



MST Viewer for Java

A MS Technology Product

Digital Imaging and Document Management Solution



User Manual

Version 13.1



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If you find a typographical error in this manual, or if you have thought of a way to make this manual better, we would love to hear from you, feel free to share with us at info@ms-technology.com.



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1. Getting Started

This section lets you get acquainted with various sections covered in this user manual which further helps you in understanding the product, MST Viewer in a better way. You can also understand the purpose of developing such product. This user guide also contains key features with the system requirements for proper installation and use of product.

1.1 Brief about User Guide

Welcome to the user guide of MST Viewer which is proficient, competent and result-oriented product. This user guide has been designed in such a way that the user is able to understand the software in an efficient and effective manner. So we recommend you to carefully go through the user guide before launching the product and keep it in a safe, easily accessible place for future reference.

1.2 Overview

MST Viewer for Java is our innovative thin-client, web-based version of MST Viewer. MST Viewer for Java has all the great features and benefits of our regular MST Viewer to be used within an internet browser.

MST Viewer for Java is an image and document viewer that operates seamlessly on Java platform. It provides a vast array of standard features and functions as well as industry-specific options to meet the entire imaging requirements for documents, images and files. It is a multilingual application; its User Interface can be converted to multiple languages. It also supports viewing of documents in a different variety of languages.

Our applet version of the MST Viewer for Java supports all the features of the regular version and it is capable to access the documents and images from a basic file structure such as your desktop or from URL (server). Easily configurable applet component is available for other applications.

1.3 Need of the Product

There is no other advanced viewer available in the market that handles PDF files, all standard image file formats (JPEG, bitmap, TIFF files, etc.), MS Office files, IBM proprietary file formats with the number of advanced features. MST Viewer for Java has been developed and can be customized to fit your exact requirements.



1.4 Features

MST Viewer is loaded with rich features that make it complete and outstanding. Some of the features are listed below:

User Interface options:

- Resizable, free floating window
- Thumbnail image selection
- File menu image selection
- Customize to support corporate branding using your logo, colors, and labels
- Customizable toolbar, add remove buttons at runtime
- Document Info. at status bar
- Splitter Panes
- Tree View (for quickly browsing through the documents)
- User Friendly User Interface

Viewing Images:

- Auto detection of image formats
- View images and documents from your local hard drive or network
- Streamed image display avoids dead time when downloading new images
- Multiple page support
- Ultra fast image display, zooming, scrolling, rotation
- Fit to height or width
- Rotation in 90 degree increments
- Thumbnails
- Aspect ratio correction
- Pan button
- Working Set / Multi-Part Document Support

Create and Annotate:

- Create new documents easily using cut, copy, paste, merge, and save functionality
- Annotate ANY format supported and save the document with annotations without modifying the original document.
- Draw freehand or use standard annotation shapes
- Insert bitmaps
- Merge the annotation with the image
- Ability to resize objects and the annotation will remain linked with the underlying image
- Rotate annotation data
- Add sticky notes with text edit capability



Manipulation:

- Crop, paste, merge, and save
- Image Cleanup
- Image Enhance
- Scale-to-gray resizing for 1bit images
- Bilinear Interpolation for resizing Bi-Level images
- Bi-Cubic Interpolation for resizing color images

Printing

- High resolution printing (300, 600, 1200 dpi)
- Print Selected Area

Saving (Saving to multiple formats)

- PDF
- JPEG
- TIFF
- MODCA
- IOCA
- BMP
- GIF

1.5 Benefits

MST Viewer provides benefits in a variety of following ways:

- **Reduce Overhead and Increase Productivity:** Allows companies to reduce a number of applications to one efficient universal document and image viewer.
- **File Formats:** Supports over 50 common and proprietary file formats.
- **Email and Fax:** Email and/or fax images and documents directly from MST Viewer application.
- **Annotations:** Access to a number of different annotations including, but not limited to redaction, line, arrow, rectangle, circle, text, note, highlighter, pen stamp, watermark and eraser.
- **Internal Development:** All file formats are developed by in-house MST developers and do not use any third party APIs. This gives you the ability to have customization, prompt resolutions to issues, and release control.
- **Individual Release Control:** Reduces deployment and upgrade cost. Every customer has their own release version of the product.



1.6 Supported File Formats

MST Viewer supports the following file formats:

TIFF
JPEG
BMP
GIF
JFIF
PCX
DCX
IBM (MO:DCA, IOCA, PTOCA)
PDF
Email (MSG, EML)
DWG
WBMP
ASCII
MS Office (Word, Excel, PowerPoint)
PPM
PGM
PBM
RTF
PNG



1.7 Compression Types

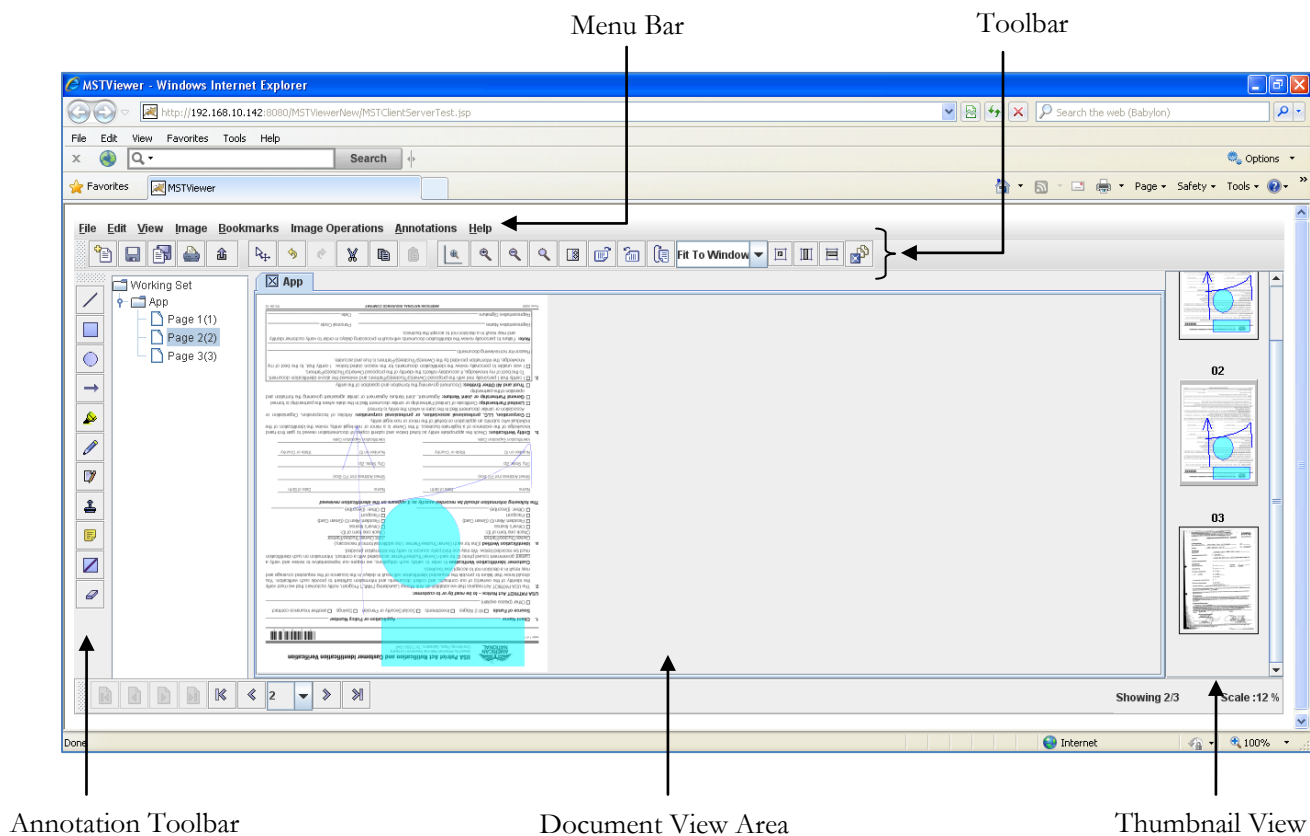
MST Viewer supports following compression types:

ABIC
BMP RLE
CCITT G3
CCITT G4
G3-2D
Huffman
IBM_MMR
JBIG2
JPEG
JPEG2000
LZW
Packed Bits



2. Understanding Interface

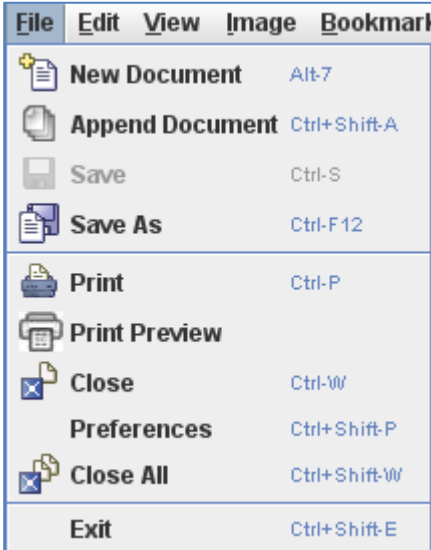
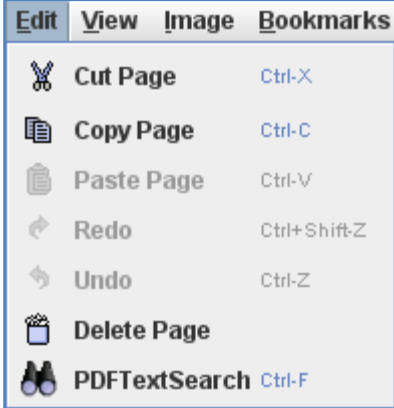
A user interface is the means by which you are able to communicate with the application. MST Viewer interface is a user friendly and provide quick access to all important functions.



The following are the components in the application user interface.

