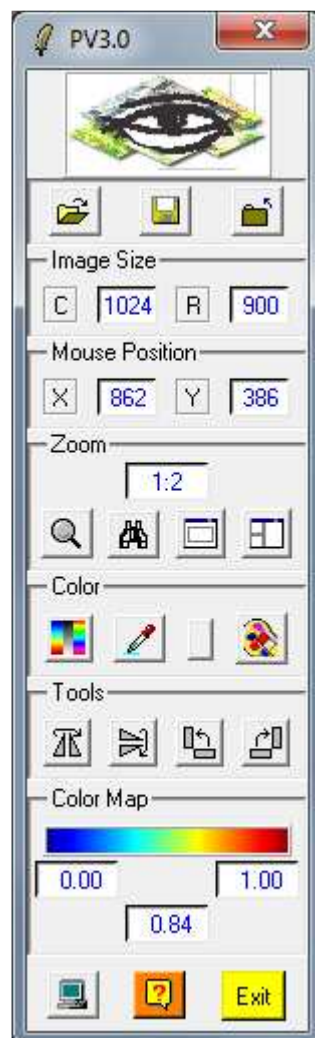


PolSARpro Viewer

Description:

A basic Viewer ([PolSARpro Viewer PV 3.0](#)) is offered which can be use to display and modify output results in common graphics formats as Windows Bitmap.


The [Viewer PV 3.0](#) allows to save the Windows Bitmap output files in different graphic formats as GIF, JPG, PS and TIF. It proposes different functionalities like Image Display Size setting, In/Out Zoom function, Zoom Lens Window, Image Flip Up-Down / Flip Left-Right, 90° Left / Right rotation, transpose functions ... The Color Palette edition and modification functions are particularly useful for the post-processing of unsupervised classification results.



Functionalities :

Open File

Open an 8-bits or 24-bits Windows Bitmap (BMP) File.
Once selected, the image opens in the PSP Viewer workspace. If the image size is more than can fit in the **Image Screen Display**

Window, PSP Viewer reduces the image magnification accordingly. The **Image Screen Display Window Size** can be set in the **Display Size** functionality of the **Environnement** widget or in the **Image Display Size Setting** functionality .

Once displayed, PSP Viewer displays the image size in pixels, the magnification value (initial zoom value), the image colormap in the **ColorBar Display** and the min/max values used to scale the data range of variation to the color scale ([Note: this last functionality is only valid if the active image is an 8-bits Windows Bitmap image](#)).



Save File

Save the active Windows Bitmap image in different graphic formats as GIF, JPG, PS and TIF. This functionality opens a [Save As dialog box](#).



Close File

Close the active Windows Bitmap image. If changes have been made to the active image since the last saving, it is prompted to save the changes.

Image Size

Give the image size in pixels: **R** = Number of Rows, **C** = Number of Columns.

Mouse Position

Give the Mouse pointer position in pixels. The Top-Left position corresponds to the [\(1,1\)](#) value and the Bottom-Right position corresponds to the [\(Nrows, Ncols\)](#) value.

[\(1:X\)](#)

Zoom Level


Correspond to the magnification level of the active image. The normal viewing level is the actual size of one-to-one [\(1:1\)](#). At three-to-one [\(3:1\)](#), the image is three times the normal size. At one-to-five [\(1:5\)](#), the image is one-fifth the normal size.

