New SpatialAnalyzer Version: SA 2020.04.09

One of the very 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 new or requested features in a very short time.

RIBBON MENU IMPROVEMENTS

- Adjusted Hide Selected Items to allow rectangle select.
- Adjusted Delete selected items to allow rectangle select of objects.
- Added a number of missing button functions (see readme for details).

GR-FEATURE INSPECTION ENHANCEMENTS

Added a readout of compensated or offset point values within the *Point List* for a geometry relationship. This can be helpful in checking expected raw position values.

Points to Points Relationship

A new relationship type called a *Points to Points Relationship* has been added. This relationship functions much like a group to group relationship, comparing points with the same names, but allows user selection of a subset of nominal and actual points chosen from a selection of point groups for comparison.

GD&T INSPECTION ENHANCEMENTS

Evaluate All Feature Checks option in the tree has be optimized and is now much faster to complete.

Added capability to set tolerance direction reference object for planar tolerance zones for true position checks.

CLOUD POINT ENHANCEMENTS

Meshing

A new meshing control to SA called a Generic Mesh. This meshing option provides a number of advantages:

- It has a simplified set of meshing controls
- It accepts any combination of point clouds
- Its much faster to compute
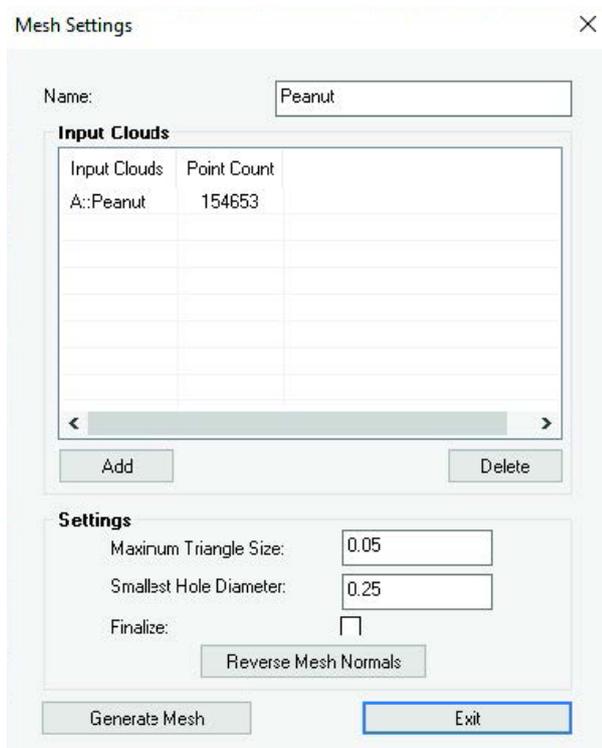
Fit Scan Passes

Added capability to refit scan passes to each other within a cloud to facility cleaner mesh generation. Also a newly constructed cloud build from multiple clouds can be refit as well. This means that the instrument intrinsic alignment will be overridden in favor of a selfconsistency within the cloud, improving meshing results.

Feature Extraction

Slots have been added to the Auto Filter to Nominal 2D Feature Extraction toolset.

