

# **GIMP** Demystified

*by*

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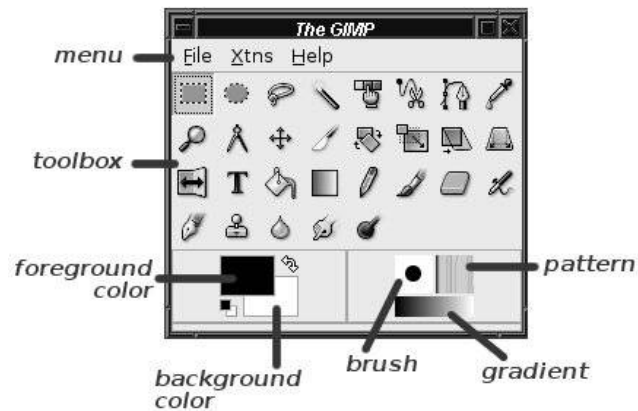
*akkana@gimpbook.com*

*http://gimpbook.com*

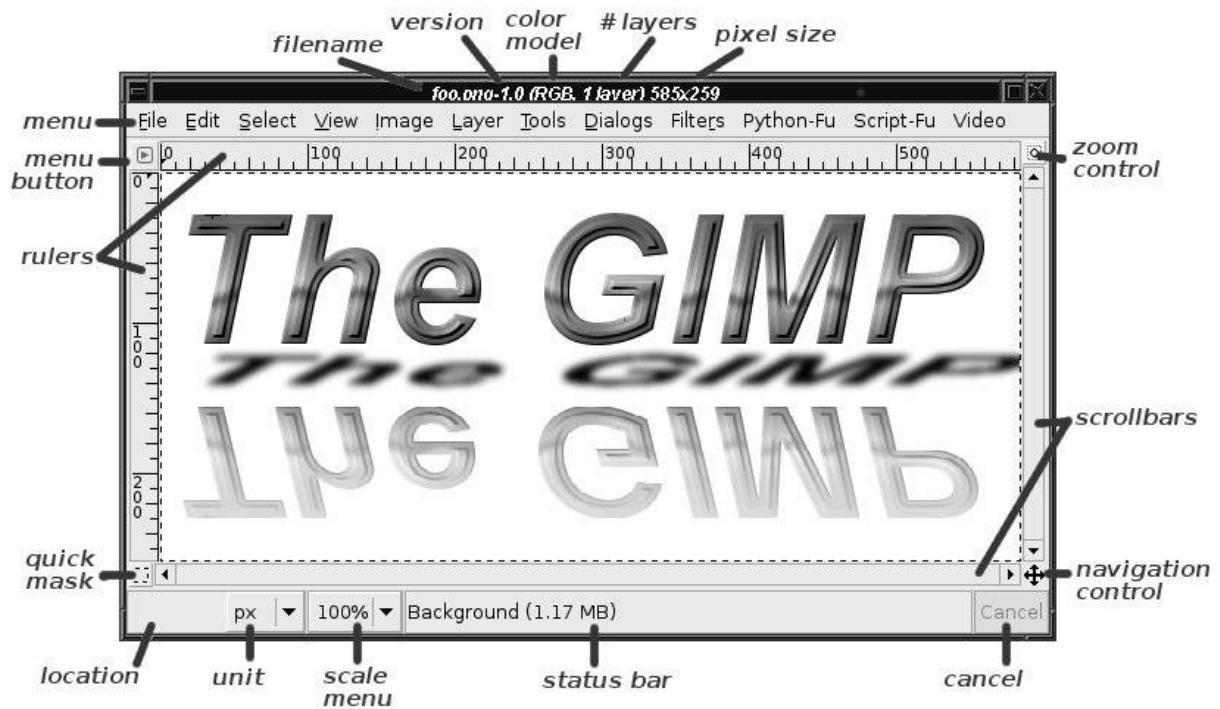
a tutorial for  
**OSCON 2008**

# GIMP Windows

## Toolbox window

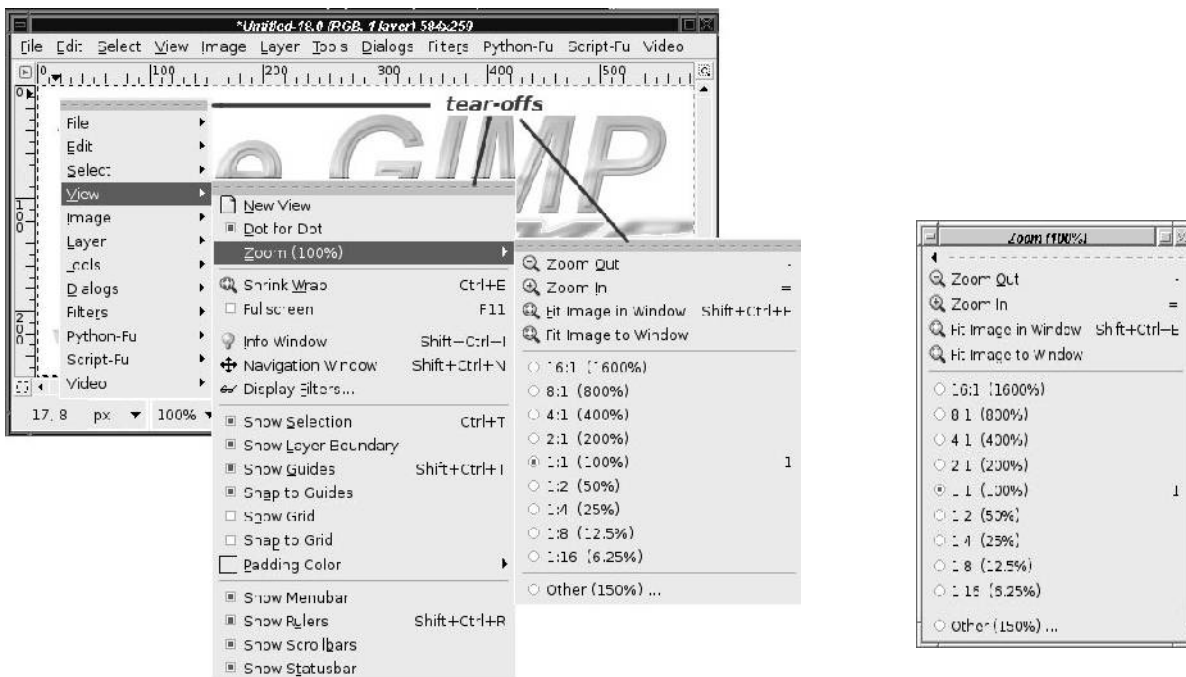


## Image windows



## Some UI Tips

### *Tear-off menus*



### *Dynamic key