



Editing Graphics – with **FREE** software

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Breath Prayer

IN: In Christ...

OUT: ...all things are possible

What is a GIF?

G (graphics) **I** (interchange) **F** (format)

- Pronounced jiff or giff (hard g)
- Limited to 256 colors
- Has the ability to have transparent regions within the image so the background of a web page can show through
- Good for line drawings, logos and illustrations but not very good for photographs.



What is a JPEG?

J (joint) **P** (photographic) **E** (experts) **G** (group)

- named after the committee that defined this image format...
- Pronounced jay-peg
- Supports 16 million colors
- Good for photographs



What is a PNG?

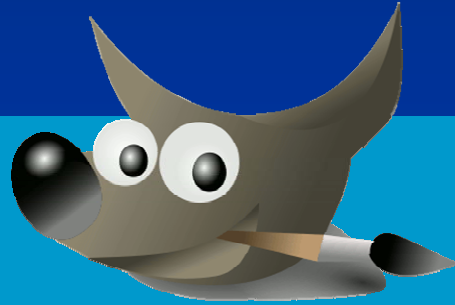
P (portable) **N** (network) **G** (graphic)

- Pronounced P-N-G
- The best of both worlds!
- Scalable text!!!
- Opacity – gradients of transparency
- Created to replace GIF

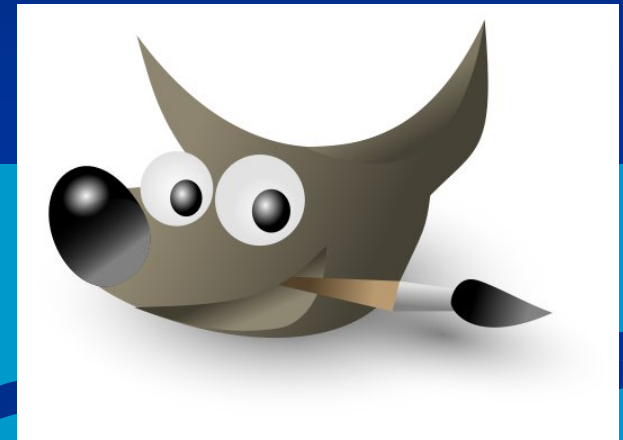
Comparison - shadow



PNG

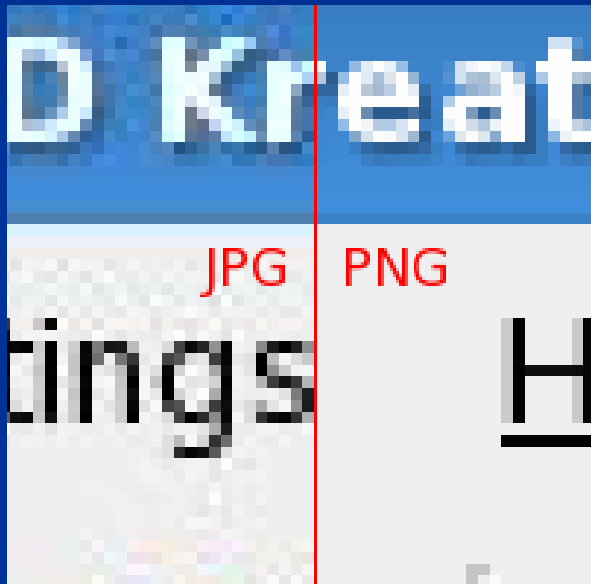


GIF



JPG

More Comparisons



TIFF(for print)

PNG



JPG

GIF

GIMP Demo

- Handout – GIMP concepts
- Handout – GIMP How to

Breath Prayer

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GIMP - What is it?

GIMP is an awesome Open Source (FREE!) graphic editing program.

Popular Open Source software include Firefox, Linux, and Open Office
You can download GIMP (GNU Image Manipulation Program) at www.gimp.org

What is Open Source? To answer this we need a brief history of the Internet.

1958 - Sputnik is launched

1962 - ARPANET (Advanced Research Projects Agency Network - military spending) requested a method to allow 4 universities to share data electronically.