- **Menu Bar:** It is the top most bar of the application interface that contains all the available features of the application. It has eight menu options:
 - File
 - Edit
 - View
 - Image
 - Bookmarks
 - Image Operations
 - Annotation
 - Help



Menu	Options	Options Description
File		<p>New Document: Creates a new Working Set</p> <p>Append Document: Appends documents in a Working Set</p> <p>Save: Saves an active document with its current filename and location</p> <p>Save As: Saves an active document to another location with the same or different filename</p> <p>Print: Prints an active document</p> <p>Print Preview: Shows how the file will look when you print it</p> <p>Close: Closes an active document</p> <p>Close All: Closes all opened documents</p> <p>Exit: Closes all opened documents and quit application</p>
Edit		<p>Cut Page: Cuts the selected text or image from a page</p> <p>Copy Page: Copies the selected text or image from a page</p> <p>Paste Page: Inserts the copied text or image at the insertion point (cursor)</p> <p>Redo: Redo a previously undone change</p> <p>Undo: Reverses the effect of the most recent image editing or filtering operation</p> <p>Delete Page: Deletes selected document from the Working Set</p> <p>PDF Text Search: Searches text in a PDF file</p>



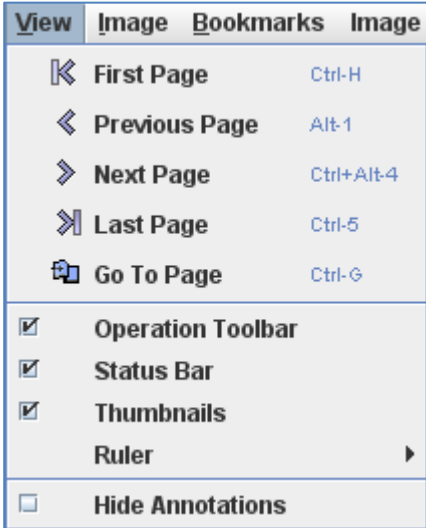
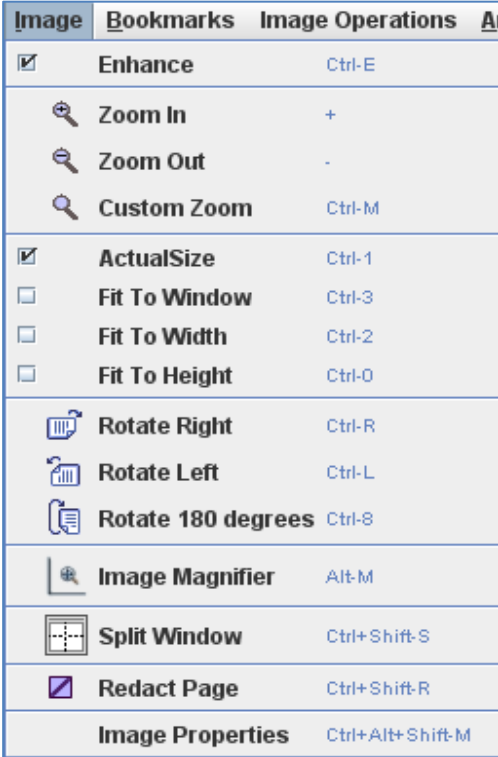
View		<p>First Page: Display the first page of an active document</p> <p>Previous Page: Display the previous page of an active document</p> <p>Next Page: Display the next page of an active document</p> <p>Last Page: Display the last page of an active document</p> <p>Go To Page: Go to the specified page of a document</p> <p>Operation Toolbar: Display the operation tool bar</p> <p>Status Bar: Display the Status bar</p> <p>Thumbnails: Display the thumbnail view of the documents opened in a Working Set</p> <p>Ruler: Display ruler on the page</p> <p>Hide Annotations: Hide annotation toolbar and option from the menu bar</p>
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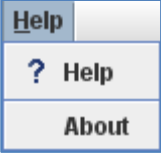


Image		<p>Enhance: Magnify the view of the page of a document</p> <p>Zoom In: Increases the magnification percentage of a document</p> <p>Zoom Out: Decreases the magnification percentage of a document</p> <p>Custom Zoom: Resize the document with a specified size</p> <p>Actual Size: Bring the document in its actual size</p> <p>Fit in Window: Resize the document to fit entirely in the window</p> <p>Fit To Width: Resize the document to fit the width of the window</p> <p>Fit To Height: Resize the document to fit the height of the window</p> <p>Rotate Right: Rotate the page of an active document in a clockwise direction</p> <p>Rotate Left: Rotate the page of an active document in an anticlockwise direction</p> <p>Rotate 180 degrees: Rotate the page of an active document in a 180° direction</p> <p>Image Magnifier: Magnifies a specific part of an image</p> <p>Split Window: Divide documents either horizontally or vertically</p> <p>Redact Page: Redactions will not move and will be saved permanently</p> <p>Image Properties: Displays properties of an image</p>

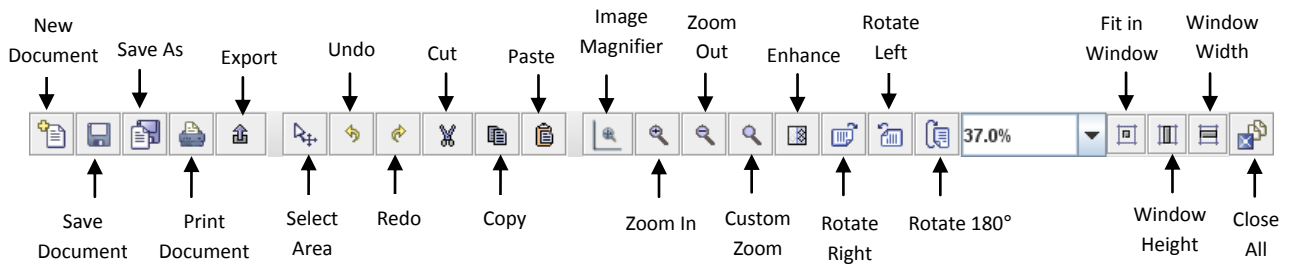


Bookmarks	<table border="1"> <thead> <tr> <th>Bookmarks</th> <th>Image Operations</th> <th>Annotations</th> </tr> </thead> <tbody> <tr> <td>ADD Bookmark</td> <td>Ctrl+Shift-F1</td> <td></td> </tr> <tr> <td>ADD Multiple Bookmarks</td> <td>Ctrl+Shift-F2</td> <td></td> </tr> <tr> <td>Remove Bookmark</td> <td>Ctrl+Shift-F3</td> <td></td> </tr> <tr> <td>First Bookmark</td> <td>Ctrl+Shift-F4</td> <td></td> </tr> <tr> <td>Next Bookmark</td> <td>Ctrl+Shift-F5</td> <td></td> </tr> <tr> <td>Previous Bookmark</td> <td>Ctrl+Shift-F6</td> <td></td> </tr> <tr> <td>Last Bookmark</td> <td>Ctrl+Shift-F7</td> <td></td> </tr> <tr> <td>Go To Bookmark</td> <td>Ctrl+Shift-F8</td> <td></td> </tr> <tr> <td>Remove All Bookmark</td> <td>Ctrl+Shift-F9</td> <td></td> </tr> </tbody> </table>	Bookmarks	Image Operations	Annotations	ADD Bookmark	Ctrl+Shift-F1		ADD Multiple Bookmarks	Ctrl+Shift-F2		Remove Bookmark	Ctrl+Shift-F3		First Bookmark	Ctrl+Shift-F4		Next Bookmark	Ctrl+Shift-F5		Previous Bookmark	Ctrl+Shift-F6		Last Bookmark	Ctrl+Shift-F7		Go To Bookmark	Ctrl+Shift-F8		Remove All Bookmark	Ctrl+Shift-F9		<p>Add Bookmark: Add bookmark to an active page of a document</p> <p>Add Multiple Bookmark: Add multiple bookmarks on a document</p> <p>Remove Bookmark: Remove added bookmark from a document</p> <p>First Bookmark: Display first bookmark in a document</p> <p>Next Bookmark: Display next bookmark in a document</p> <p>Previous Bookmark: Display previous bookmark in a document</p> <p>Last Bookmark: Display last bookmark in a document</p> <p>Go to Bookmark: Go to the specified bookmark in a document</p> <p>Remove All Bookmark: Delete all the added bookmarks in a document</p>
Bookmarks	Image Operations	Annotations																														
ADD Bookmark	Ctrl+Shift-F1																															
ADD Multiple Bookmarks	Ctrl+Shift-F2																															
Remove Bookmark	Ctrl+Shift-F3																															
First Bookmark	Ctrl+Shift-F4																															
Next Bookmark	Ctrl+Shift-F5																															
Previous Bookmark	Ctrl+Shift-F6																															
Last Bookmark	Ctrl+Shift-F7																															
Go To Bookmark	Ctrl+Shift-F8																															
Remove All Bookmark	Ctrl+Shift-F9																															
Image Operations	<table border="1"> <thead> <tr> <th>Image Operations</th> <th>Annotations</th> </tr> </thead> <tbody> <tr> <td>Image Filters</td> <td>▶</td> </tr> <tr> <td>Edge Detections</td> <td>▶</td> </tr> <tr> <td>Flips</td> <td>▶</td> </tr> <tr> <td>Brightness/Contrast</td> <td>Alt+Shift-B</td> </tr> <tr> <td>Emboss</td> <td>Alt+Shift-E</td> </tr> <tr> <td>Invert Image</td> <td>Alt+Shift-I</td> </tr> <tr> <td>Sharpness</td> <td>Alt+Shift-S</td> </tr> <tr> <td>Smoothness</td> <td>Alt+Shift-M</td> </tr> <tr> <td>Initial Image</td> <td>Alt+Shift-O</td> </tr> <tr> <td>RedEye</td> <td>Alt+Shift-R</td> </tr> </tbody> </table>	Image Operations	Annotations	Image Filters	▶	Edge Detections	▶	Flips	▶	Brightness/Contrast	Alt+Shift-B	Emboss	Alt+Shift-E	Invert Image	Alt+Shift-I	Sharpness	Alt+Shift-S	Smoothness	Alt+Shift-M	Initial Image	Alt+Shift-O	RedEye	Alt+Shift-R	<p>Image Filters: Apply various effects on an image</p> <p>Edge Detections: Identifying and locating sharp discontinuities in an image</p> <p>Flips: Rotate image either vertically, horizontally or diagonally</p> <p>Brightness/Contrast: Change the brightness and contrast of an image</p> <p>Emboss: Emboss an image</p> <p>Invert Image: Invert color of an image</p> <p>Sharpness: Makes an image sharper</p> <p>Smoothness: Makes an image smoother</p> <p>Initial Image: Bring an image into its actual look</p> <p>RedEye: Appearance of red pupil in the eyes of humans and</p>								
Image Operations	Annotations																															
Image Filters	▶																															
Edge Detections	▶																															
Flips	▶																															
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Sharpness	Alt+Shift-S																															
Smoothness	Alt+Shift-M																															
Initial Image	Alt+Shift-O																															
RedEye	Alt+Shift-R																															



		animals
Help		<p>Help: Open user manual for assistance</p> <p>About: Check the product version and licensing information</p>

- Toolbar:** Frequently accessing tools through the menu bar is little bit clumsy. MST Viewer for Java has floating toolbars with several buttons that can be easily access to quickly perform any action. The toolbars can be dragged to any location so as not to hinder the view of the document.





