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Inkscape

Document Outline:

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What is Inkscape?

Inkscape is a free, open source, professional, quality vector graphics software. It can be used to create or edit vector graphics such as illustrations, diagrams, line arts, charts, logos and complex paintings. It runs on Linux, Mac OS X and Windows desktop computers.

What is a Scalable Vector Graphic file?

SVG files are vector images for two-dimensional graphics. The images are described by text (XML) and can be infinitely scaled. They are heavily used by web designers. The MakerLab runs these files on the Epilog Laser Mini, a laser etcher and engraver.

Epilog Laser Cutter

Customers can use the Epilog laser cutter in the MakerLab to run their vector artwork, which can be cut and etched on various materials including glassware and wood. To use the laser in the MakerLab, you must make a One on One appointment with a member of our staff or come to a library program. This machine is free to use; the only potential costs are those of materials purchased from the MakerLab, which will be charged to your library card.

Tour of the Interface:

- **Middle of screen:** Canvas, or workspace. Along the edges of the work area are rulers. We can change the size of the canvas and the units from mm to inches under File -> Document Properties. There are black arrows along the ruler that follow our mouse. We can click and drag from the ruler to create guide lines.

- **Top Bar (Commands Bar):** Common commands such as New Document, Open Document, Import / Export, Cut / Copy / Paste, Undo / Redo, Zoom, Duplicate Object, Group / Ungroup. Others open dialog boxes, like Layers, Stroke + Fill, Text + Font
- **Right Bar (Snap Controls):** Control snapping behavior of objects as you draw or move them.
- **Left Bar (Toolbox):** This has the majority of the tools we use in Inkscape. We can use tools like creating lines, curves, shapes, and text boxes.
- **Top Bar (Tool Controls Bar):** This changes depending on the tool we're using and gives us more editing options.
- **Bottom Bar (Palette):** Can drag and drop colors onto objects to easily recolor them.

Sizing the Workspace:

Set the document size to the size of the material you are working with by changing the Document Properties. For example, if you are creating a 10" x 5" item, set the document size to 10" width by 5" height. Then you can determine the size and placement of any vector graphics in your design.

Creating Lines by Drawing Paths:

The Pen Tool can draw or modify artwork by creating curves and straight lines. Clicking on the workspace creates the first point (called a node) on the path. Subsequent clicks create more segments. Holding down "control" while doing this makes the line perfectly horizontal or vertical. Clicking while dragging creates a curve. To end, hit "Enter" or connect the line to the first node. Paths can be edited after they are created.

Creating Shapes:

Inkscape has dedicated tools to help draw things like rectangles, ellipses, polygons, stars, and spirals. These are different than drawing a shape with the Pen Tool. Click and drag the mouse to create the shape. Hold "Control" to keep the aspect ratio constant. Change the fill color and outline with the "Fill & Stroke" tool. Click and drag the corner node to change the outline shape (rectangle) or angle (circle).

Creating Text:

Select the Text Tool. Click and drag on the workspace to draw a text box. Type your desired text. Edit the font style and size by selecting the text properties (top bar). Note that fonts created in other programs might not import well into Inkscape. Be sure to create your font in Inkscape or be sure it has been saved as a vector.

Converting to Vector from Other Sources:

Sometimes there will be no good vector image of a file, or you can only find a jpeg or png instead of svg. The image can be converted into a vector (to varying degrees of success) using Trace Bitmap.

To do this: Open your jpeg or png file in Inkscape. With the image selected, choose "Path" on the toolbar, then select the "Trace Bitmap" command. Check on "Live Preview" if it is not already enabled. Click "Update," which will give you a small preview of what the vector will look like. Select Okay. The new vector image will be pasted on top of your original image. Select the new image and position it where you want. Delete the original image.

For the Epilog Laser:

To make a cut line, change the stroke to red in the "Fill and Stroke" area. To engrave, make the fill of the object black or grayscale.

Learning Resources:

LinkedIn Learning (a library provided database, must have BAL card to use at home, available to all for in library use.)

Questions? Email digitalservices@balibrary.org or call (847) 382-1300 x 2060