Training Course „Optical measuring for particular cases in machine building“ at Geodetic Institut KIT , Karlsruhe

02. October 2012 | Karlsruhe

VMT GmbH is representing at the partner exposition

<http://www.gik.kit.edu/omam2012.php>



Optische Messtechnik für
Anwendungen im
Maschinenbau

Projectdialog SpatialAnalyzer

The 4. German User Meeting of SpatialAnalyzer Software

08. – 09. November 2012 | Bruchsal | at VMT

More information you will get in short time on our website:

<http://ims.vmt-gmbh.de/events/>

More Information:

Industrial Measurement department of VMT GmbH has got a new own web side on which we will keep you informed about our products, services and news.

<http://ims.vmt-gmbh.de>

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