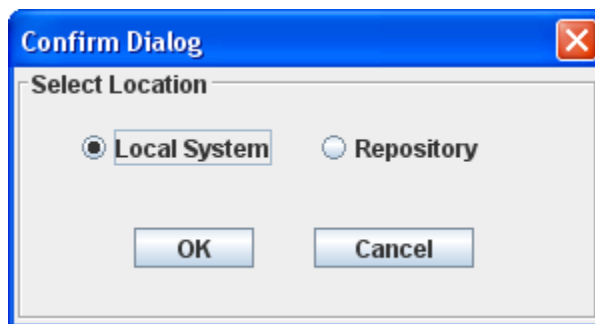
3. Common Tasks

This section lists some common operations that can be performed while managing MST Viewer.

3.1 Append Document in a Working Set

In a working set, multiple documents can be appended by performing the following steps:

1. On the **File** menu, click **Append Document**.
2. The **Select Location** dialog box appears.



3. Select the required location from the available options.
4. The **Append** dialog box appears.
5. Navigate and find the file to append.
6. Once you found it, select it and click **Append**.
7. If the selected file is supported will be opened in the application.
8. Repeat the process to append multiple documents.

3.2 Save Document

The document can be saved in one of the several formats to a folder on your desktop, or your hard disk drive or to a folder on a network drive. MST Viewer supports saving a file in one of the following formats:

- WBMP
- TIFF
- JPEG
- GIF
- Bitmap (bmp)
- MODCA
- IOCA
- PDF

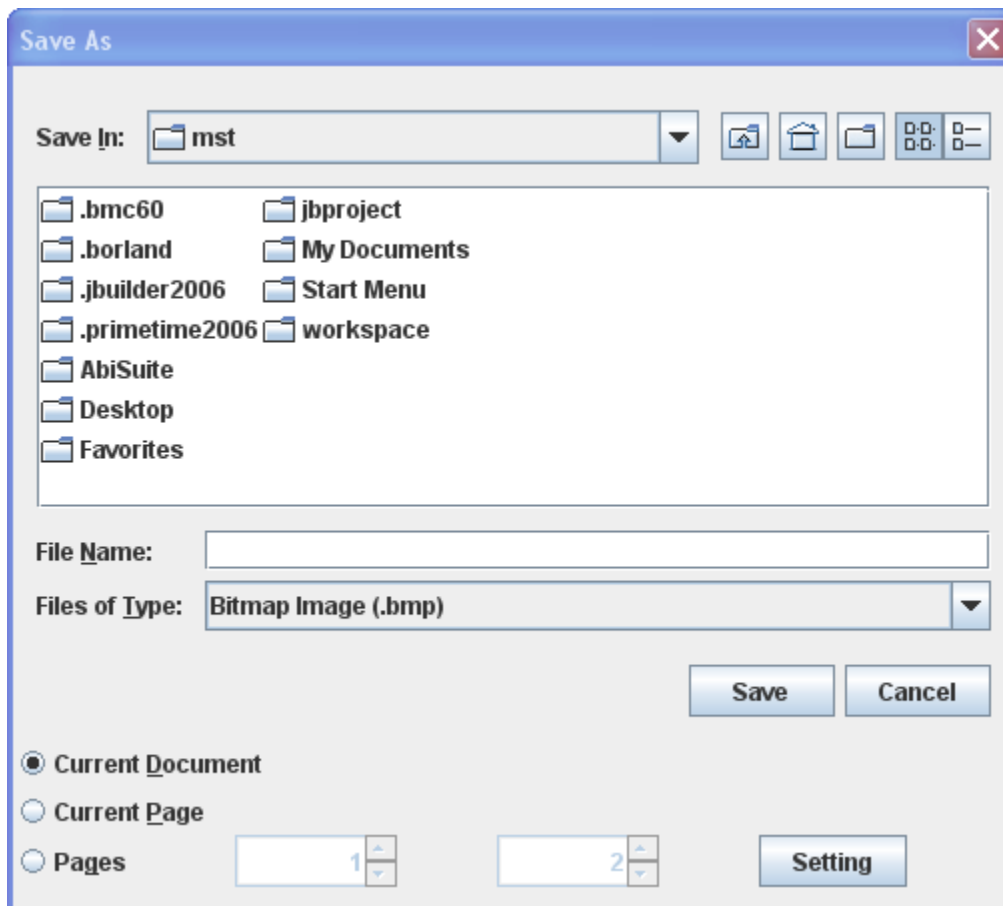


Perform the following steps to save a document:

1. On the **File** menu, click **Save** OR click the **Save** button displayed on the Operation toolbar.

Perform the following steps to save a document in a different format:

1. On the **File** menu, click **Save As** OR click **Save As** button displayed on the Operation toolbar.
2. The **Save As** dialog box appears.



3. In **Save In** drop down, select the location where you want to save the file and navigate to the path.
4. In **File Name** box, enter the name of the file.
5. In **Files of Type** drop down box, select the format in which you want to save the file.
6. Select the required option from the list of available save options:

- **Current Page:** To save the current page only.
- **Current Document:** To save all pages of the current document.




- **Pages:** To save some specified pages, enter the page numbers using up and down arrow keys.
7. Click **Settings** for **BMP Compressions**.
 8. Once done, click **Save**.
 9. The document has been successfully saved in a different format.

3.3 Print Document

The document can be printed by performing the following steps:

1. Open the document that you want to print.
2. On the **File** menu, click **Print** OR click the **Print** button displayed on the Operation toolbar.
3. The **Print** dialog box appears.
4. Under **Select Printer** group, select the printer you want to use (if it is not selected).
5. Under **Print Range** group, specify the portion of the document that you want to print. If you click **Pages**, you have to enter the page numbers or page ranges you want to include.
6. Under **Copies** group, select the number of copies that you want to print.
7. To adjust page settings, go to **Page Setup** tab.
8. Click **Print**.

 To see how your document looks before you print it, go to the **File** menu and select **Print Preview**. This will generate a preview of how your document will look like when it's printed on paper.



3.4 Bookmarks

Bookmarks provide a different way to navigate within a document. If you're working on a large document and need to return to specific locations in the document for editing or for some other purpose, Bookmark feature can prove invaluable. Rather than having to scroll through pages of the document, you can quickly return to marked locations to resume with the work. Perform the following steps to work with bookmarks:

1. From the **Bookmarks** menu, do one of the following:
 - *To add bookmark:* Click **Add Bookmark**. A **star** will display at the top left side of the page.
 - *To add multiple bookmarks:* Click **Add Multiple Bookmark**. The **Add Bookmark** dialog box will appear. Enter the page number on which you want to apply bookmark separated by commas in **Enter Pages** text box field. Click **Add**. To apply on all pages, select **All Pages** checkbox.
 - *To remove bookmark:* Select the page and click **Remove Bookmark**.
 - *To view first bookmark:* Click **First Bookmark**
 - *To view next bookmark:* Click **Next Bookmark**
 - *To view previous bookmark:* Click **Previous Bookmark**
 - *To view last bookmark:* Click **Last Bookmark**
 - *To go to specified bookmark:* Click **Go To Bookmark**. The Go To Bookmark dialog box appears. Provide the **File Name** and **Page No.** of the desired bookmark in the respective fields. Click **OK**.
 - *To remove all added bookmarks:* Click **Remove All Bookmark**. The application will prompt **'Do you want to remove all bookmarks'**? Click **Yes**.

3.5 Image Processing

Supported Image Operations	Supported Image Filters
Brightness	Gaussian Filter
Sharpness	GrayScale Filter
Smoothness	Glow Filter
Robert	Lens Blur Filter
Contrast	Maximum Filter
Invert	Minimum Filter
Prewitt	Median Filter
Edge Detection	Noise Filter
Emboss	Unsharpen Filter



Base Image



Image after Prewitt

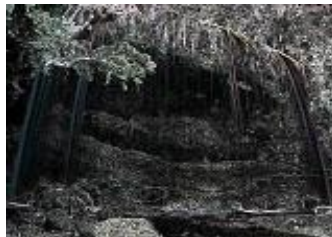


Image after Emboss



Image after performing Sharpness





Image after performing Frei
Chen



Image after Glow Filter



Image after Lens Blur Filter



Image after Gray Scale Filter



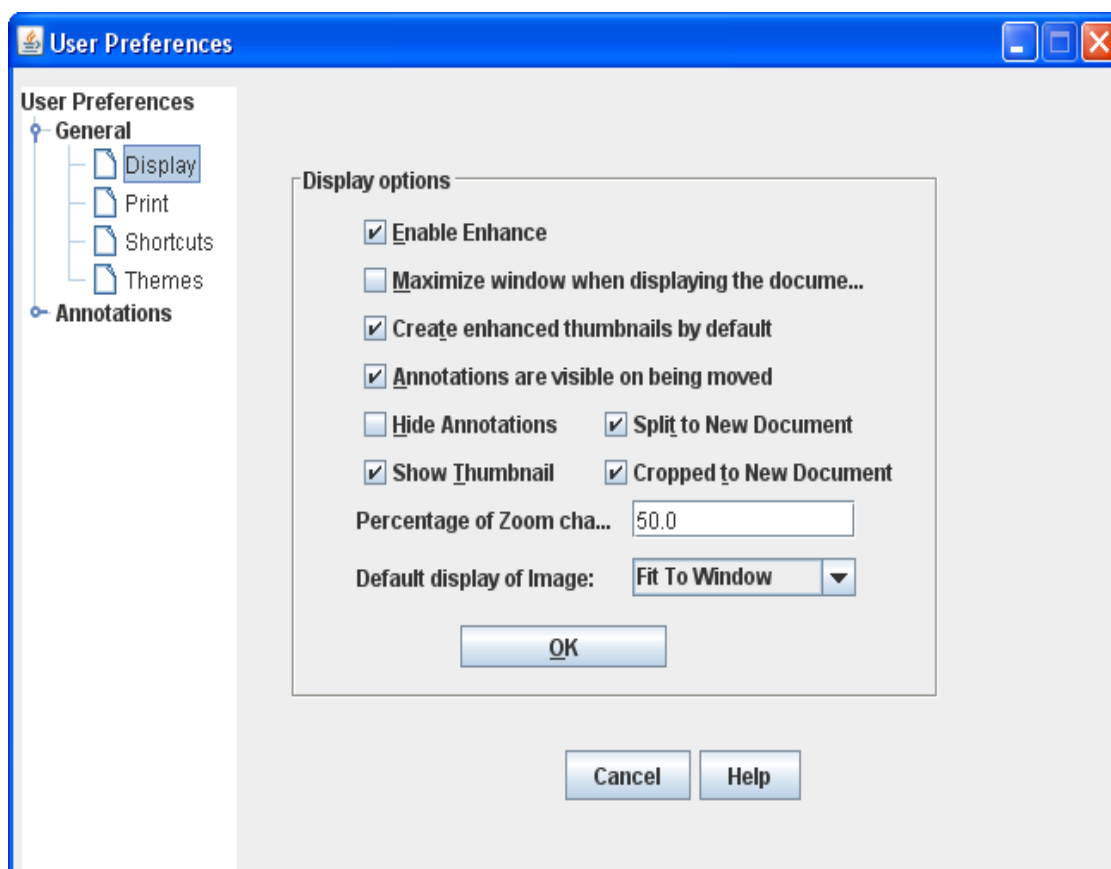


3.6 Setting Default Properties

Default properties are the standard options that are automatically set and can be changed depending upon the needs. If changes are made, then the application will apply those changes and will remember as a default setting for the working area.

