Surveyor Scale Bar & Micron Marker Guide

Objective Imaging Ltd.

1 Overview

In microscopy, a scale bar or micron marker is often useful for gauging the relative scale of an object in microns or millimetres, rather than pixels. Surveyor allows the display of a scale bar within the view of a scanned image, although it is limited to usage within the Surveyor application only – ie. the scale bar cannot be saved or "burned" to the final mosaic image. Other applications such as *Media Cybernetics Image Pro Premier* support the loading of Objective Imaging workspaces and may allow more detailed scale bar functionality.

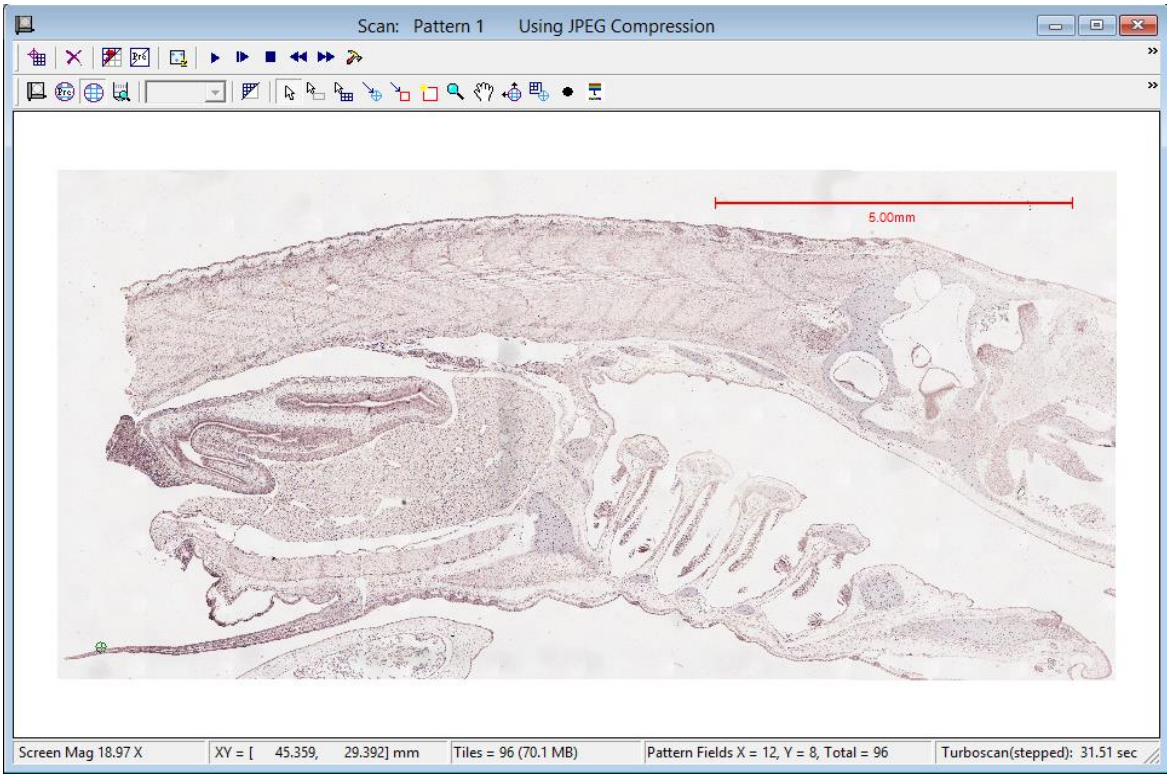


Figure 1 - Example scale bar, positioned top-right.

Each objective lens configured within Surveyor has a defined calibration factor, which specifies a correlation between the pixel size of the camera and the stage area in microns. This essentially denotes the number of microns represented by each pixel in the image and is displayed as the value *microns-per-pixel* which is accessible via *Control menu > Calibrate Lens* as shown in figure 2.

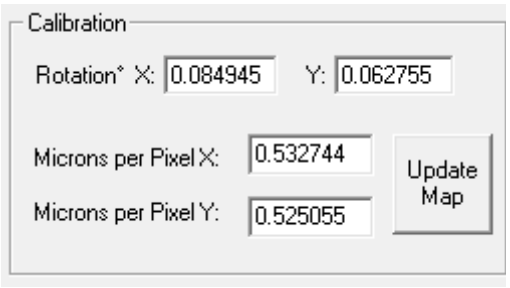


Figure 2 - Example calibration for 10X objective.

Surveyor uses the *microns-per-pixel* calibration factor when drawing the scale bar. In figure 2, each pixel in the X axis represents 0.532744 microns. Therefore, drawing a horizontal line of length 1000 pixels represents a length of ~532.7 microns. Using this

value, it is possible to draw your own scale bar using alternative graphical applications.

2 Prerequisites

Usage of the Surveyor scale bar requires the system to be correctly calibrated, and this is true for both adequate stitching during scanning acquisition, as well as accurate display of the scale bar. If your system is not already calibrated, please see the document titled *Surveyor Autocalibration Guide* or consult your system reseller.

