

Spatial Studio 1.1

Release News



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1. Introduction

Devonor is pleased to announce the release of Spatial Studio 1.1. This document describes the new features and changes introduced after version 1.0. Please refer to the User Guide for an overview of all features in Spatial Studio.

2. New Features

Modal Editing

Select the *Toggle Modal Editing* function  before you start an interactive function that you wish to repeat several times. This causes the interactive function to loop. Press ESC when you are done.

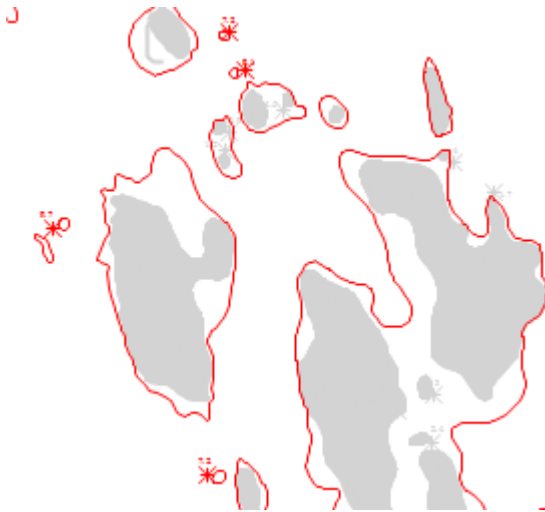
Contrast

You can now contrast the selected layer by selecting *Contrast* from the *Layer* menu. A contrasted layer will always be drawn on top of all other layers. All other layers are drawn in their original order. If you wish to add additional layers to contrast, just select another layer and choose *Contrast* again. To revert to normal presentation, select *Reset Contrast*.

Contrasting is performed by drawing the background layers and the contrasted (foreground) layers in a way that makes them appear separate. You can select the contrast mode in *Tools/Options/Presentation*. The modes are:

Two Colors

The background layers are drawn in a single solid color and the foreground layers are drawn in a different single solid color. The colors are set in *Tools/Options/Presentation*.



Two Colors Contrast.

Blended

The background layers are drawn with their original presentation, except they are blended towards the background color of the map. The benefit of this is that the overall look of the background layers are kept, including any transparency effects. The blending also makes the background layers appear washed out, contrasting nicely with the foreground layers.

The foreground layers are drawn in a different single solid color. The foreground color and the blend strength are set in *Tools/Options/Presentation*.

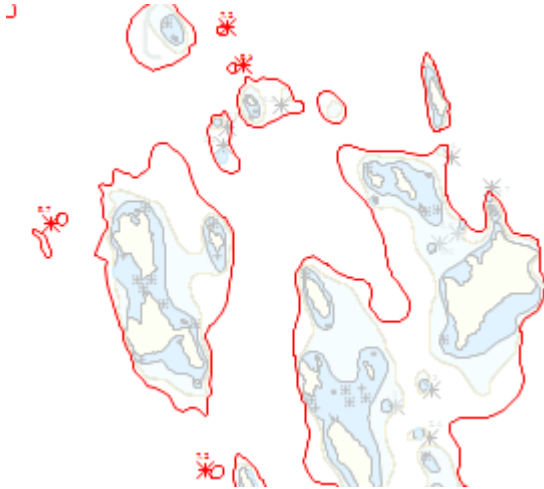


Figure: *Blended Contrast*.

Original Colors

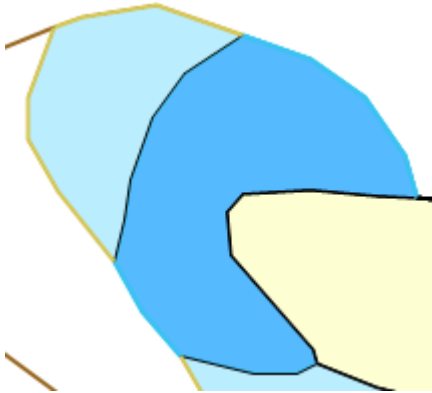
The background layers are drawn in the same manner as in *Blended* mode. The foreground layers are drawn with their original presentation.