Perform the following steps to set default properties for the viewer:

1. On the **File** menu, click **Preferences**.
2. The **User Preference** dialog box appears.
3. Click **Display** provided under **General**.



Field Name	Field Description
Enable Enhance	Enhances an image. If not selected, Enhance option is disabled under Image menu
Maximize window when displaying the document	Opens document in a maximized window
Create enhanced thumbnail by default	Enhances thumbnail images
Annotations are visible while being moved	Display all annotations made on the document clearly while moving



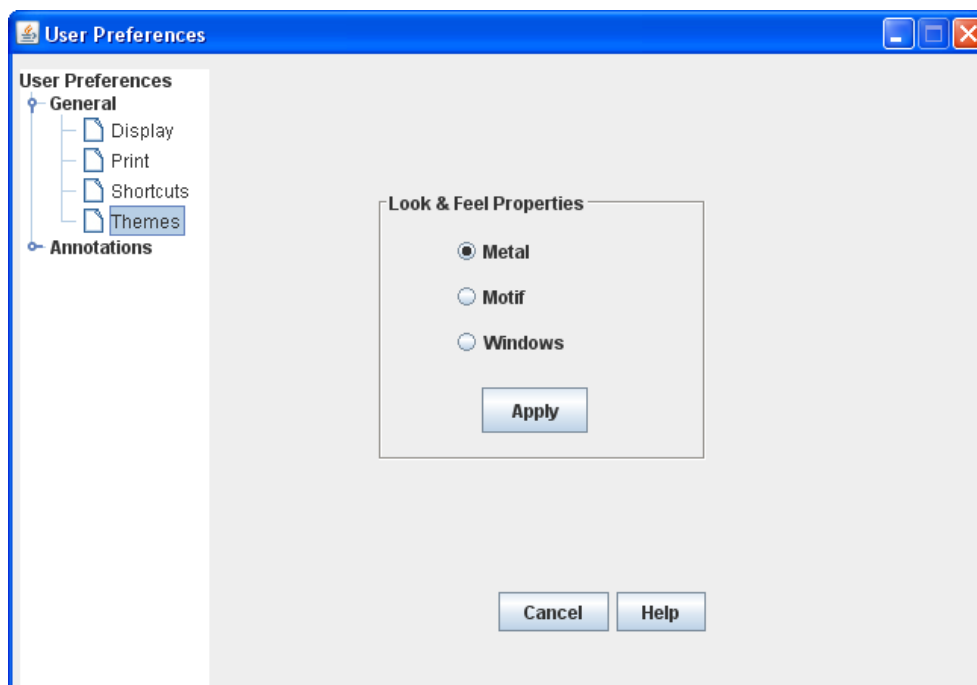
Hide annotation	Hides all annotations tools
Split to New Document	Divide documents into two tabs
Show Thumbnail	Display Thumbnail view
Cropped to New Document	
Percentage of Zoom change	Magnification percentage of a document
Default display of image	Determines the window size of documents

4. Make necessary changes depending upon your needs.
5. Once done, click **OK**.

3.7 Apply Theme

Themes allow personalizing the 'look and feel' of the Viewer. Setting a theme applies styles and skins to all the pages and controls in the viewer. The theme can be set by performing the following steps:

1. On the **File** menu, click **Preferences**.
2. The **User Preferences** dialog box appears.
3. Click **Themes** provided under **General** option.



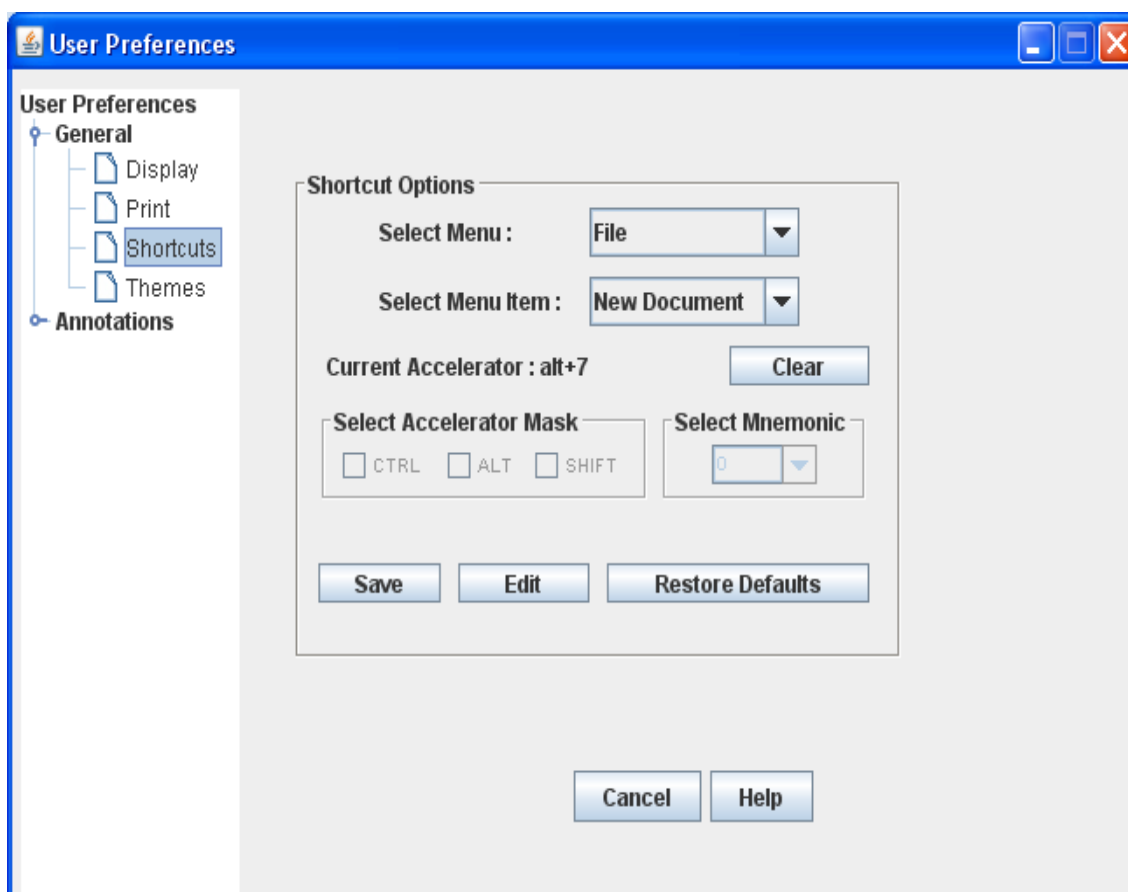
4. Select the required theme from the list of available themes.
5. Click **Apply**.
6. The selected theme will reflect when you reopen the application again.



3.8 Setting Shortcut Keys

Short Cut keys provide an easier and quicker method of navigating and using software. Short Cut keys are commonly accessed by using **ALT**, **CTRL**, or **SHIFT** in conjunction with a single letter. MST Viewer provides a facility through which a shortcut key can be generated for a particular command. Perform the following steps to create a shortcut key:

1. On the **File** menu, click **Preferences**.
2. The **User Preferences** dialog box appears.
3. Click **Shortcuts** provided under **General** option.



4. Select the menu in **Select Menu**.
5. Depending upon the selection, the list of items in **Select Menu Item** will get populated.
6. Select submenu in **Select Menu Item**.
7. Click **Edit**.
8. The **Select Accelerator Mask** and **Select Mnemonic** box will get enabled.
9. Select the combination and key in **Select Accelerator Mask** and **Select Mnemonic** box.
10. Click **Save**.



4. Annotation

Annotations are comments, notes, explanations, or other types of external remarks that can be added to a selected part of the document to explain or illustrate its meaning.

MST Viewer provides tools to enable you to freely write your own comments to the document and can share with others. It provides facility to add comments via sticky notes, apply digital stamps and much more thus making MST Viewer an ideal solution for business work flow. It also allows you to save, copy, paste and print annotation and contents.

Annotation marks are saved within a MO:DCA image file as annotation data that is kept separate from the image data. Whenever we make some annotations, a file with the same name with an extension `.t_1` is created in the current directory. Any annotation that is NOT burned-in (embedded) is put in this file. These marks can also be merged with the image data in a process known as burning-in. To save annotations to any file type other than MO:DCA or TIFF, we save `.t_1` file. The `.t_1` file is a GOCA file. Once annotations are burned-in a MO:DCA document, they become part of the base image but still can be manipulated by the annotation functions.

MST Viewer has a full range of annotation tools. Following is a list of the annotation and markup tools included in MST Viewer, with a brief description of their functionality.