bindings:*

In Preferences, go to *Interface* and enable *Use dynamic keyboard shortcuts*.

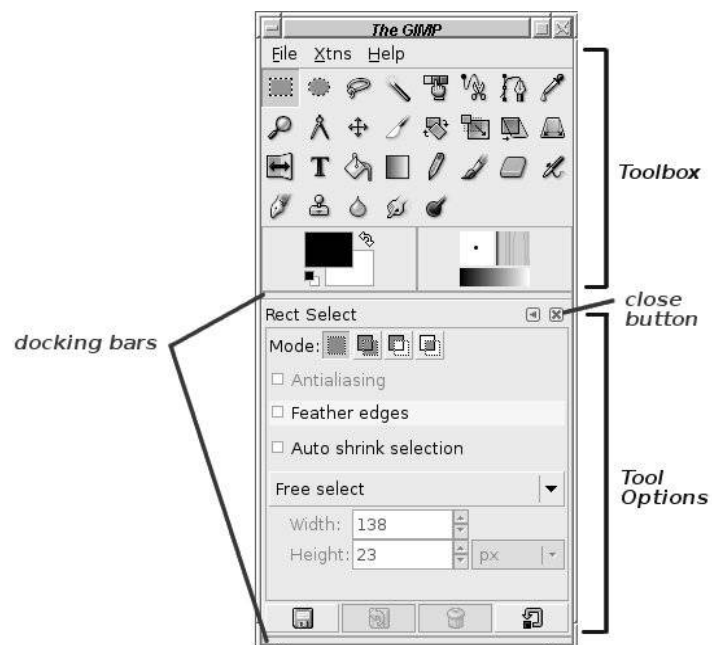
Then find a function anywhere in the menus, hover over it and type the key. Instant new key binding!

## Dialog Docking



Nearly any GIMP dialog can be docked with any other.

Drag from the drag handle (shown above) to the docking bars in an existing dialog (shown at right).