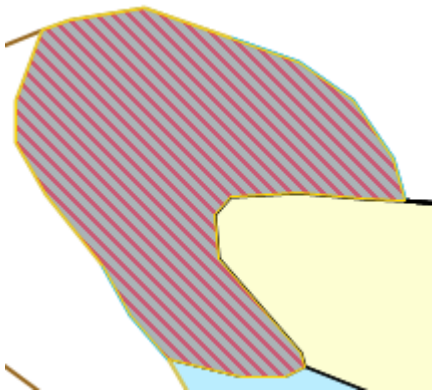
Original Colors Contrast.

Merge Face Features

The merge features function now merges topological face features in addition to its previous capability of merging curves and surfaces.




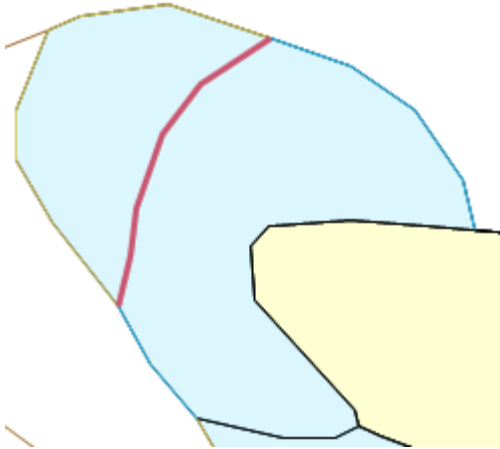
Before using Merge Face Features.



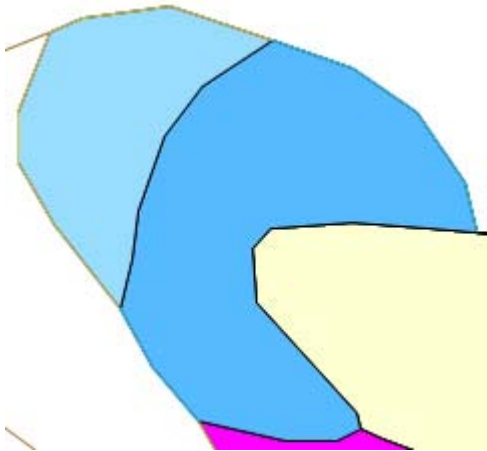
After Merge Face Features.

Split Face Feature

The split feature function  splits a topological face. The function is not interactive so you will need to select both the face you wish to split and an existing edge, or set of edges, that splits the face prior to starting the split feature function. The selected edge(s) must be connected to the exterior of the selected face.



Split Face Feature (edge and face must be selected).



Split Face Feature (result).

Assign Geometry

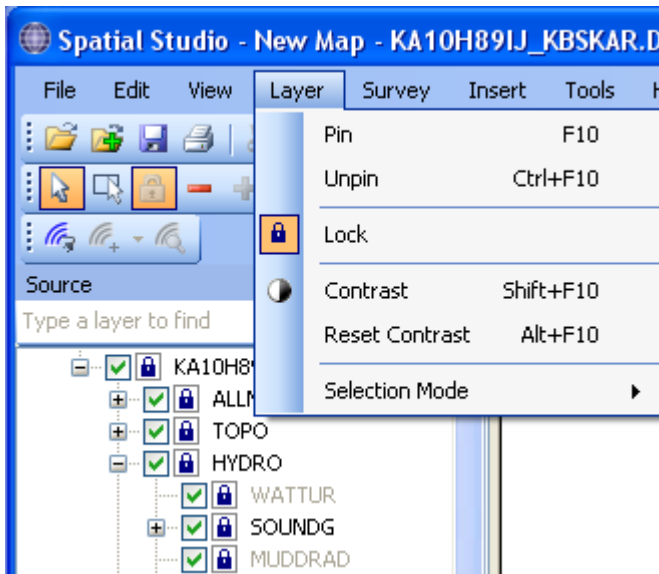
This function can be used to copy the geometry from another feature. This is most useful when you are aligning a feature to an existing dataset in another datasource.

First select the feature that you wish to modify, then start the *Assign Geometry* function. Finally, select the feature whose geometry you wish to copy.