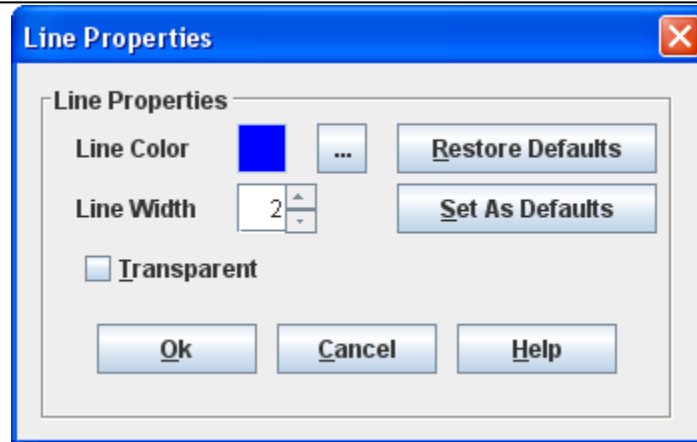
4.1 Line

This annotation tool draws a horizontal, vertical, or lines at 45° with adjustments: color, thickness, and transparency. Perform the following steps to draw a line:

1. On the **Annotation** menu, click **Line** OR click on the Line icon from the Annotation toolbar OR use shortcut key **CTRL + ALT + L**.
2. Click where you want the line to begin, and then drag the mouse to the place where it should end, and release the mouse button.

Edit Properties of Line

1. Select the annotation.
2. Right click and click **Properties**.
3. The **Line Properties** dialog box is displayed.



4. *To change the color of the line:* Click on the Line Color button. The color palette is displayed. Select the required color.
5. *To change the width of the line:* Enter the required value in Line Width text box OR maximize or minimize the up or down arrows.
6. Select or clear **Transparent** checkbox to make line transparent.
7. Click on **Set as Defaults** button to make existing property values as default values.
8. Click on **Restore Defaults** button to restore default properties.
9. Once you finished, click **OK**.

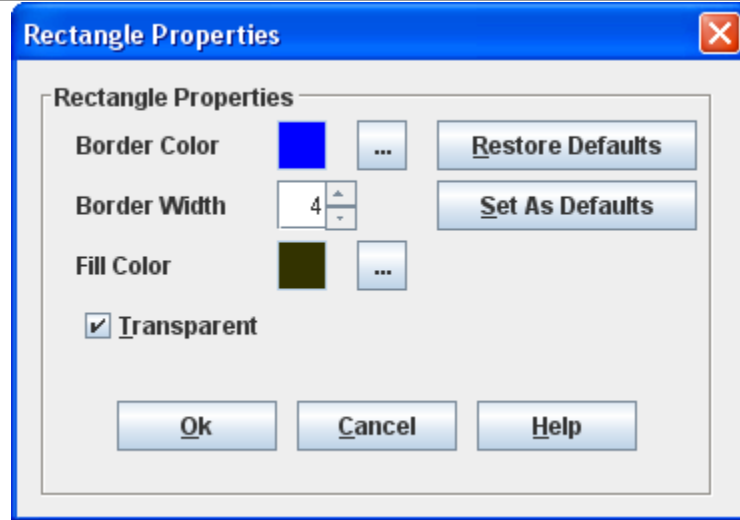
4.2 Rectangle

This annotation tool draws a rectangle with adjustments: line and fill color, thickness, and transparency. Perform the following steps to draw a rectangle:

1. On the **Annotation** menu, click **Rectangle** OR click on the Rectangle icon from the Annotation toolbar OR use shortcut key **CTRL + ALT + R**.
2. Click on the screen and drag diagonally and release the mouse button.

Edit Properties of Rectangle

1. Select the annotation.
2. Right click and click **Properties**.
3. The **Rectangle Properties** dialog box is displayed.



4. *To change the color of the border of the rectangle:* Click on the Border Color button. The color palette is displayed. Select the required color.
5. *To change the width of the rectangle:* Enter the required value in Border Width text box OR maximize or minimize the up or down arrows.
6. *To fill color inside the rectangle:* Click on the Fill Color button. The color palette is displayed. Select the required color.
7. Select or clear **Transparent** checkbox to make rectangle transparent.
8. Click on **Set as Defaults** button to make existing property values as default values.
9. Click on **Restore Defaults** button to restore default properties.
10. Once you finished, click **OK**.

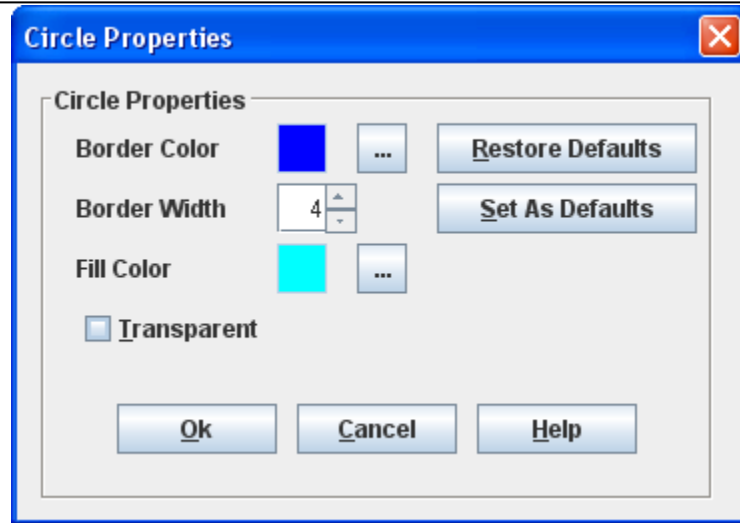
4.3 Circle

This annotation tool draws a circle with adjustments: line and fill color, thickness, and transparency. Perform the following steps to draw a circle:

1. On the **Annotation** menu, click **Circle** OR click on the Circle icon from the Annotation toolbar OR use shortcut key **CTRL + ALT + C**.
2. Click on the screen and drag diagonally and release the mouse button.

Edit Properties of Circle

1. Select the annotation.
2. Right click and click **Properties**.
3. The **Circle Properties** dialog box is displayed.



4. *To change the color of the border of the circle:* Click on the Border Color button. The color palette is displayed. Select the required color.
5. *To change the width of the circle:* Enter the required value in Border Width text box OR maximize or minimize the up or down arrows.
6. *To fill color inside the circle:* Click on the Fill Color button. The color palette is displayed. Select the required color.
7. Select or clear **Transparent** checkbox to make circle transparent.
8. Click on **Set as Defaults** button to make existing property values as default values.
9. Click on **Restore Defaults** button to restore default properties.
10. Once you finished, click **OK**.

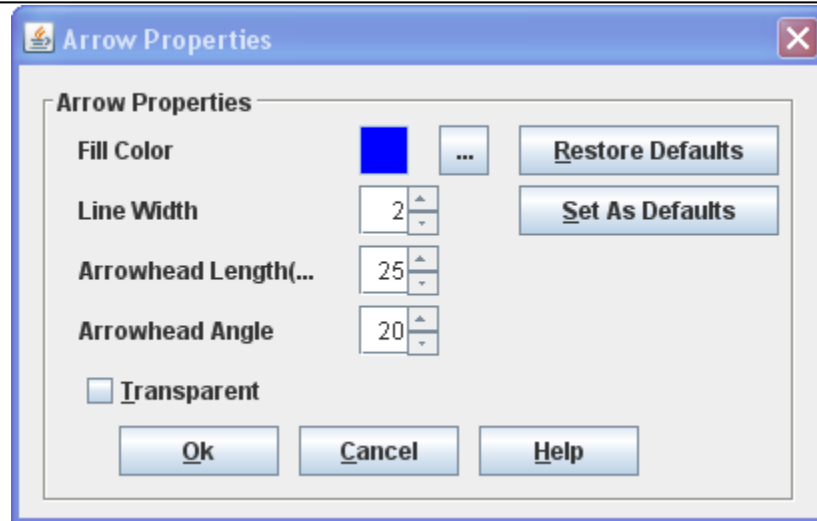
4.4 Arrow

This annotation tool draws a horizontal, vertical or 45° arrow with adjustments: color, thickness, arrowhead length and angle. Perform the following steps to draw an arrow:

1. On the **Annotation** menu, click **Arrow** OR click on the Arrow icon from the Annotation toolbar OR use shortcut key **CTRL + ALT + A**.
2. Click where you want the arrow to begin, and then drag the mouse to the place where it should end, and release the mouse button.

Edit Properties of Arrow

1. Select the annotation.
2. Right click and click **Properties**.
3. The **Arrow Properties** dialog box is displayed.



4. *To change the color of an arrow:* Click on the Fill Color button. The color palette is displayed. Select the required color.
5. *To change the width of an arrow:* Enter the required value in Line Width text box OR maximize or minimize the up or down arrows.
6. *To set arrowhead length and angle:* Enter the required value in Arrowhead Length and Arrowhead Angle text box OR maximize or minimize the up or down arrows.
7. Select or clear **Transparent** checkbox to make arrow transparent.
8. Click on **Set as Defaults** button to make existing property values as default values.
9. Click on **Restore Defaults** button to restore default properties.
10. Once you finished, click **OK**.

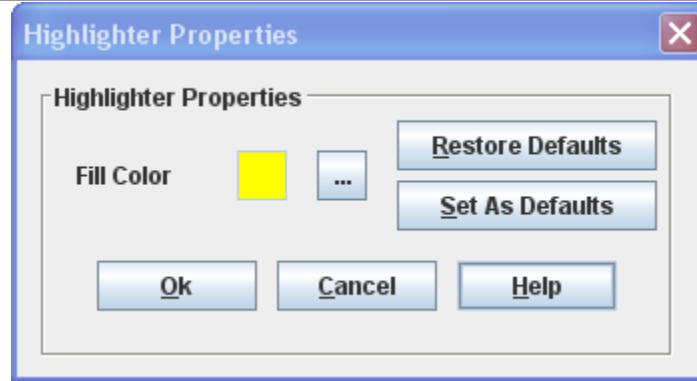
4.5 Highlighter

People use creative methods to draw attention to items of interest when they mark up a paper document, such as underlining, highlighting, circling words in a sentence. This annotation tool provides a similar feature for marking up information displayed in the viewer. Perform the following steps to draw highlighter:

1. On the **Annotation** menu, click **Highlighter** OR click on the Highlight icon from the Annotation toolbar OR use shortcut key **CTRL + ALT + H**.
2. Click on the screen and drag diagonally and release the mouse button.

Edit Properties of Highlighter

1. Select the annotation.
2. Right click and click **Properties**.
3. The **Highlighter Properties** dialog box is displayed.



4. *To fill color inside highlighter.* Click on the Fill Color button. The color palette is displayed. Select the required color.
5. Click on **Set as Defaults** button to make existing property values as default values.
6. Click on **Restore Defaults** button to restore default properties.
7. Once you finished, click **OK**.

