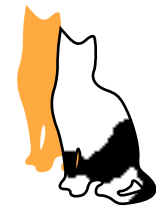




svg2key Manual

**A Guide for
Creating Shapes in Keynote**



I. About

svg2key is a simple command-line utility that extracts shapes from scalable vector graphic (SVG) files and imports them into Keynote, Apple's new presentation program. By importing SVG shapes you can extend Keynote palette of shapes and use programs such as Illustrator, Omni Graffle and Inkscape as drawing tools for Keynote.

II. System Requirements

Mac OS X 10.3 or later

Keynote 1 or later

SVG editor (i.e. Inkscape, Illustrator, Omni Graffle, etc...)

III. Installation

Double-click the `svg2key-0.2.dmg` file to mount the disk image. Then drag the files over to your home folder.

Launch the Terminal.app (in `/Applications/Utilities`) and type:

```
chmod a+x svg2key
```

Convert one of the sample SVG files to make sure everything works by typing:

```
svg2key SVG_Examples/testfile.svg
```

There will be a slight pause followed by: "Keynote file saved as Untitled.key". To view the resulting file type:

```
open Untitled.key
```

IV. Usage

```
svg2key [-f] [-o outputfile.key] file1.svg file2.svg ...
```

Optional Flags:

- o specify a output file name. The default file name is Untitled.key
- f force svg2key to save Keynote file regardless of whether the file exists.
- h display help and exit

Examples:

- Specify an output file using the -o flag

```
svg2key -o outputfile.key file.svg
```

if the file “output.key” exists you will be prompted for a new file name.

To override the interaction mode you can use the -f flag like so:

```
svg2key -f -o outputfile.key file.svg
```

- Convert multiple svg files at once:

```
svg2key file1.svg file2.svg file3.svg
```

Here a separate slide will be created for each svg file.

Alternatively you can place all of your SVG files in a folder and convert them like so:

```
svg2key ~/KeynoteStuff/SVGfolder/*
```

or you can use a wild card to convert a subset of files in your folder:

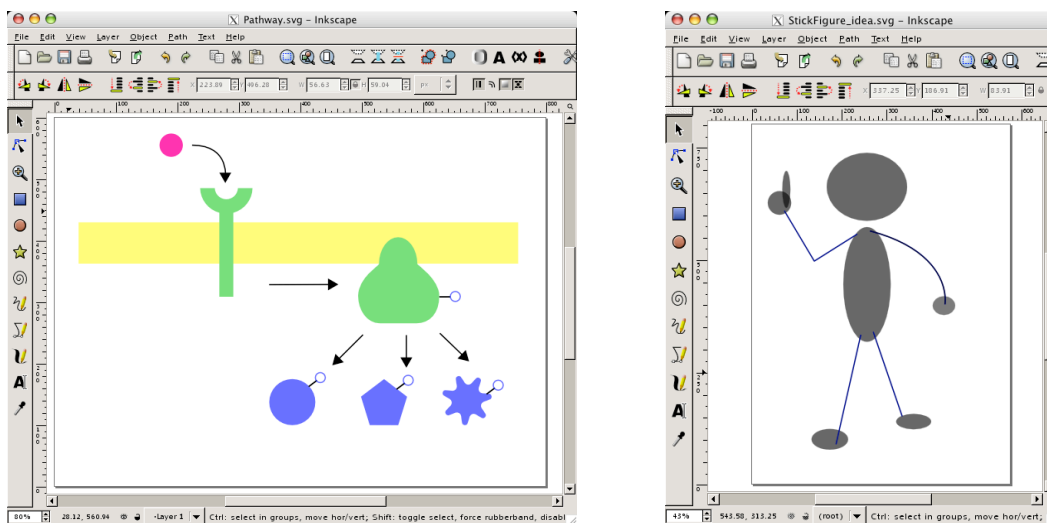
```
svg2key ~/KeynoteStuff/SVGfolder/file*.svg
```