RGB Color

The RGB color control has be expanded and enhanced to provide a histogram display of the selected color, intensity or quality value.
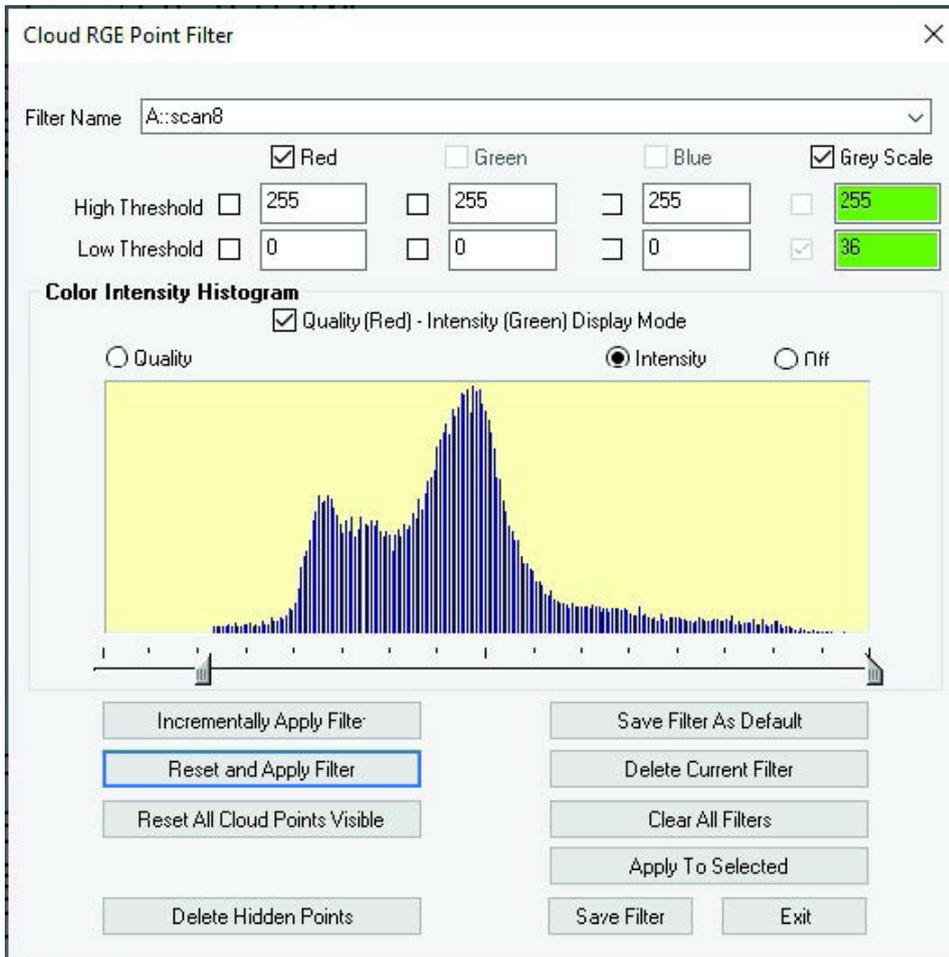
ADDITIONAL ANALYSIS FUNCTIONS

New Delete by Proximity Control
Edit -> Delete Points -> Corresponding to Reference Groups by Proximity has been added to help remove duplicate points from a job file.

IMPROVEMENTS FOR SURVEY APPLICATIONS

Added US Survey Feet

Added new unit type: US Survey Feet (1 US Survey foot = 1200/3937 meters or approximately 0 .3048006096m where as an International Foot is exactly 0.3048m). This unit type can be quite helpful when working with files in State Plane Coordinates.

Hidden Point Expansion

A new single-point hidden point definition or *Gravity Frame* definition has been added for hidden points. This new single point hidden point option will apply an offset along Z-axis of a user selected reference frame and should facility survey work.
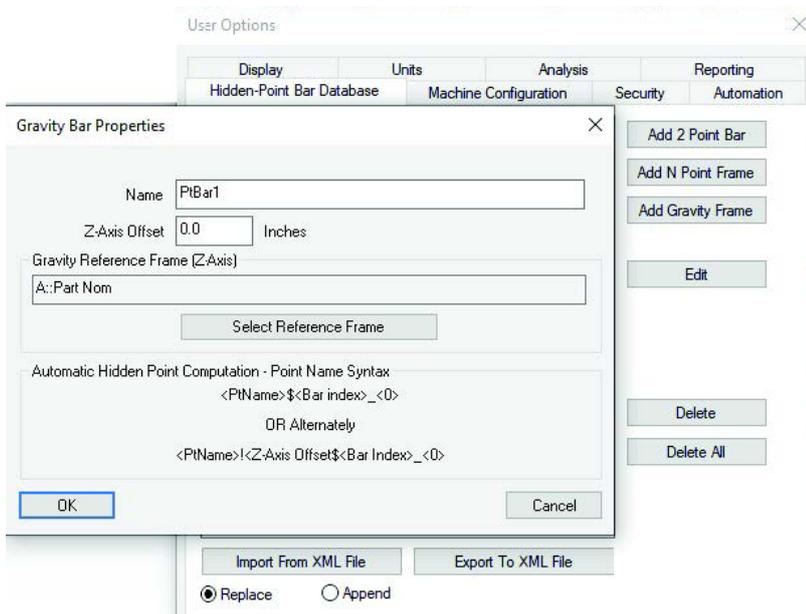
The Gravity Bar is unique in that it can be used to define a dynamic offset length.

Hidden Point Bar Import/Export

The ability to import and export Hidden Point Bar definitions through the use of an XML file has also been added making it much easier to share bar definitions between computers and job files.

Obscured Point Analysis

Extended obscured point evaluation to include theodolites.