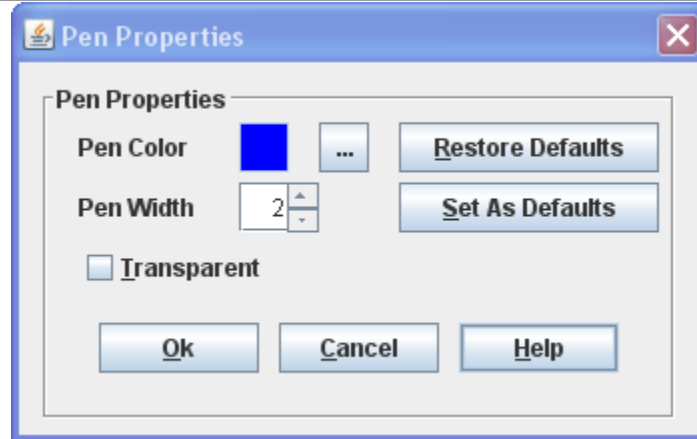
4.6 Pen

This annotation tool draws freehand lines and shapes with adjustments: color, thickness, and transparency. Perform the following steps to draw a freehand line:

1. On the **Annotation** menu, click **Pen** OR click on the Pen icon from the Annotation toolbar OR use shortcut key **CTRL + ALT + P**.
2. Click on the screen and drag the mouse. The line will follow your mouse moves. Release the mouse button to end your drawing.

Edit Properties of Pen

1. Select the annotation.
2. Right click and click **Properties**.
3. The **Pen Properties** dialog box is displayed.



4. To change the color of freehand line: Click on the Pen Color button. The color palette is displayed. Select the required color.
5. To change the width of freehand line: Enter the required value in Pen Width text box OR maximize or minimize the up or down arrows.
6. Select or clear **Transparent** checkbox to make freehand line transparent.
7. Click on **Set as Defaults** button to make existing property values as default values.
8. Click on **Restore Defaults** button to restore default properties.
9. Once you finished, click **OK**.

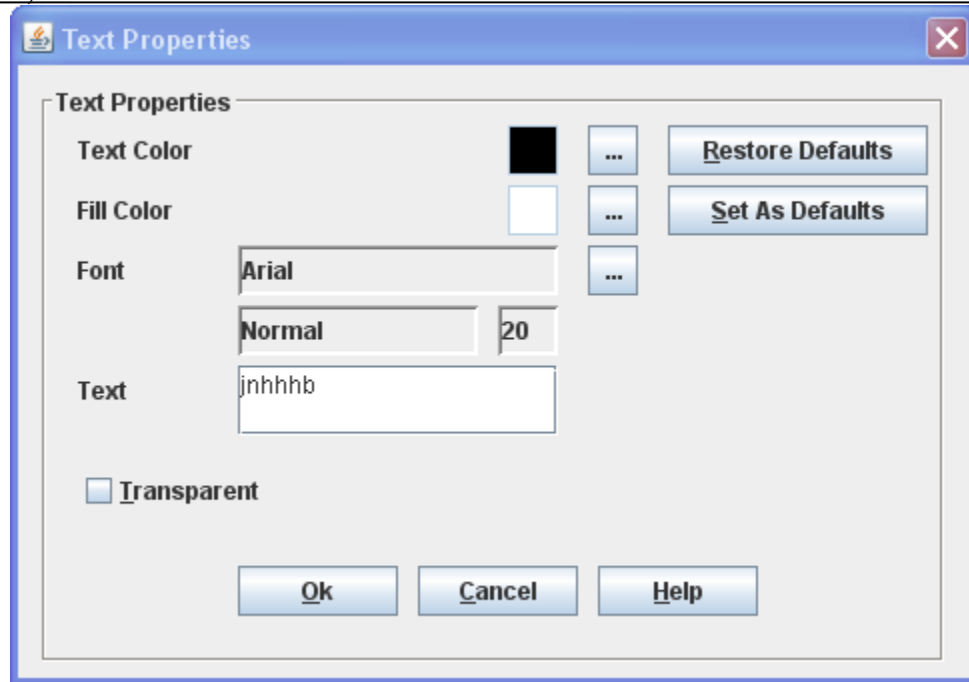
4.7 Text

This annotation tool enters text with adjustments: size and color of the fonts and the text box. Perform the following steps to add any text:

1. On the **Annotation** menu, click **Text** OR click on the Text icon from the Annotation toolbar OR use shortcut key **CTRL + ALT + T**.
2. Click where you want to place the text.
3. A cursor will appear on the screen allowing you to type in text.
4. To finish editing the text, click anywhere outside of the text box.
5. To edit the text later, just double click on the text.

Edit Properties of Text

1. Select the annotation.
2. Right click and click **Properties**.
3. The **Text Properties** dialog box is displayed.

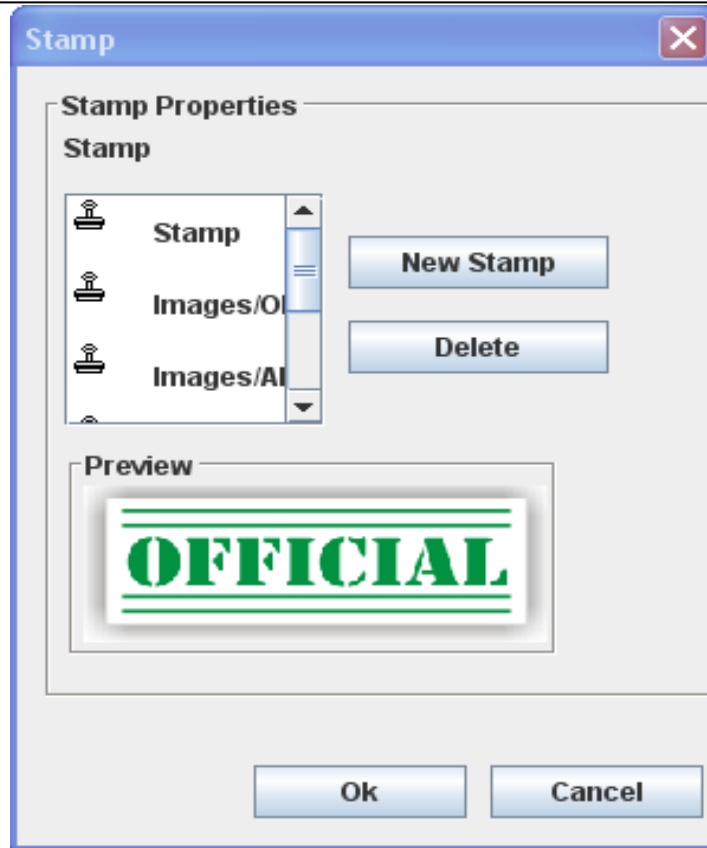


4. *To change the color of the text:* Click on the Text Color button. The color palette is displayed. Select the required color.
5. *To fill color in the text box:* Click on the Fill Color button. The color palette is displayed. Select the required color.
6. *To change the formatting of text:* Click on the Font button. The Font dialog box is displayed. Make required formatting changes.
7. *To edit text:* Edit the existing text in the Text box.
8. Select or clear **Transparent** checkbox to make text transparent.
9. Click **Set as Defaults** button to make existing property values as default values.
10. Click **Restore Defaults** button to restore default properties.
11. Once you finished, click **OK**.

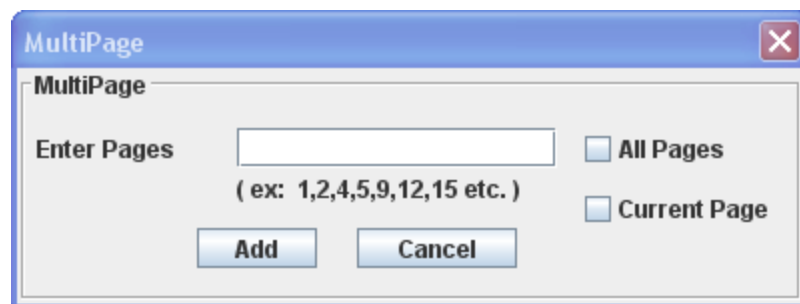
4.8 Stamp

Just as you would use a rubber stamp, you can stamp images and text anywhere on a document. You can choose either from a list of pre-defined stamps or create your own stamps. Perform the following steps to add stamp:

1. On the **Annotation** menu, click **Stamp** OR click on the Stamp icon from the Annotation toolbar OR use shortcut key **CTRL + ALT + S**.
2. Click where you want to place the stamp.
3. The **Stamp** dialog box appears.



4. Select the required stamp from the predefined list of stamps that you want to place on the document.
5. The preview of the selected stamp will be displayed in **Preview** group.
6. Once selected, click **OK**.
7. The **MultiPage** dialog box appears and do one of the following:



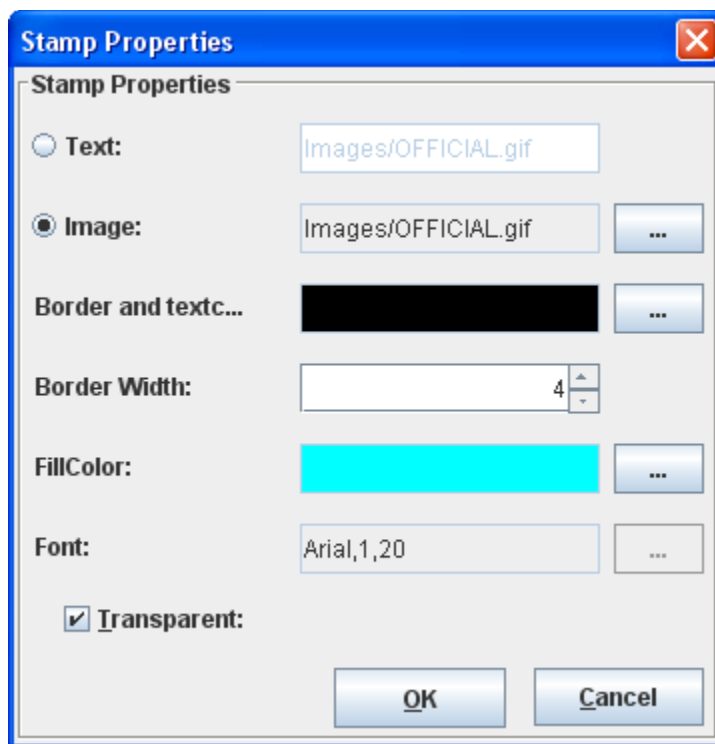
- *To place stamp on all pages:* Select **All pages** checkbox.
- *To place stamp on the current page only:* Select **Current Page** checkbox.
- *To place stamp on the specified page:* Provide the page number on which you want to place stamp in **Enter Pages** text box.