Lock Layer

This function can be used to lock an entire layer from modification. Any insert, update or delete functions will be prohibited for that layer. This is enforced both by the application and the feature model engine. There are many different scenarios where this is useful. One scenario is when you are comparing data against a datasource which you need to ensure does not get altered.. Another use is to enforce you to only update a particular layer. The *Lock All But This* function in the *Source* form context menu can be selected to do this efficiently.

The dockable *Source* form shows the locked state as a padlock for each layer.



Source with locked layers.

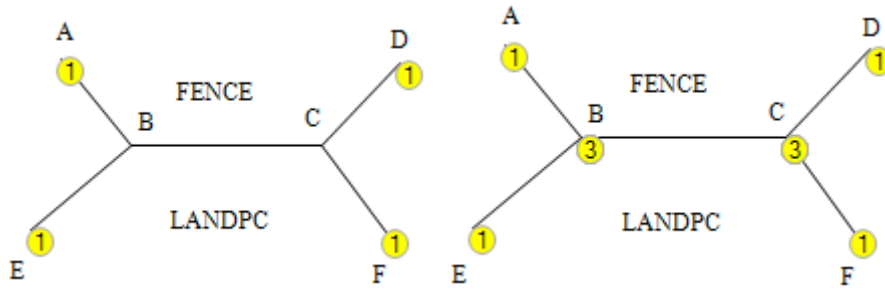
Create Geography

Create Geography is a new rule in *Export Vector*. If you check this rule, then implicitly the *Delete Geography* rule will take effect as well ensuring that any existing geography is removed from those data formats where it is applicable. After the existing geography is removed (if present) then new geography elements are created including topological elements (a subset of the geography model).

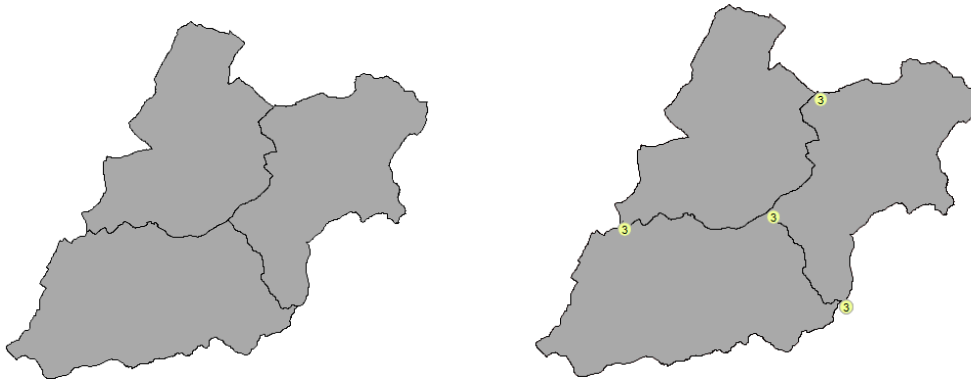
All features having curve or surface geometry will be partitioned against all other features having curve or surface geometry. Features having curves will be partitioned first. This is to ensure that features having surface geometry attempt to use (and partition) existing features with curves. If there are no existing features having curves from which to construct the exterior or interior boundaries or the surface, then those features are automatically created and stored in an ORPHAN layer.

All other features will attempt to snap to existing features so that they share a common geography element. The partitioning is performed by splitting all curves where they touch or overlay each other. There are no tolerances used for this test. The coordinates must match exactly.

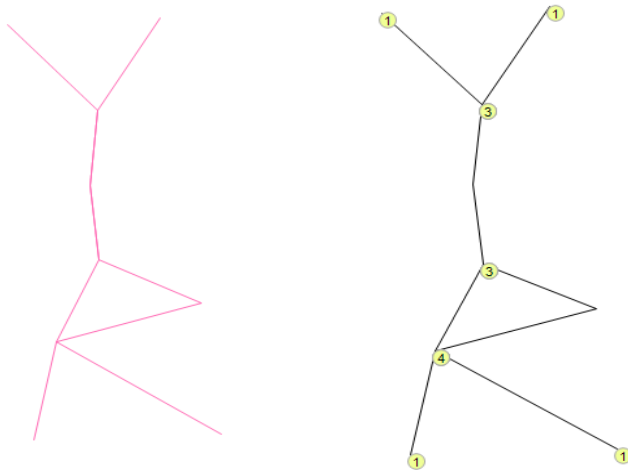
There are two primary uses for this rule. One use is to be able to round trip datasources supporting a geography (including topology) model (typically dvf, gfo and dst) with datasources that do not support a geography model (typically dxf, dgn, shape, masik). The other is to create edge and face topology from spaghetti geometry for presentation, editing and analysis purposes.