REPORTING ENHANCEMENTS

GR-Features

Modified relationship summary table to include tolerance information automatically when set.

Improved initial callout placement

An improved logic is now used to place callouts logically when they are created in a view. This reduces the need to manually position them after they are created.
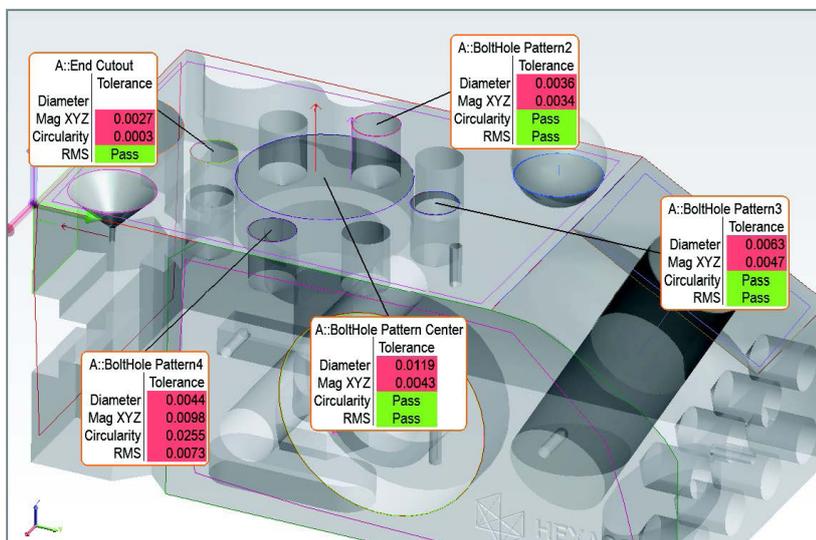
INSTRUMENT DEVELOPMENTS

Added Point Sets

Added Point Set data acquisition mode. *Point Sets*, like point clouds, are points saved within a single entry in the tree. The advantage of a point set is that the object contains all the measurement details saved within the first point in the set and each point within a set contains a.
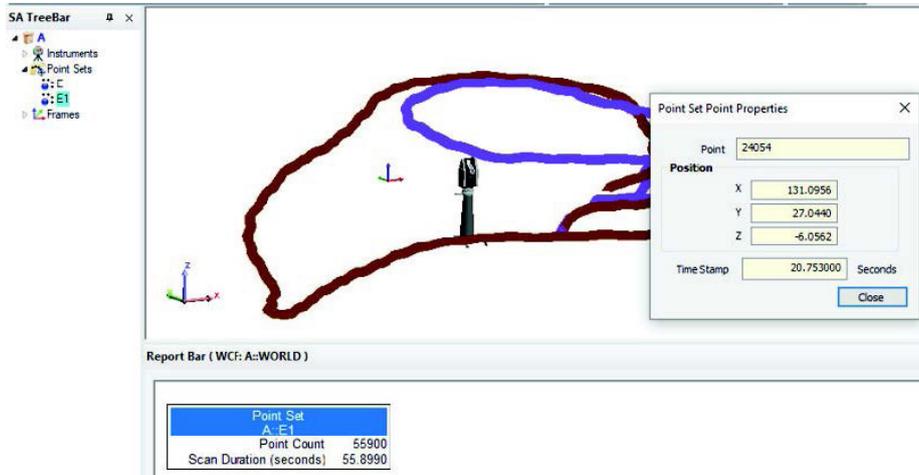
Improve Instrument View

The option to *Set Viewpoint from Instrument Updates* has been significantly improved. This includes better direction control relative to the measured part, more incremental control of when the view updates, and that ability to link the view zoom depth with the feature that is being measured.
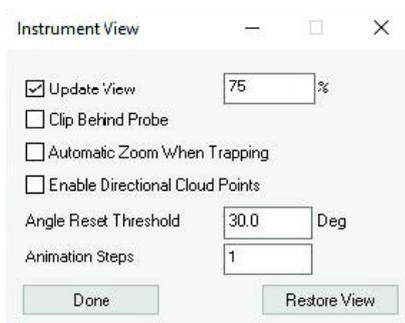
Leica Trackers

Added Shutdown Tracker button to the Leicea AT9x0 and ATS600 trackers.

Faro Trackers

Updated SDK support to version 5.1.7.3. This includes a new findtracker function using the tracker's serial number.

API Trackers

Added support for the vProbe2

CAD IMPORT

Updated CAD import libraries.