

7.0 Color Masking

This chapter discusses how to prepare color masks that will be used by various editing or vectorizing tools, as well as transformation tools.

The Color Mask tool (previously named filters) was enhanced to support 24-bit images. A color mask is a list of RGB colors defining a specific subset of colors. A color mask is normally assigned, to one or several images.

7.1 Color Mask Applications

A color mask lets you handle any image with more than two colors exactly as if it was a two-color image. It dynamically converts all colors of the mask into the “drawing” color, and all the rest into the “backfill” color. A color mask cannot be defined for two-color images, as they already have only a foreground color and a background color. All tools used for image editing or vectorization, normally work with binary (two color) images only. Because of the color mask feature, these tools can now be used with images that have more than two colors.

A color mask specifically determines what will be considered as the “drawing” colors for various “raster” operations. For a given image, you can define an unlimited number of color masks to be saved in the same color mask file. For example, all colors rendering red lines on a scanned map constitute a color mask, while all colors rendering green lines or bodies constitute another mask. Another class of raster objects can be rendered with a mixture of red and green pixels that compose another color mask. A given color can be present in more than one mask.

In the Color Mask dialog, one default mask will always be available even when no mask file is opened:

- The (Temp) mask is an editable mask that is never saved in a mask file.

A new mask concept, “Chameleon-Mask” is introduced in Bentley Descartes. This special mask is similar to the standard mask except that it can have one or more sub-masks that are a specialization of the parent mask for a specific image. The mask can be applied to any image and the sub-mask will be applied only on the image to which they have been assigned. The names of the masks included in the chameleon mask are automatically generated. Using the following rules generates the name of each mask:

- The name of the parent mask.
- An underscore.
- The name of the image to which the mask is attached (with no path).

7.2 Color Mask tool box



The Color Mask tool box provides tools to add color indices to a mask, to subtract indices from a mask, or to open the Color Mask dialog box.

The Color Mask tools and functions are not available for two-color images.

To	Select in the Color Mask tool box
Add a selection set of color indices to the selected color mask.	 <i>Add to Mask tool</i>
Remove a selection set of color indices from the selected color mask.	 <i>Subtract from Mask tool</i>
Open the Color Mask dialog box.	 <i>Color Mask Dialog tool</i>

7.3 Add to Mask tool



Used to add a selection set of color indices to the selected color mask.



Tool Setting	Effect
Area	<ul style="list-style-type: none"> Block: Using the pointer draw a rectangular block over the colors to add. Element: Using the pointer, select a closed element that delimits the region to include. All colors comprised in the element are added to the color mask. Fence: The colors in the fence are included.
Mask	Used to select in which mask the colors are added. The drop-down list shows the existing masks that can be edited.
Highlight	Use to turn the highlight feature ON or OFF. The highlight feature changes all pixels that match the color(s) of the selected color mask to the highlight color.

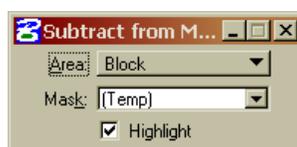
To add colors to a color mask

1. Click the Add to Mask tool.
The tool settings window opens.
2. In the tool settings window, set the area (element, block or fence) and select the mask in which the colors will be added.
3. Select the area (element, block, or fence) in the image.
All the colors found under the selected area are automatically added to the mask.

7.4 Subtract from Mask tool



Used to remove a selection set of color indices from the selected color mask.



Tool Setting	Effect
Area	<ul style="list-style-type: none">• Block: Using the pointer draw a rectangular block over the colors to add.• Element: Using the pointer, select a closed element that delimits the region to include. All colors comprised in the element are added to the color mask.• Fence: The colors in the fence are included.
Mask	Used to select in which mask the colors are added. The drop-down list shows the existing masks that can be edited.
Highlight	Use to turn the highlight feature ON or OFF. The highlight feature changes all pixels that match the color(s) of the selected color mask to the highlight color.

To subtract colors from a color mask

1. Click the subtract from Mask tool.
The tool settings window opens.
2. In the tool settings window, set the area (element, block or fence) and select the mask from which the colors will be subtracted.
3. Select the area (element, block, or fence) in the image.
All the colors found under the selected area are automatically subtracted from the mask.