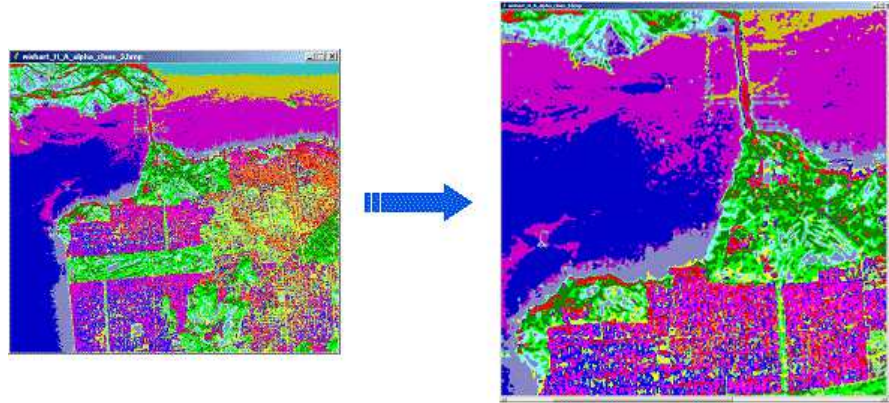


Zoom Tool

Activate the Zoom functionality. The [left and right Mouse buttons](#) are used to increase and decrease the magnification level. To Zoom-In, left-click the image. The magnification increases by one level on each click. To Zoom-Out, right-click the image. The magnification decreases by one level on each click.

When the magnification of an image is changed, PolSARpro Viewer can enlarge or reduce the Image Screen Display Window automatically to the new size, to include as much of the image as will fit. Scroll bars appear along the right and bottom edges of the **Image Screen Display Window** whenever the image is too large to fit entirely within it. To bring a different area of the image into view, click and hold down the arrow buttons on either end of the scroll bar, or drag the slider bar.

To unselect the Zoom functionality, click again the button  or any other tool button.




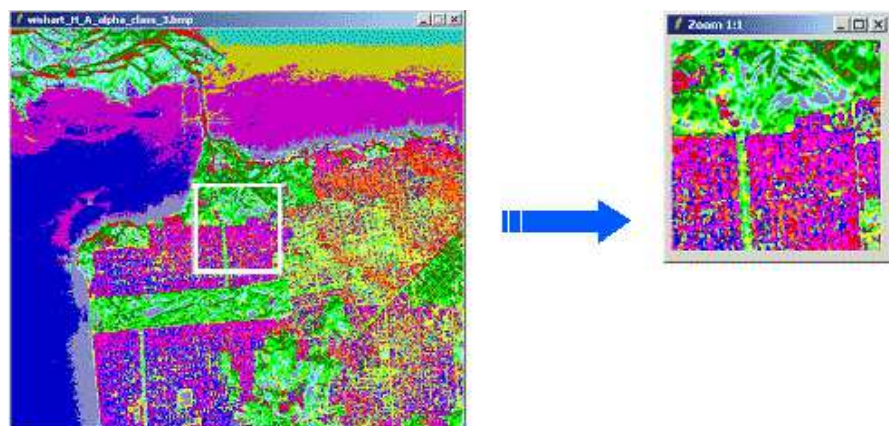
Lens Tool

Activate the Lens functionality. When an image is edited, it can be helpful to magnify the edited area while still being able to see the effect on the entire image. This can be done by opening the Lens functionality. Any changes made to the image are immediately updated to the image displayed in the **Lens Display Window**.

As the active image is too large to fit in the Lens window, its visible area is enclosed by a rectangle on the active image. To move from one area of the image to another, move the cursor over the rectangle. When the cursor changes to the Cross icon, click the left mouse button, drag to the new area to be displayed and release the button.

Zoom factor is independent between the **Image Screen Display Window** and the **Lens Display Window**, it is thus possible to increase and decrease the magnification level of the edited area from the **left and right Mouse buttons**. The cursor must be outside the rectangle. The magnification level of the edited area appears on the **Lens Display Window** title bar.

To unselect the Lens functionality, click again the button  or any other tool button.