V. Creating your own Scalable Vector Graphics

- **Inkscape** - My favorite program for creating vector graphics. Inkscape is open source (i.e. free) and since Inkscape is strictly an SVG editor, its output is fairly clean. Please note that Inkscape runs in the X11 environment, so you will need to install the developer tools from your Mac OS X installation DVD or CD to run it. Inkscape can be obtained from <http://www.inkscape.org>.
- **Adobe Illustrator** - A popular graphics application and does more than just vector graphics. Adobe is also big supporter of the SVG format. For more info see: <http://www.adobe.com/products/illustrator/main.html>
- **Omni Graffle** - Software for the Mac that can save graphics in SVG format. For more info see: <http://www.omnigroup.com/applications/omnigraffle/>
- **EasyDraw** - A great app for creating vector graphics. Although EasyDraw does not export SVG files, it can save directly to Keynote format. Great if you will be drawing shapes from scratch. For more info see: <http://www.eazydraw.com/>

- **Intaglio** - Can export graphics as SVG and supports a “text to path” feature that can be used to create shapes from special text symbols.
For more info see: <http://purgatorydesign.com/Intaglio/>
- **Stone Create** - Supports bitmap image tracing and SVG export.
For more info see: <http://www.stone.com/Create/Create.html>
- **Batik and Sodipodi** - Other open-source drawing programs.
For more info see: <http://www.sodipodi.com/> and <http://xml.apache.org/batik/>
- The **Adobe SVG Viewer** (free) gret for viewing SVG files with your web browser.
<http://www.adobe.com/svg/viewer/install/>

VI. Using Multiple Shapes per Slide:

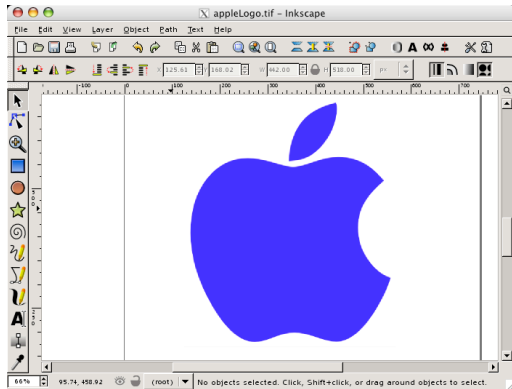


If you have a composite graphic like the molecular diagram shown above-left, `svg2key` will preserve the relative positions of each shape in the Keynote file. However if you intend for the collection of shapes to remain as a whole, as with the stick figure shown above-right, you are better off joining each path before saving the SVG file (by selecting `Path > Union` in Inkscape). As of this writing, Keynote will not resize grouped objects, so by merging the paths you can adjust the size, fill color and line thickness of the entire shape in Keynote.

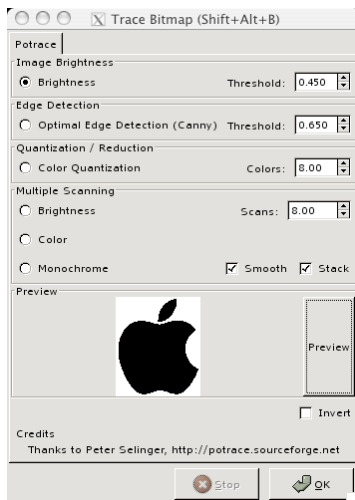
VII. Create unique shapes through image tracing

This tutorial describes how to convert an image (i.e. JPG, TIFF, GIF, etc..) into a vector graphic using Inkscape. Most SVG editors such as Illustrator have similar functions. First you will want to start with a high-contrast image or silhouette. In this example we will use a tiff image of the apple logo.

1. Open the image in Inkscape (or your favorite SVG editor).

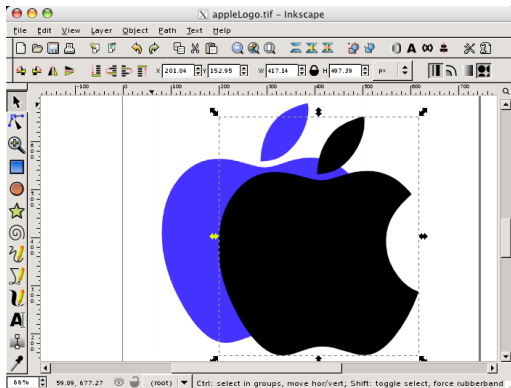


2. Click on the image and then select Path>Trace Bitmap from the Menu. For starters, use the default settings and click "OK".