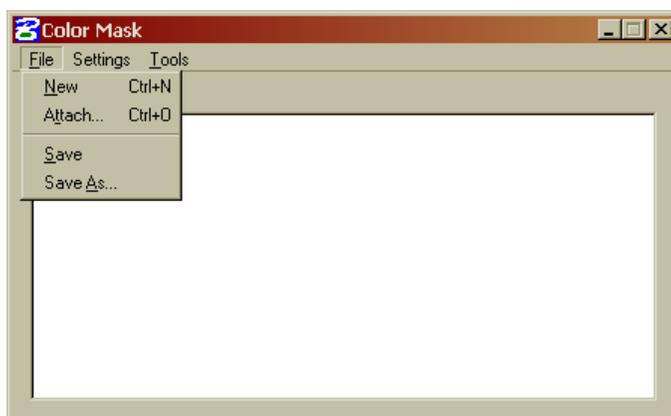
7.5 Color Mask Dialog tool



Use to create and manage Color Masks. A mask can be assigned to any image regardless of the pixel type (except for binary images). When adding colors to a mask, it is possible to select the area on any image currently open in Raster Manager.

7.6 Color Mask tool settings

File Menu:



- New — Use to create a new empty color mask file.
- Attach — Use to attach a saved color mask file.
- Save — Use to save the active color mask file.
- Save As — Use to save the current color mask file under a different name.

Settings Menu:



Provides access to the Highlight Settings dialog.

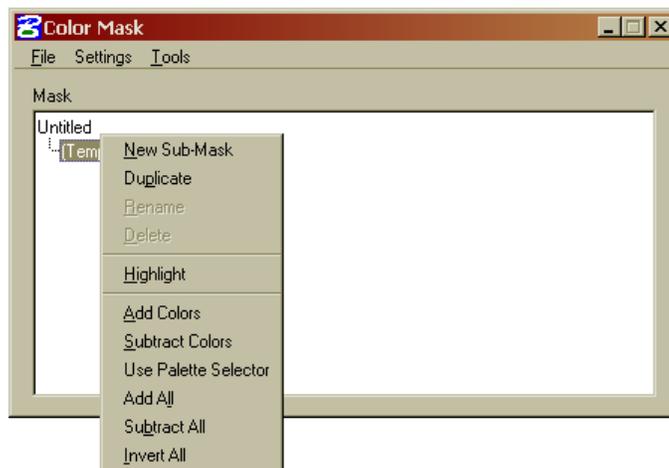


- Highlight Color — Opens the MicroStation color selector dialog to select the highlight color. The default color is red (255, 0, 0).
- Highlight Level — Selects the percentage of opacity for the highlight color. The default level is 100% (opaque).

Tools Menu:

The Tools menu offers different choices depending of the current selection in the Color Mask dialog.

A mouse right-click on the selection provides a context sensitive menu that corresponds to the tools menu.



- New Mask (or New Sub-Mask) — If a File Name is currently selected, a new mask is created.
If a mask is currently selected, the mask is transformed to a chameleon mask and a sub-mask is created in the mask.
If a chameleon mask is currently selected, a new sub-mask is created in the currently selected mask.
Multiple selections are not supported.
- Duplicate — If a mask is currently selected, a copy of the mask "xyz" is made. The new mask is named "copy of xyz"
Multiple selections are not supported.
- Rename — Changes the name of the currently selected mask or chameleon mask.
Multiple selections are not supported.
- Delete — Delete the selected mask, chameleon mask or chameleon sub-mask from the mask file.
Multiple selections are supported.
- Highlight — The selected mask, chameleon mask or chameleon sub-mask is highlighted until the next "refresh".

Multiple selections are not supported.

- Add Colors — Allows selection of colors by drawing a block on the screen to add colors to the selected mask.

If a chameleon mask is selected, the new colors will be added to the parent mask.

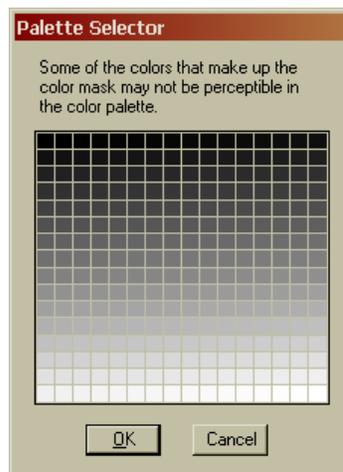
Multiple selections are not supported.

- Subtract Colors — Allows to draw a block on the screen to subtract colors from the selected mask.

If a chameleon mask is selected, the new colors will be subtracted from the parent mask.

Multiple selections are not supported.

- Use Palette Selector — Allows to select colors from a color palette. Available only if the selected image has a color palette.



- Add All — Add all colors to the selected mask, chameleon mask or chameleon sub-mask.

Multiple selections are not supported.

- Subtract All — Subtract all colors from the selected mask, chameleon mask or chameleon sub-mask.

Multiple selections are not supported.

- Invert All — Invert all colors of the selected mask, chameleon mask or chameleon sub-mask.

Multiple selections are not supported.