1969 - Data sharing standards are used by several large universities.

1972 - Internet email

1984 - GNU Project - create an operating system entirely from free software. (Trivia: GNU stands for "GNU's Not Unix". This only makes sense to computer geeks).

1986 - NSF (National Science Foundation) sets rules for commercial use of Internet

1993 - Mosaic released - first graphical browser

1995 - Microsoft includes Internet Explorer Browser with it's operating system

1998 - Netscape Navigator - a FREE Internet Browser, runs on multiple operating systems, including Microsoft based systems.

1998 - OSI (Open Source Initiative) created - this group develops standards used to determine if something is "Open Source". First guideline is:

Free Redistribution: the software can be freely given away or sold. (This was intended to encourage sharing and use of the software on a legal basis.)

Basic layout - at first glance you will notice GIMP is different. Each area of functionality appears in a separate window. Also each file you work with has it's own window. You can move these windows to different parts of your screen. Keep your tools on the left, layers on the right and your current image in the center

Layer - Layers are an important concept. Think of it like layers in a cake. Pretend the bottom layer of our cake is chocolate, then we have a layer of strawberry jelly, then a layer of white cake with chocolate chips, finally a layer of vanilla icing. If we look down on the cake, we only see the vanilla frosting layer. If we remove the frosting we'd see the chocolate chip layer. If we slice the cake, we can see all the layers that make up the cake. Here are some things to remember when working with layers

- Each layer can be changed independently from the other layers.
- To view the Layer window, click on Dialogs in your image window and select Layers, drag this window to the right side of your screen so you can find it easily.
- A pasted object is inserted as a layer, you must either Anchor it to the current layer (add it to the existing layer) or create a New Layer containing the new object. Both options are available under the Layers menu in the image window. (Layers->Anchor or Layers->New Layer)
- In the layers window the eye icon indicates the layer is visible. You can click on this icon to hide the layer.

Digital Editing with FREE software

Key-Web Solutions, LLC

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Common things you want to do with digital pictures

1. Rotate the picture - Easiest to do outside of the photo editor.

- Open the folder with the picture(s), View->Thumbnails, right-click on the photo you want to rotate, select the correct direction to rotate the picture.
- To rotate multiple pictures, hold the Ctrl key and click on each picture you want to rotate, right-click on any of the selected pictures and select the correct rotation.

Organization Note:

- Create a folder to store the picture you want to edit.
- Use the View->Filmstrip option to view an larger copy of the picture.
- Copy (right-click->copy) the pictures you want to edit into the new folder.
- Resist the urge to move the pictures into the edit folder, if you copy you can always go back to the original!

3. Crop the background

- Click on the rectangle selection tool (upper left in tool window)
- Click and drag a rectangle around the area you want to keep.
- Locate the 'Image' menu on the top of the main window, then select 'crop to selection'.
(Image->Crop to Selection)

2. Straighten the picture

- Open the crooked picture
- Select View->Show Grid, this will put a grid over the image.
- Double-click the rotate tool (two squares with arrows - looks like it is turning)
- Click on the image and drag until the image is straight
- Crop the photo for a finished look

4. Adjust brightness/contrast

- Tools->Brightness/Contrast.
- Increase Brightness to lighten picture
- Sometimes playing with Contrast also helps to enhance an image

5. Remove red-eye

- Zoom in (magnifying glass tool) so only the eyes are showing
- Double-click on the fuzzy select tool (looks like a magic wand)
- Click on one of the red eyes
- If too little or too much is selected, adjust the Threshold value for the fuzzy select tool (options are found under the tool window)
- Now hold down the Shift key and click on the other red eye
- Both areas to be fixed are now selected.
- To add a few more pixels to help blend the correction, use Select->Grow
- Open the Channels window (Dialogs->Channels)
- Highlight the Red Channel only
- Select Colors->Desaturate, select 'Luminosity',
- Turn other color channels back on
- Zoom out and Select->None