Before/After topology creation. The feature connecting the two 3 nodes will belong to both layer FENCE and layer LANDPC after topology creation.



Before/After topology creation of spaghetti surfaces. Boundary edges are automatically created.



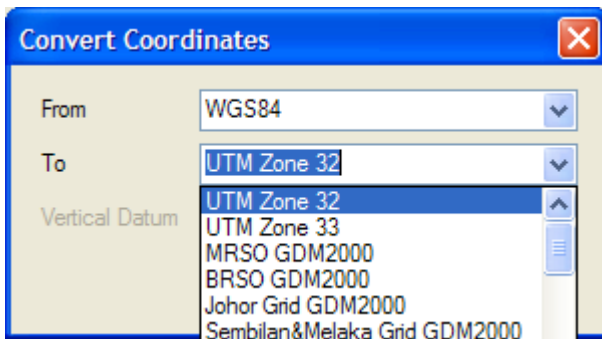
Before/After topology creation of linestrings with partial overlap.

Convert Coordinates

Convert Coordinates is a new rule in *Export Vector*. This can be used to convert the coordinates of any datasources from a specified coordinate system to a new specified coordinate system.



Convert Coordinates (from).

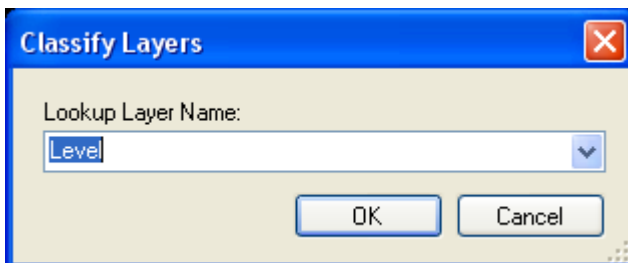


Convert Coordinates (to).

Classify Layers

Classify Layers is a new rule in *Export Vector*. This can be used to rearrange the features to a new layer whose name is taken from a property of the feature. This is useful when the feature carries classification information as a property. If you check this rule, then implicitly the *Delete Geography* rule will take effect as well. Datasources supporting a geography model may get conflicts due to features being shared among more than one layer.

Select the property that carries the classification information. If there is no such property, or the value is an empty string, then the feature will remain in its original layer.



Classify Layers.

Remove Empty Layers

Remove Empty Layers is new rule in *Export Vector*. It is used to remove layers that have no features, or have no child layers.

Total Station

Total station support has been added.

The total station needs to be oriented on the map before collection of map details can start.

Total Station

Orientation **Observe**

Pick Point Reset

	East	North	Height	Name
Control Station				S1
Reference Object				S2
Check Object				S3

Reference Obs Map Distance Measured Angle Deviation

Check Obs

Close

Total Station Orientation.

Single points or lines can be collected.

To create lines the Insert Line function needs to be pressed before the Observe button.

Total Station

Orientation **Observe**

Observe

Horizontal distance

Slope distance

Horizontal angle

Inclination

Close

Total Station Observation.

3. Enhancements

Merge Features

Previously, *Merge Feature* could only be used interactively. Now, if 2 or more features are selected prior to starting *Merge Feature* then they will automatically be merged and no more user interaction is required. The merger will try all combinations to ensure that all selected features will be merged wherever possible.

Merge Edges

Merge Edges, like *Merge Features*, is now able to merge all selected features in the select list, even if they belong to different edge chains. The rule for when it is acceptable to merge an edge is the same as before.