## **Basic Photo Manipulation**

### ***Rotate by multiples of 90°***

*Image->Transform* menu

### ***Crop***

Crop tool

*Image->Crop to Selection*

### ***Scale***

*Image->Scale*

*Layer->Scale*

Scale tool

### ***Free Rotate***

Rotate tool

## Common Image formats

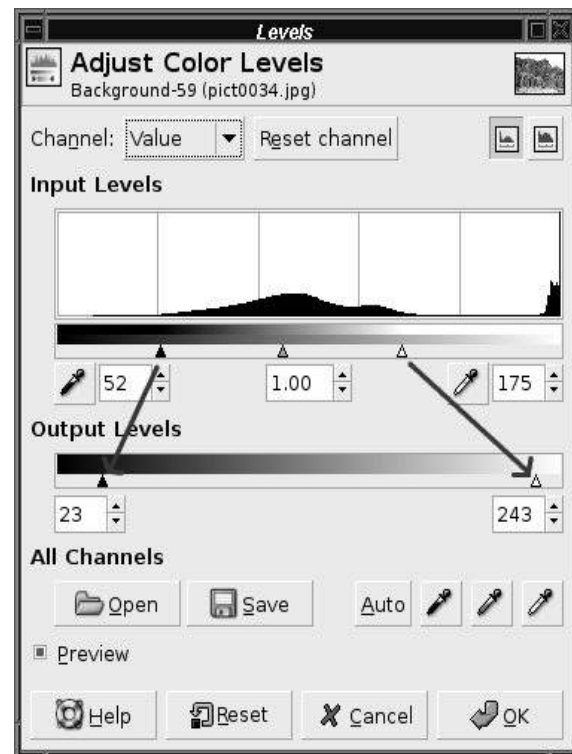
Format	Good for	Bad for
JPG (.jpg, .jpeg)	Full color photographs	Preserving data (compression is lossy)
GIF (.gif)	Corporate logos with few colors; transparency; animations	Full color photographs
Full-color PNG (.png)	Archiving photos, no loss Full color with transparency	Web; anything requiring small size
Indexed PNG (.png)	Logos with few colors & transparency	Web (IE compatibility issues)
XCF (.xcf, .xcf.gz, .xcf.bz2) GIMP native format	Saving a project with layers, masks, etc.	Web; anything that requires small size.
TIFF (.tif, .tiff)	Archiving photos	Broad compatibility (different programs may use different subsets)
RAW	Importing from digital cameras (use ufraw plug-in)	Anything else
ICO	“favicons”, Windows progs	Anything else
BMP	Windows progs & wallpaper	Anything else
PS/PDF	Vector drawing	Raster graphics
SVG	Vector drawing; GIMP Paths	Raster graphics
PSD (Photoshop)	Importing from old Photoshop images (new ones may not work)	Portability
PCD (PhotoCD)	Importing from PhotoCD	Size, portability

## Levels

Extremes of input range  
get mapped to output range.

Generally, only Input Levels  
are worth adjusting.

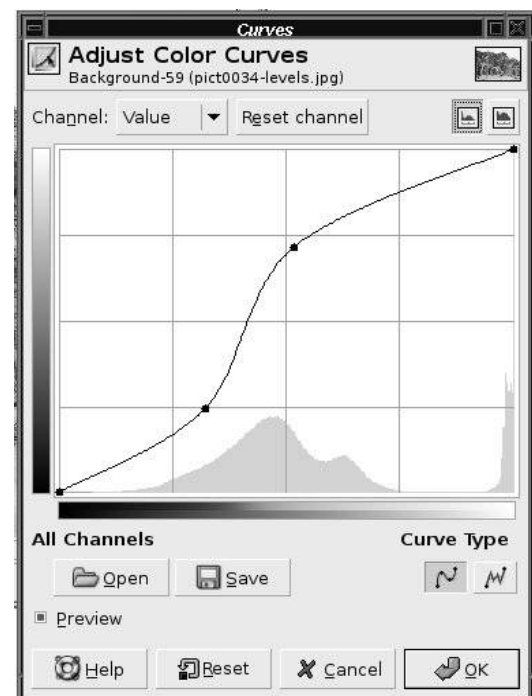
*Auto* eyedroppers to choose  
black point, grey point (gamma)  
and white point.



## Curves

“Lights” at upper right, “darks” at lower left.

Fiddle with curve until the image  
looks right. Play around.



## Basic Selection

### *Rectangular / Elliptical selection*

Resize handles

“Confirmed” selections

Selection modes (add, subtract, intersect)

### *Other useful selection tools*

Select by color, Fuzzy select (contiguous regions),

Bezier Paths, Intelligent Scissors, SIOX (select foreground objects).