6. Add text

- Click on the big **A** in the tool window
- Click on your image approximately where you would like the text
- Type your text into the window, click Close when done
- Your text will be display. It has been added as a new layer (see layer discussion later on)
- To move the text, make sure the text layer is selected. The select the move tool, click on the text and drag to the desired location
- Click on the text to change font, color, etc. The text options will be displayed in the lower half of the tool window.
- Double-click to change the text

7. Name it something meaningful

File->Save As, locate the folder where you want to save your edited file. Default extension for GIMP is .xcf - this format will store it so you can return to exactly what you were editing

8. Make email (web) or print friendly

File->Save As near the bottom of the save as window there is click on "+ Select File Type (by extension)". Then select the type you want. GIF or PNG for drawings, JPG for photos.

GIF - Graphic Information Format - GIF graphics format is best for images with only a few colors: charts, graphs, or text set as graphics. The fewer colors you use, the more efficient GIF files are. GIF files can contain up to 256 colors.

JPG - Joint Photographic Experts Group - JPG graphics format is best for images with many colors, such as photographs or scanned artwork. JPG files can contain up to 16 million colors.

PNG - Portable Network Graphics - a PNG image has the ability to store opacity information (alpha channel)

Terms

- A bitmap image uses a grid of individual 'dots' called pixels. Each pixel can contain only one color. Most images you use on a compute are bitmap images (made up of pixels).



dpi (dots per inch)/ppi (points per inch), more dots = more detail = bigger file

300 dpi - photo paper on photo printers or professional printing service

120 dpi – Newsletters printed at office or at home

72 dpi – for viewing on computer screens, web and email

- Alpha channel - is used to make some thing visible (100%) or invisible (0%). Use a number between 0-100 and the object becomes translucent, the great the number the less you can see through it.
- Channels - Red, Green and Blue. Channels can be edited individually or all together as well by tones.
- Flatten - Compresses all layers of a file into a single layer.
- History shows each change made to the images. It also allows you to undo several editing steps at once.

Tips

- Dime test - Lay a dime over faces in your newsletter pictures to make sure they are big enough to see.
- Add text to images when you want the text re-sizable with the image. Text that is part of the image can not be picked up by search engines. Make sure you add alternate text if you add the image to a web page.

Common Editing Techniques

- Mask - Allows only part of an image to be visible (just like a mask you wear shows only your eyes). To create a layer mask:
 1. In the layers window, click on the layer you want to mask
 2. Right-click on the layer, select 'Add Layer Mask'
 3. Select Black (full transparency). Your image will no longer be visible, you will see a grey & white checkerboard
 4. In the Tools window, select the paint brush (large brush)
 5. Make sure the foreground is set to white and the background is set to black
 6. Now paint over the parts of the image you want to show through
 7. Increase view % (located lower left of image window) to help fine tune your edges
 8. Swap foreground and background colors to remove unwanted background
 9. Select a smaller size brush to help with detail
- Oval Select (vignette)
 1. Select the oval selection tool on the tools menu (next to rectangle tool)
 2. Click and drag an oval around the area you want
 3. On the image window click on the Select menu
 4. Click on Invert (Select->Invert)
 5. If you want a fuzzy edge, Select->Feather, set to ~20
 6. Press the delete key (or Edit->Cut)
 7. Image->Autocrop Image

Other Fun Editing Techniques

- Cool Text Effects - a quick way to make cool text effect is to use the built-in Logo tool under the Xtns menu in the tools window (Xtns->Logo)
- Bulgy Eye Effect - select the area of the image you want to distort. On the image window, select Filters->Distorts->Whirl and Pinch. Set Whirl Angle to 0 and Pinch amount to -1. Repeat the effect two or three times
- Create animations using layers. To preview your animation select Filters->Animation->Playback. Remember to save your image as type GIF and "save as animation" (do not flatten the image!). If you use the predefined animation effects under Filters->Animation remember to not create too many frames (no more than 20) otherwise you may lock up your computer or produce a really large file!

Have fun and save often!