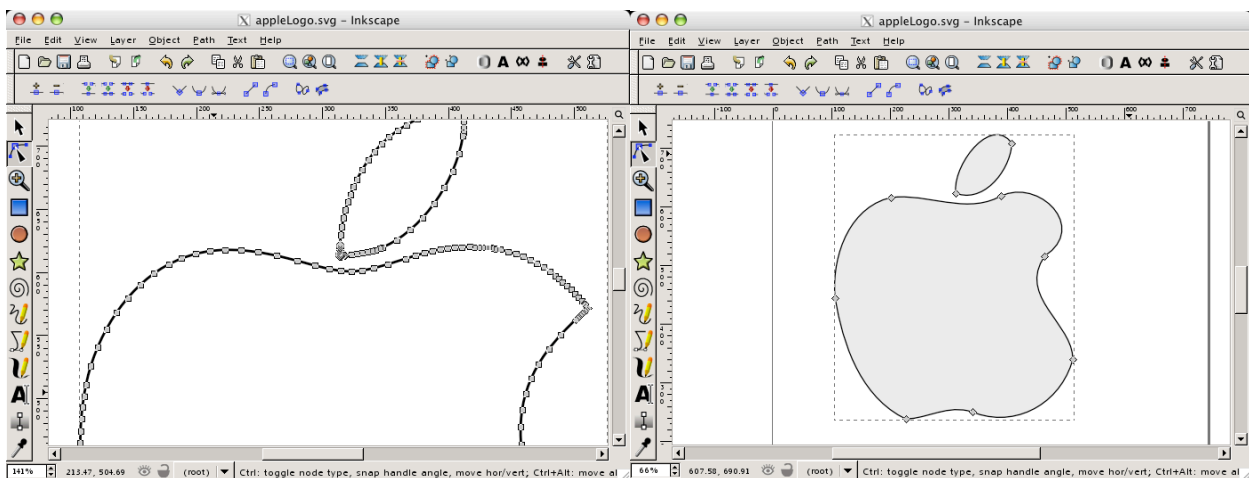
Note: If bitmap tracing does not accurately trace your image, you can adjust the "Brightness Threshold" setting in the to change the output. The "Brightness Threshold" is the cut-off value used for evaluating the pixel intensity. The higher the threshold setting, more pixels will be considered as part of the shape, and the vector tracing will be become darker. See the Tracing Tutorial under the Help Menu for more information.

3. You should end up with two images, one is the original picture and the other is the vector path. Delete the image and keep path.



3. Save the file in SVG format
4. Use svg2key to import the shape into Keynote

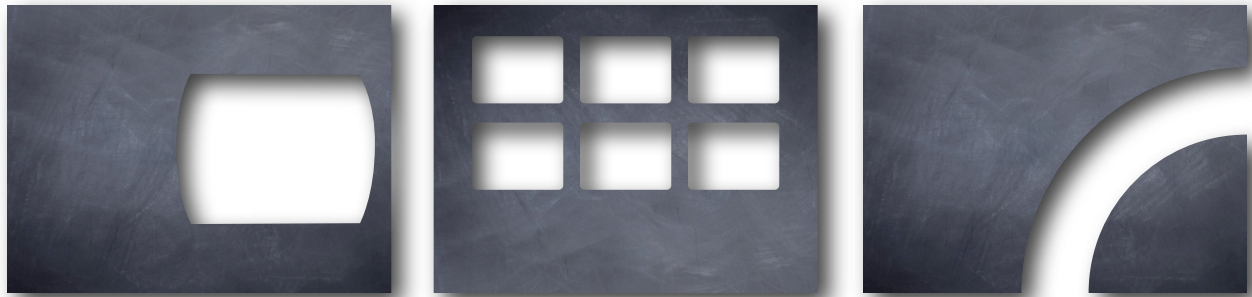
Keep in mind that tracing tools produce an approximate rendering of an image, not an exact replica. You will want to keep your graphic as simple as possible, or in other words have as few points in the path as possible. The more complex the path becomes, the more CPU processing will be required to draw and animate the object later on.