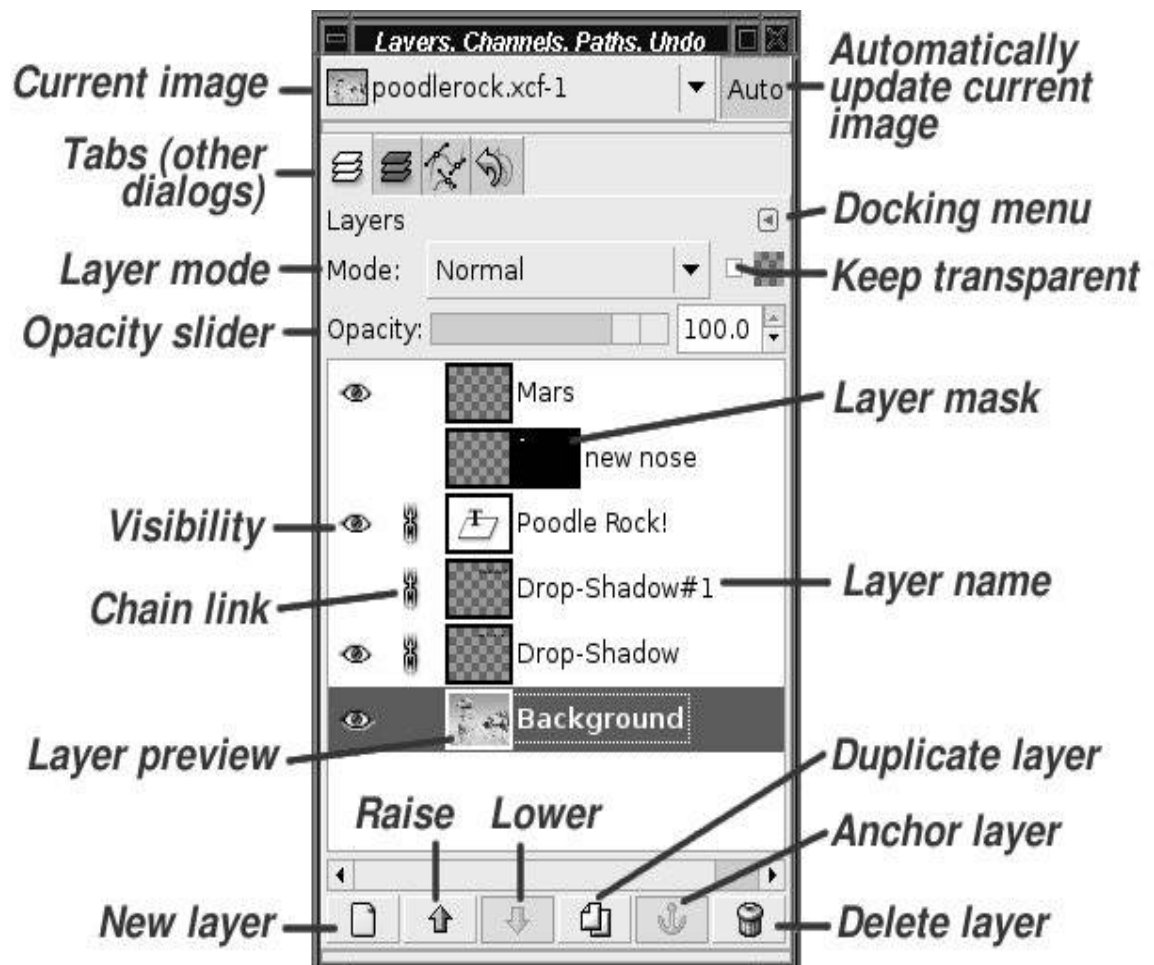
### **Quickmask**

Make an approximate selection somehow (by color, fuzzy, lasso, etc.) then invoke the QuickMask to refine the selection. Paint while zoomed in.