3 Scale Bar Options

3.1 Accessing the Scale Bar

The scale bar controls are accessed via *View menu > Map Properties* as shown in figure 3.

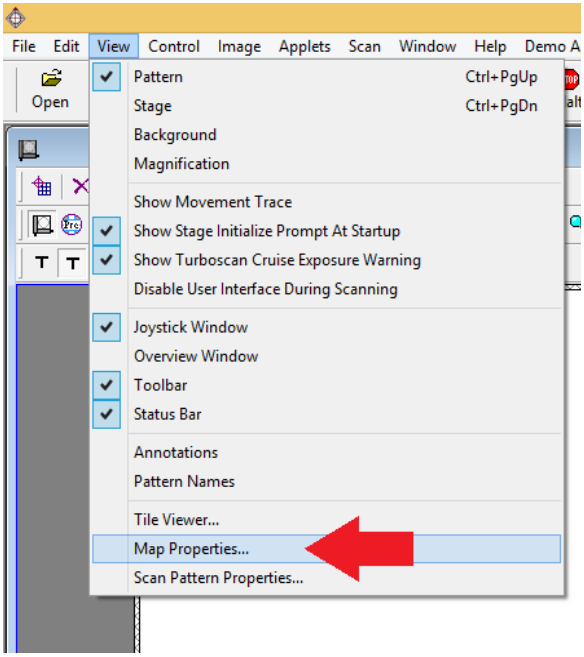


Figure 3 - View menu > Map Properties...

The scale bar options reside at the bottom of the Map Properties dialog as shown in figure 4.

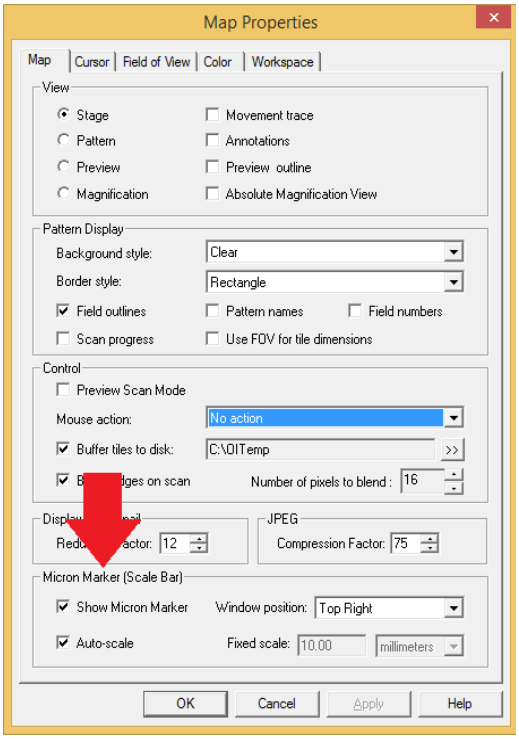
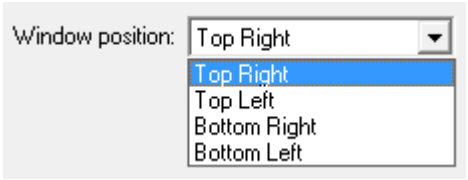
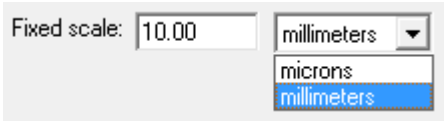


Figure 4 - Scale bar options.

3.2 Description of Scale Bar Options

	Toggle the visible scale bar/micron marker on or off.
	Select the fixed position of the scale bar within the Map window. Note that the scale bar cannot be moved freehand.
	When auto-scale is enabled, the scale bar will be set to an appropriate scaling regardless of the current zoom magnification of the scan.
	When auto-scale is disabled, the fixed scale options become changeable. This allows a user-defined scaling to be set in either microns or millimetres. Note that a user-defined scaling may not be appropriate at all zoom levels.

3.3 Changing the Scale Bar Colour

The *Map Properties* dialog > *Color* tab also allows colour elements to be modified including the scale bar. To do this, select element *MicronMarkerColor* and change the value of the *Color Palette* as shown below:

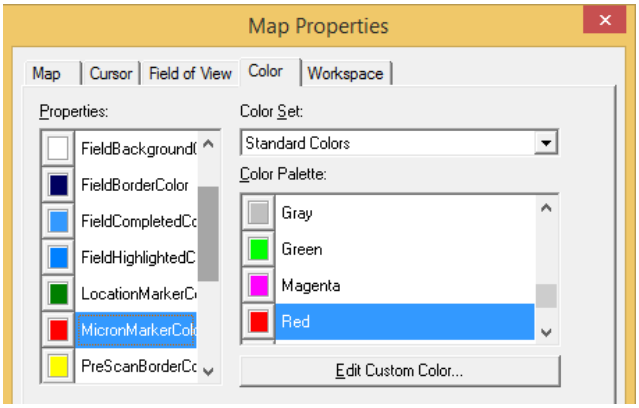


Figure 5 - Changing the colour of the scale bar.