Form Placement

Whenever you start a form, it will be placed in its previous position. If the form is resizable it will also remember its previous size.

Cursor Appearance

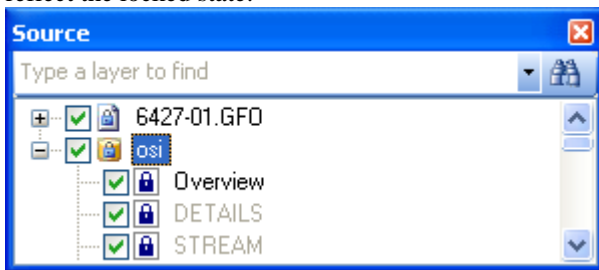
The cursor changes appearance when the application expects you to select or digitize something in the map.

Source Form

The source form displays different icons for file datasources and Oracle datasources:



If the entire datasource is locked, then each of these icons will have a padlock appended to the image to reflect the locked state:



New Shortcuts

Additional shortcuts have been added. For a full list of shortcuts, please see the User Guide.

Shift+F10 - Contrast

Alt+F10 – Reset Contrast

4. Changes

Pin Layer

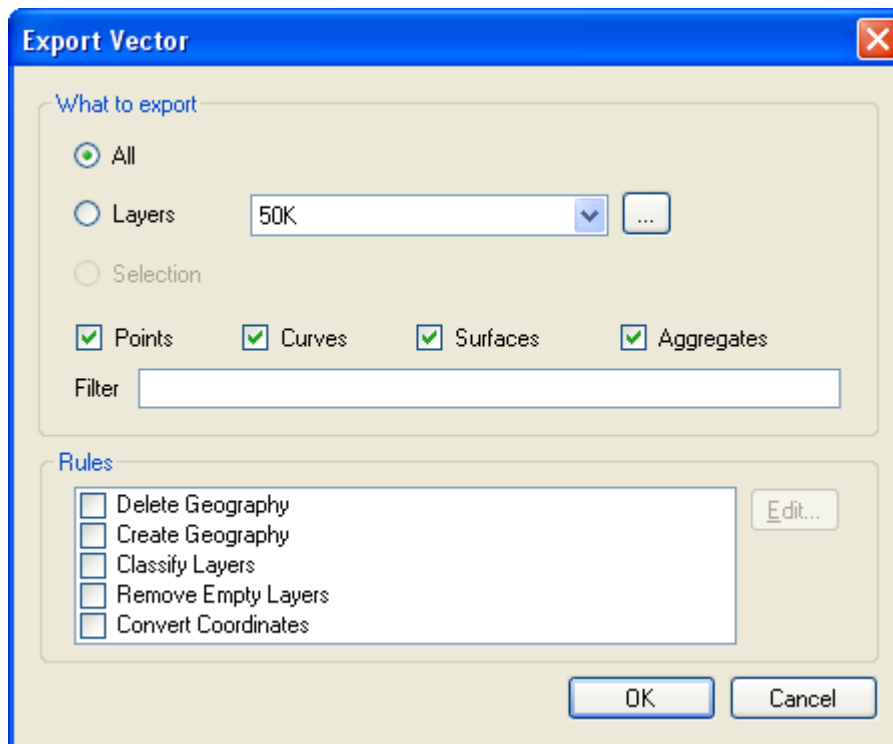
The previous function *Lock Layer* has been renamed to *Pin Layer*. The reason for this is that we want to reserve *Lock* for ensuring that a layer cannot be modified. *Pin Layer* means to keep a layer pinned as the working layer. Inserting features is done in the working layer. If a layer is not pinned, then whenever you select a feature in the map, the layer of that feature will become the new working layer.

Layer Menu Changes

The *Selection Mode* sub-menu has been moved from the *Edit* menu to the *Layer* menu. *Lock as Current Layer* is now named *Pin*.

Export Vector Form Changes

The export vector form has gained additional rules. Also the filters for the specific geometric aggregates have been replaced by a single check box for *Aggregates*. In the rare cases where you need to distinguish between multipoints and multicurves and the other geometric aggregates the *Filter* expression can be used.



Export Vector Form.