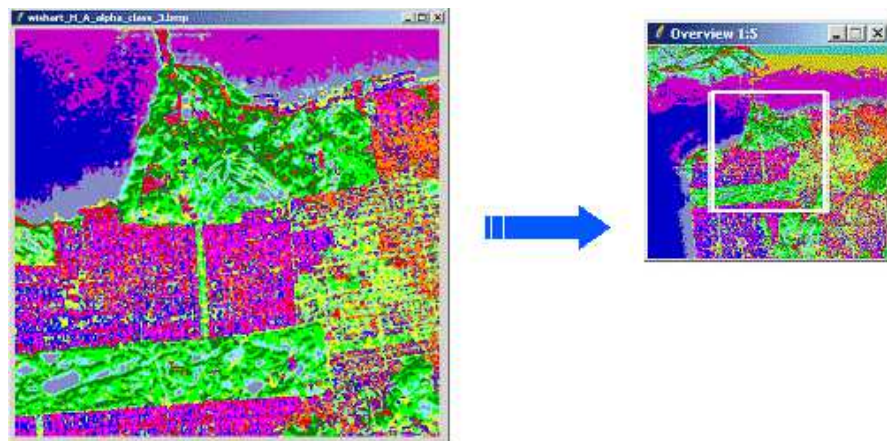
Overview Tool

Activate the Overview functionality. When a zoom is applied on a small area for a detailed operation, it can be helpful to see the entire image. This can be done by opening the Overview functionality which displays a small view of the entire image. Any changes made to the image are immediately updated to the image

displayed in the **Overview Display Window**.

When the zoomed area of the image is too large to fit in the **Image Screen Display Window**, its visible area is enclosed by a rectangle on the **Overview Display Window**. To move from one area of the image to another, move the cursor over the rectangle. When the cursor changes to the Cross icon, click the left mouse button, drag to the new area to be displayed and release the button. Zoom factor is independent between the **Image Screen Display Window** and the **Overview Display Window**, it is thus possible to increase and decrease the magnification level of the zoomed area from the [left and right Mouse buttons](#). The cursor must be outside the rectangle. The magnification level of the edited area appears on the **Zoom Level** display.

To unselect the Overview functionality, click again the button  or any other tool button.




ColorMap

Change the ColorMap of the active image. A specific widget is opened and proposes predefined Jet, Gray and HSV ColorMaps with associated complementary ColorMaps (Reverse and Inverse). Select a ColorMap will change and update automatically all the active image with the new Color Palette. (Note: this functionality is only valid if the active image is a 256 Colors Windows Bitmap image)




Dropper Tool

Activate the Color Dropper functionality. To select a color from the active image, move the dropper over the image and click. The selected color appears in the **Pixel Color Display**. To modify the

selected color, click on the Pixel Color Display that will open the [Windows Color Dialog Box](#). The active image will then be changed and updated automatically with the new color. To unselect a selected color, click the right mouse button. To unselect the Color Dropper functionality, click again the button  or any other tool button. (Note: this functionality is only valid if the active image is an 8-bits Windows Bitmap image).



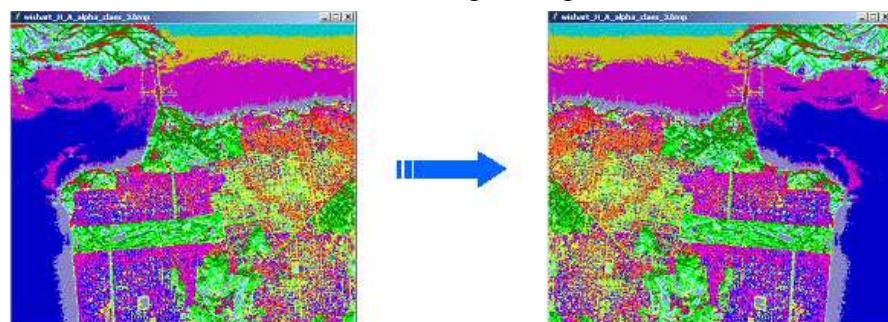
ColorMap Edit

Edit the ColorMap of the active image. Clicking a color square opens the [Windows Color Dialog Box](#). The active image will then be changed and updated automatically with the new color. To unselect the ColorMap Editor functionality, click again the button  or any other tool button. (Note: this functionality is only valid if the active image is an 8-bits Windows Bitmap image).