8. Once done, click **Add**.



Edit Properties of Stamp

1. Select the annotation.
2. Right click and click **Properties**.
3. The **Stamp Properties** dialog box is displayed.



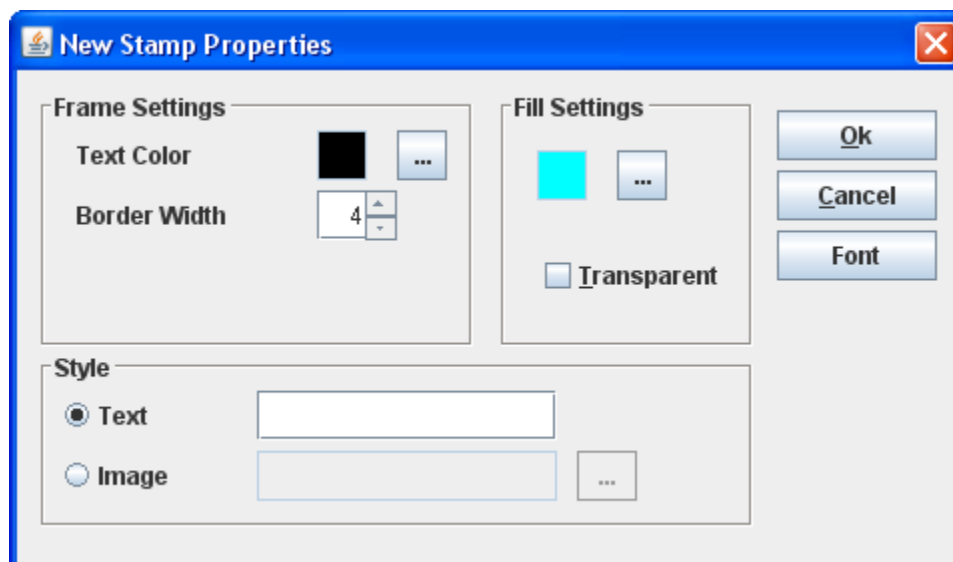
4. *To change the color of the stamp:* Click on the Border and text color button. The color palette is displayed. Select the required color.
5. *To adjust thickness of the stamp:* Enter the required value in the Border Width text box OR minimize or maximize the up and down arrows.
6. *To fill color in the stamp:* Click on the Fill Color button. The color palette is displayed. Select the required color.
7. *To change the formatting of stamp:* Click on the Font button. The Font dialog box is displayed. Make required formatting changes.
8. *To display text:* Click on the **Text** radio button. Provide text of the stamp in the Text box.
9. *To display image:* Click on **Image** radio button. Click on Image button. The **Select Stamp Image** dialog box is displayed. Click on **Browse** button and navigate to the image that you want to display. Adjust the height and width of the image in **Resize** group box. Once done, click **OK**.
10. Select **Transparent** checkbox to make text transparent.
11. Click on **Set as Defaults** button to make existing property values as default values.
12. Click on **Restore Defaults** button to restore default properties.
13. Once you finished, click **OK**.



Create New Stamps

All the existing stamps are located in the list of pre-defined stamps. If you want to add a new stamp, then you can create a new stamp in MST Viewer. Perform the following steps to create a new stamp:

1. On the **Annotation** menu, click **Stamp** OR click on the Stamp icon from the Annotation toolbar OR use shortcut key **CTRL + ALT + S**.
2. Click anywhere on the screen.
3. The **Stamp** dialog box appears.
4. Click **New Stamp**.
5. The **New Stamp Properties** dialog box appears.




6. Under **Frame Settings** group box, for the new stamp, select the Text Color and Thickness in **Text Color** and **Border Width** fields respectively.
7. Under **Fill Settings** group box, if you want to fill the color inside the stamp then click on the button. The color palette is displayed. Select the required color. Click OK. Click on the **Transparent** checkbox to make stamp transparent.
8. Under **Style** group box, select from the available options the type of new stamp either **Text** or **Image**. For Text stamp, enter the name of the stamp in the text box. For Image stamp, click on Image button. The **Select Stamp Image** dialog box is displayed. Click on **Browse** button and navigate to the image that you want to display. Adjust the height and width of the image in **Resize** group box. Once done, click **OK**.
9. Click on the **Font** button to change formatting of text.
10. Once done, click **OK**.
11. The newly created stamp has been created and will be listed in the **Stamps** list box.



Delete a Stamp:

Perform the following steps to delete any existing or pre-defined stamps:

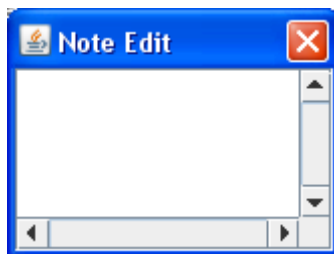
1. On the **Annotation** menu, click **Stamp** OR click on the Stamp icon from the Annotation toolbar OR use shortcut key **CTRL + ALT + S**.
2. Click anywhere on the screen.
3. The **Stamp** dialog box appears.
4. Select the stamp from the list of available stamps in **Stamps** group box.
5. Click **Delete**.
6. The selected stamp has been removed from the list of stamps.

 You cannot delete all the stamps. There should be atleast one stamp be available in the list.

4.9 Sticky Note

Sticky Note is quite similar to typical sticky note that is stuck with the hard copy documents. It is more efficient and provides a natural and familiar means by which you can add and share comments in the form of a note anywhere on a page over text, images or blank spaces without editing the content. Perform the following steps to add a sticky note:

1. On the **Annotation** menu, click **Sticky Note** OR click on the Sticky Note icon from the Annotation toolbar OR use shortcut key **CTRL + ALT + N**.
2. Click on the screen to stick down your note.
3. It will open a sticky note box.

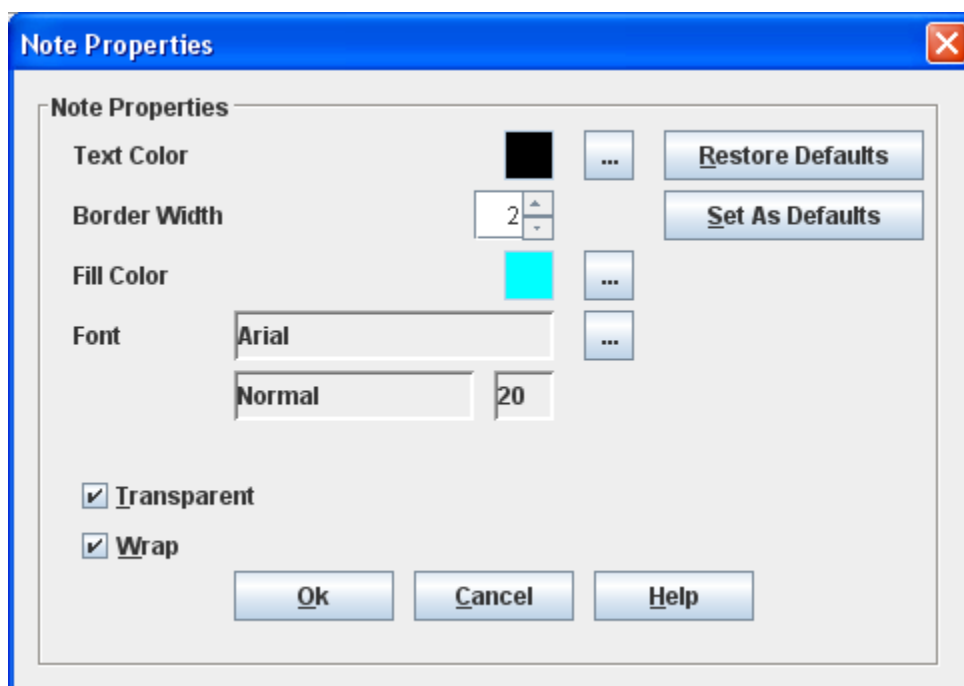


4. Enter comments in the note.
5. Once done, click **Close** button displayed at the top right of the note to release from sticky note.
6. To edit note later, double click on the note.
7. It will open sticky note box in an edit mode.
8. Edit the text and click **Close**.



Edit Properties of Sticky Note

1. Select the annotation.
2. Right click and click **Properties**.
3. The **Note Properties** dialog box appears.

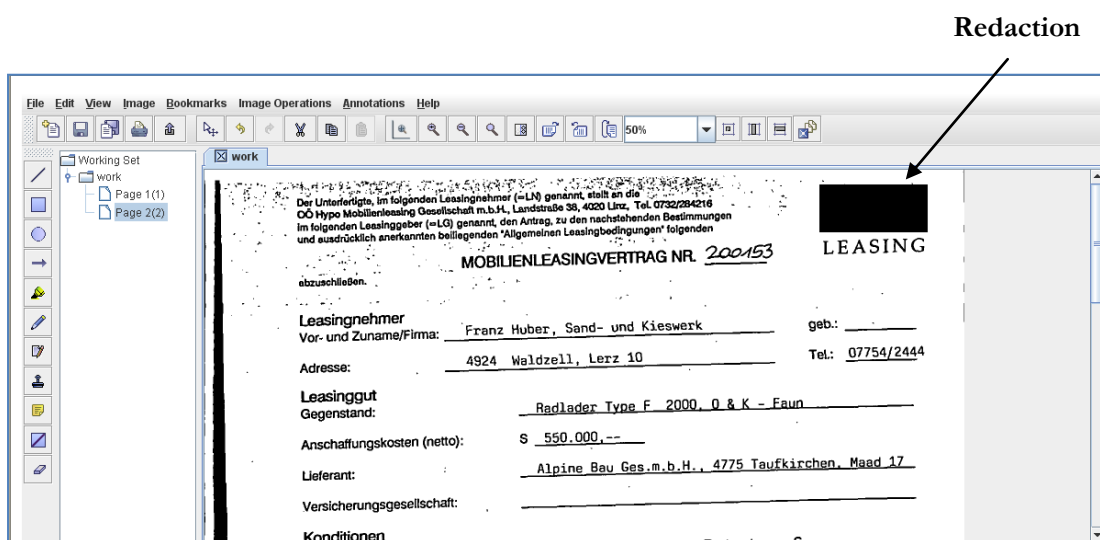


4. *To change the text color:* Click **Text Color** button. The color palette is displayed. Select the required color.
5. *To adjust thickness of the Sticky Note:* Enter the required value in the **Border Width** text box OR minimize or maximize the up and down arrows.
6. *To fill color inside Sticky Note:* Click **Fill Color** button. The color palette is displayed. Select the required color.
7. *To change the formatting of Sticky Note:* Click **Font** button. The font dialog box is displayed. Make required formatting changes.
8. Select **Transparent** checkbox to make Sticky Note transparent.
9. Select **Wrap** checkbox to arrange text in different lines.
10. Click on **Set as Defaults** button to make existing property values as default values.
11. Click on **Restore Defaults** button to restore default properties.
12. Once done, click **OK**.