A path with many unnecessary nodes

A path with too few nodes becomes distorted

VIII. Creating Custom Cutouts



A shape cutout has some advantages over a photo cutout. With a shape you can change the image fill, color, resize the cutout and alter the drop shadows without having to go back and forth between Keynote and Photoshop. Because these shapes are scalable, one cutout will work for many different sized presentations. And by using different image fills, one cutout will work for many different themes. Also one image can be used to fill many different cutout shapes, thus reducing the overall size of your presentation.

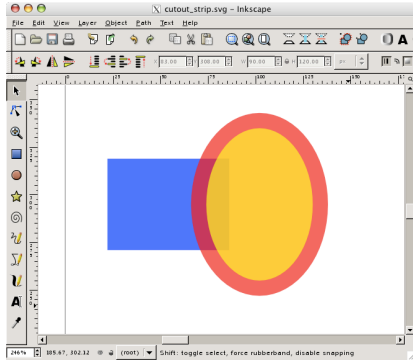
For example I was able to create my own custom cutouts for Keynote's Blackboard theme. I adjusted the size of the cutouts to fill the screen and then filled the shapes with the the Blackboard image. Photos can be placed behind each cutout. If I change my mind and decide to go with another background, I can simply change the shape fill rather than editing a new cutout in Photoshop.

This guide describes creating a cutout in Inkscape, but analogous functions are available in other SVG editors.

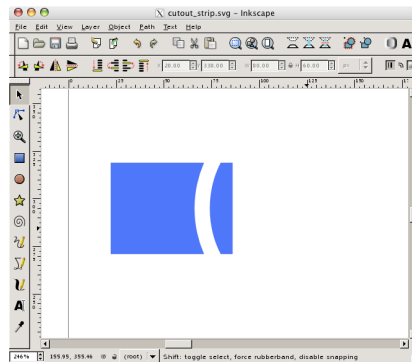
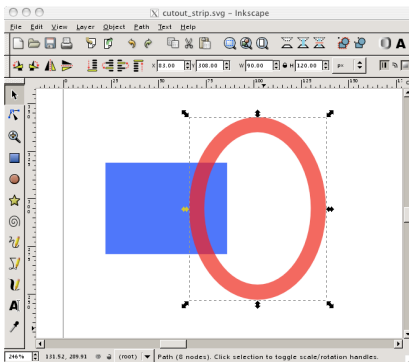
1. Open your graphics editor and draw a rectangle with the dimensions of your slide, in this example 80x60 pix.

Note: the actual size of the rectangle is not important (remember these graphics are scalable), but the ratio of the height and width (aspect ratio) of the rectangle is important. For example the rectangle can be 800x600 or 1024x768 and still work.

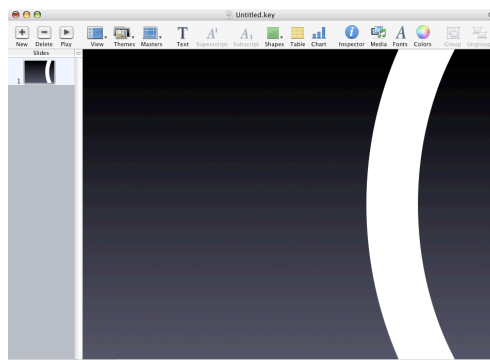
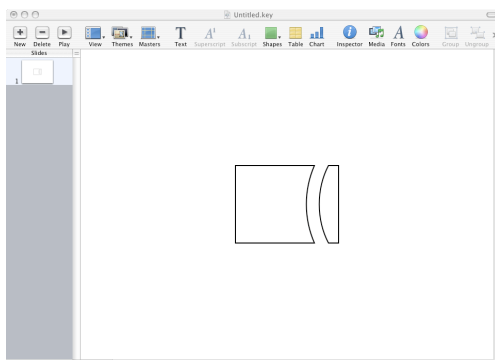
2. Draw the other shapes to create holes in your rectangle. In this example our cutout will be a circular strip at right edge of slide. Draw circle with radius of 80 to 100 pix.
3. Draw second circle with radius 10 to 20 pix smaller.
4. Align both circles by selecting Object>Align and Distribute then select align-center.
5. Position doughnut shape at right of rectangle (align-center with rectangle).
Should look something like this:



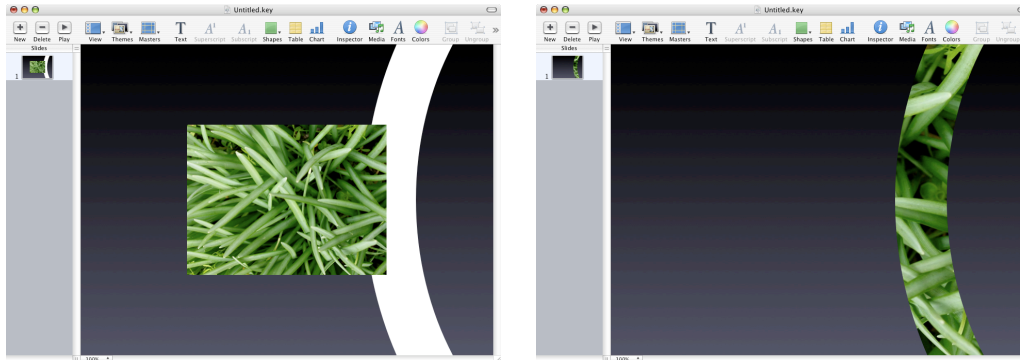
6. Select both oval shapes and then select Path>Difference to subtract smaller circle from the larger, creating a doughnut shape.
7. Subtract doughnut shape from rectangle to get final cutout. Should look something like the figure below.



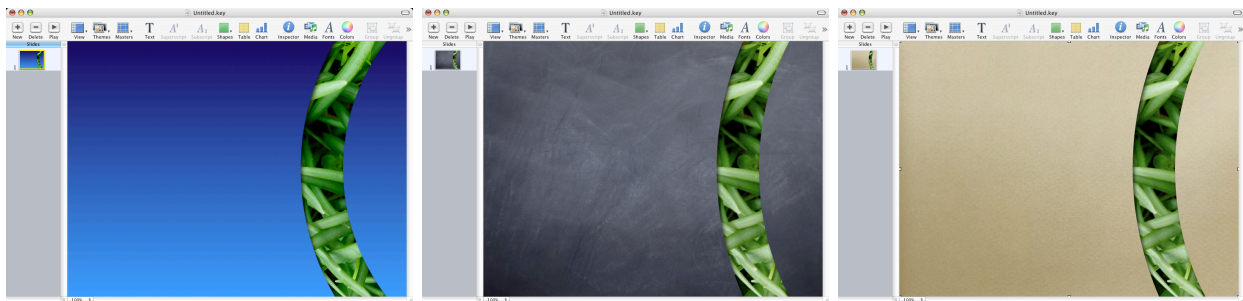
8. Save as SVG (plain settings)
9. In Terminal use `svg2key` to import the shape into Keynote
10. In Keynote apply gradient or image fill
11. Resize the shape to fill the slide (i.e. 800x600)
12. Lock the shape in place by selecting Arrange>Lock



13. Insert the photo for the background. Adjust the size of the photo to fit the cutout. And place behind the cutout by selecting Arrange>Send to Back. Should look something like this:



14. By applying different image fills, one shape can be used for many different cutouts.



IX. FAQ

Should I use SVG or vector PDF?

- By using svg2key to import shapes into Keynote, you can change the fill color, line thickness and color, apply an image fill in Keynote without having to go back and forth between several apps. Using a shape like this reduces the overall file size for your presentation

- However with a vector PDF you can take advantage of special drawing tools not available in Keynote. For example you can apply complex gradient fills, highlights and shadows with a program like Photoshop and export as PDF. However just like a photo this shape cannot be edited once placed in your Keynote slide.

Are there any sources of clip art that I can use?

Yes. Check out www.openclipart.org for royalty-free SVG clip-art files. Please be aware that some of these files will not transfer very well into Keynote because SVG supports several advanced features such as complex gradient shading and animations that are not supported by Keynote. When you visit openclipart.org try to select shapes that have a solid fill color and can be easily merged into a single shape.

X. Acknowledgments

I would like to thank Brian Peat and Ken Drake of keynoteuser.com for many helpful discussions and suggestions. They were kind enough to test an earlier version of this program.

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