Mirror

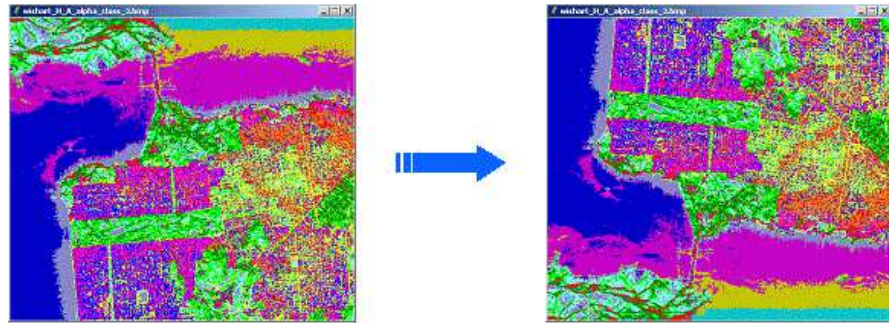
Apply a Mirror orientation operation on the active image. The Mirror command reverses the image along its horizontal axis.





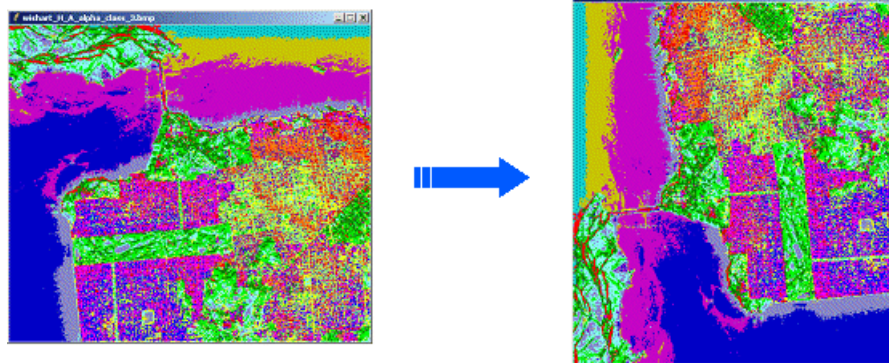
Flip

Apply a Flip orientation operation on the active image. The Flip command reverses the image along its vertical axis.



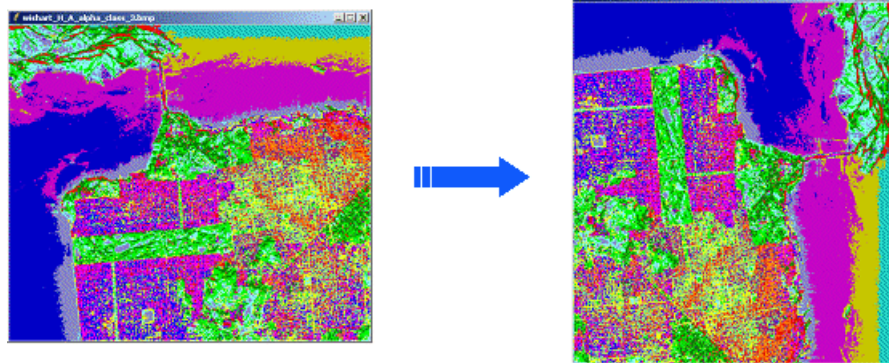
Rotation +90

Apply a +90 degrees rotation operation on the active image. This command moves the image around its center point in the counter-clockwise direction.



Rotation -90

Apply a -90 degrees rotation operation on the active image. This command moves the image around its center point in the clockwise direction.



**ColorBar
Display**

Display the ColorMap of the active image. (Note: The ColorBar is displayed only in the case of an 8-bits Windows Bitmap image).



**Min / Max
Values**

Minimum and Maximum values used to scale the data range of variation to the color scale (Note: this functionality is only valid if the active image is an 8-bits Windows Bitmap image).

Pixel Value

Display the pixel value (Note: this functionality is only valid if the active image is an 8-bits Windows Bitmap image).

Display Screen Setting

This function is used to change the **Image Screen Display Window** size, the **Lens Display Window** size and the **Overview Display Window** size using the associated widget buttons :  or .