Redaction, by definition, means hiding certain type of information from documents. Redacting a file allows you to hide the document's sensitive information. It can be used to cover information such as Social Security Numbers, competitive information and even images. Perform the following steps to draw mask:

1. On the **Annotation** menu, click **Redaction** OR click on the Redaction icon from the Annotation toolbar OR use shortcut key **CTRL + ALT + M**.
2. Click and drag diagonally on the text or image that you want to redact and release the mouse button.
3. The solid rectangle will be displayed at the selected portion.



4. To hide text or image permanently, click **Redact Page** from the **Image** menu.

Once you redact any text or image, it will be hidden permanently.

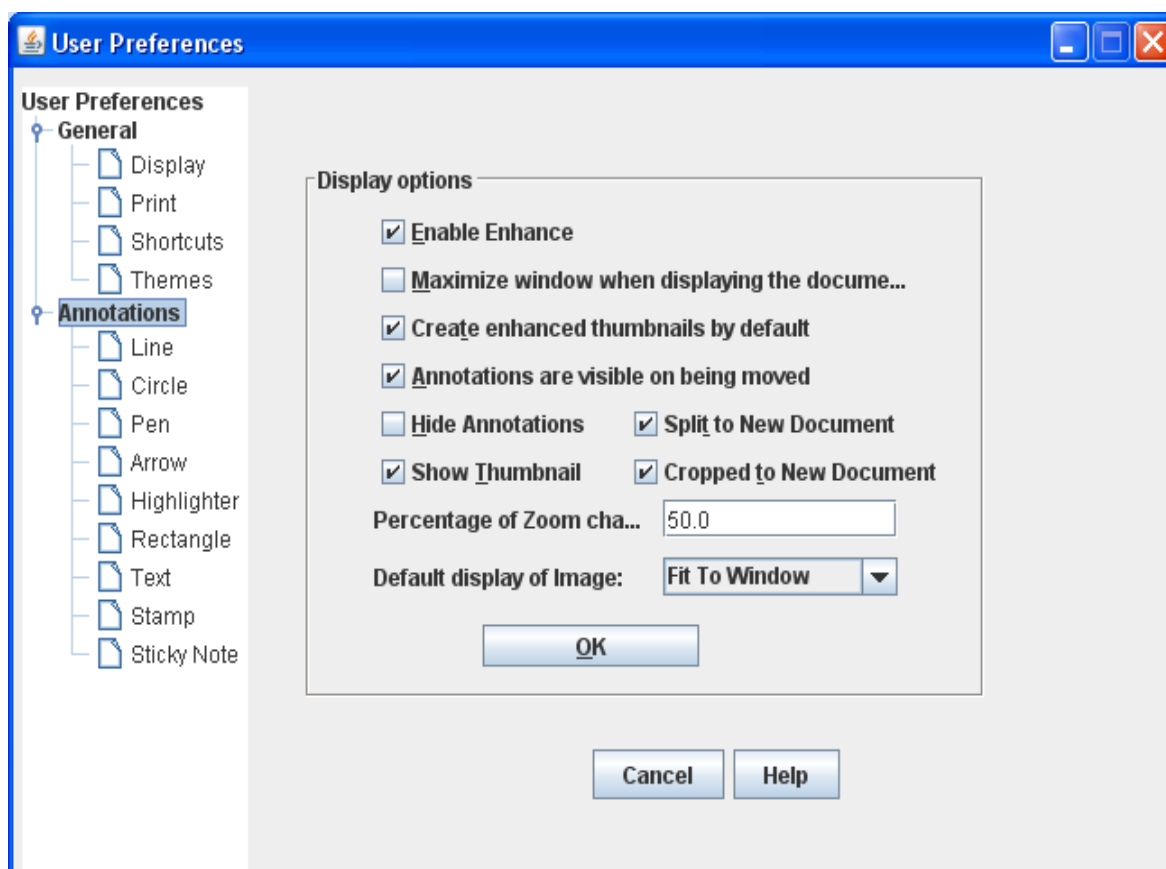


4.11 Setting Default Properties

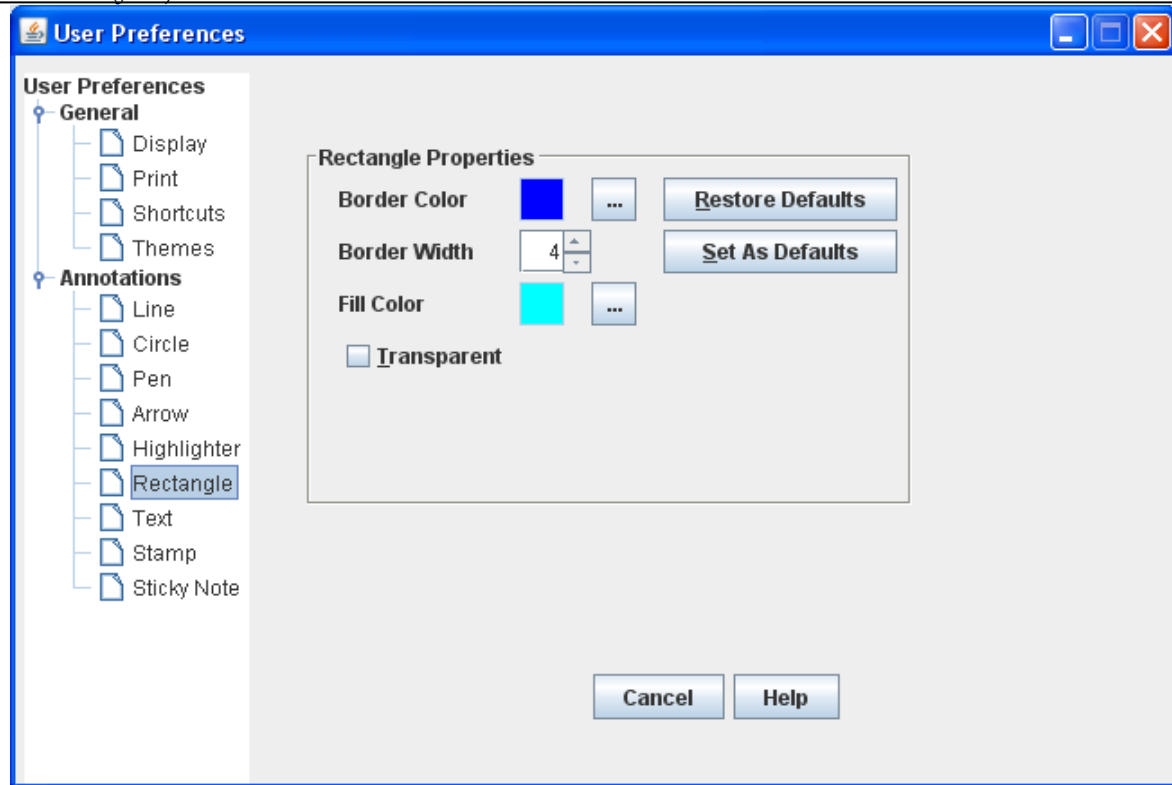
Default properties are the standard options that are automatically set and can be changed depending upon your needs. If changes are made, then the application will apply those changes and will remember as a default setting for the working area.

Perform the following steps to set default properties for the annotations:

1. On the **File** menu, click **Preferences**.
2. The **User Preference** dialog box appears.
3. Expand **Annotations**.



4. Click on the annotation of whose property that you want to set.
5. Clicking the annotation will display the properties on the right side of the window.



6. Make necessary changes as per your needs.
7. Click on **Set as Defaults** button to make existing property values as default values.



5. Short Cut Keys

Short Cut keys provide an easier and quicker method of navigating and using software. Short Cut keys are commonly accessed by using **ALT**, **CTRL**, or **SHIFT** in conjunction with a single letter.

As you begin to memorize shortcut keys, you'll notice that many applications share the same shortcut keys. The below basic shortcut keys are a listing of shortcut keys that will work with almost all IBM compatible computers and software programs. It is highly recommended that all users keep a good reference of the below shortcut keys or try to memorize the below keys. Doing so will dramatically increase your productivity.

Command	Short Cut Key
New	Ctrl + O
Close	Ctrl + W
Close All Documents	Ctrl + Shift + W
Save As	Ctrl + F12
Print	Ctrl + P
Cut	Ctrl + X
Copy	Ctrl + C
Paste	Ctrl + V
Undo	Ctrl + Z
Redo	Ctrl + Shift + Z
First Page	Home
Previous Page	Page Up
Last Page	End
Next Page	Page Down
Enhance	Ctrl + E
Zoom In	+
Zoom Out	-
Custom Zoom	Ctrl + M
Actual Size	Shift + 1
Fit in Window	Shift + 3
Fit to Width	Shift + 2
Fit to Height	Shift + 0
Rotate Right	Ctrl + R
Rotate Left	Ctrl + L
Rotate 180	Ctrl + 8
Pen	Ctrl + Alt + P
Highlighter	Ctrl + Alt + H
Rectangle	Ctrl + Alt + R
Circle	Ctrl + Alt + C
Line	Ctrl + Alt + L



MST Viewer (Java)

Arrow	Ctrl + Alt + A
Sticky Note	Ctrl + Alt + N
Stamp	Ctrl + Alt + S
Text	Ctrl + Alt + T
Redaction	Ctrl + Alt + D
Add Bookmark	Ctrl + Shift + F1
Add Multiple Bookmark	Ctrl + Shift + F2
Remove Bookmark	Ctrl + Shift + F3
First Bookmark	Ctrl + Shift + F4
Next Bookmark	Ctrl + Shift + F5
Previous Bookmark	Ctrl + Shift + F6
Last Bookmark	Ctrl + Shift + F7
Go To Bookmark	Ctrl + Shift + F8
Remove All Bookmarks	Ctrl + Shift + F9