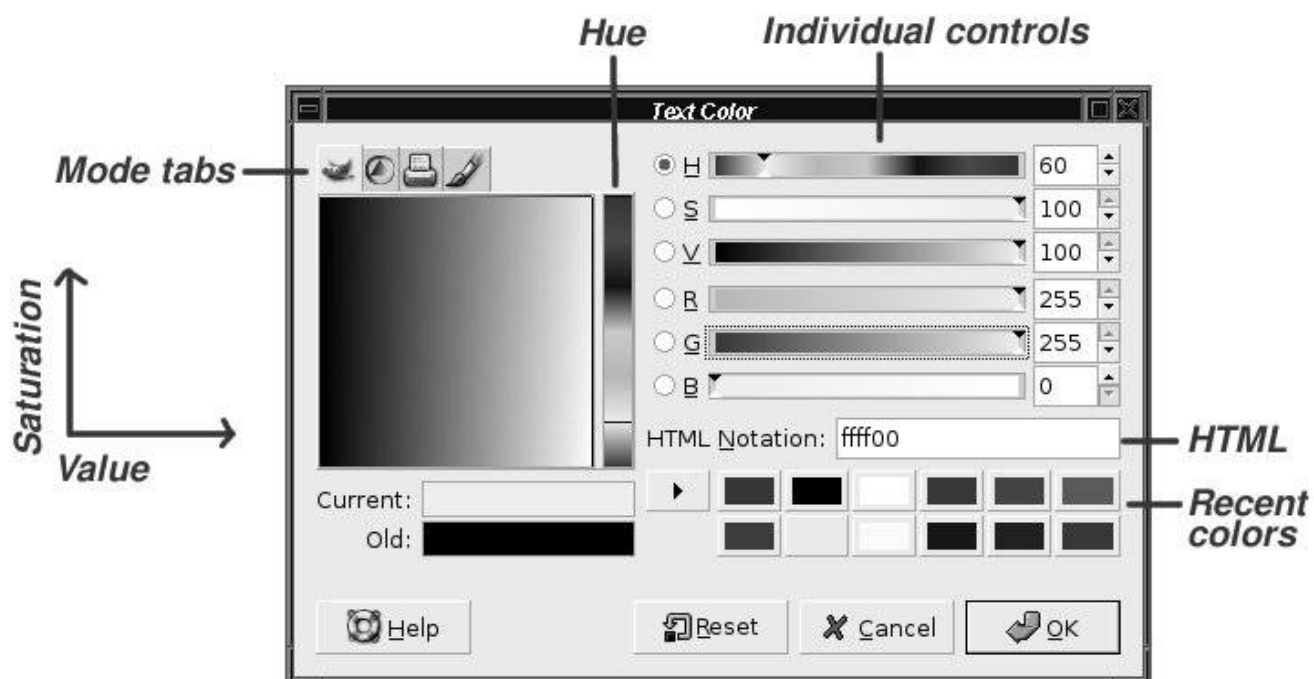


## The Layers Dialog



## Color Chooser

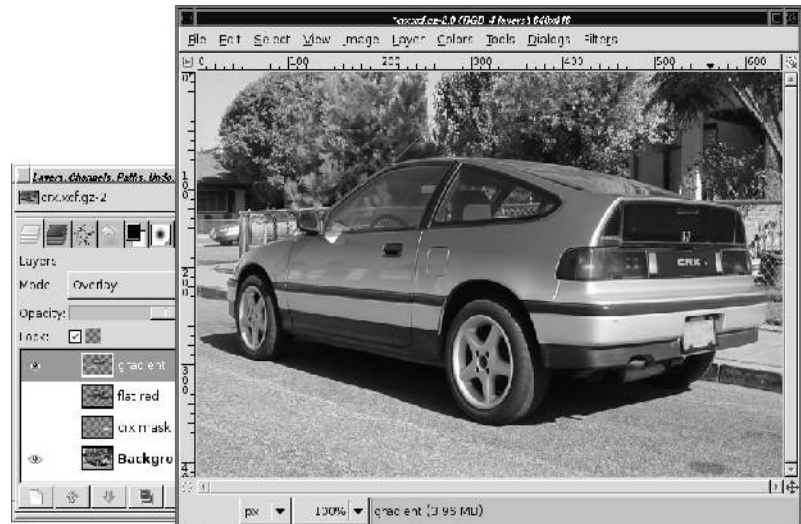
GIMP's default color chooser uses HSV:



## Layer Modes

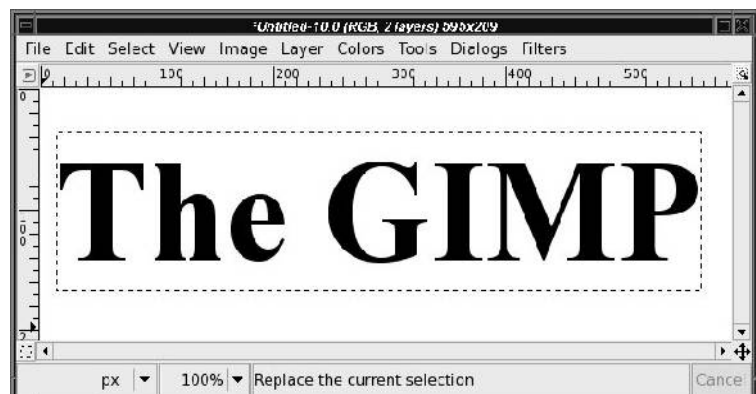
Use for combining or comparing two images, for enhancing a single image (e.g. increasing contrast), or for adding colors or patterns.

Use Up/Down arrows to step through each mode (after clicking on the Mode menu) to see which ones work best.



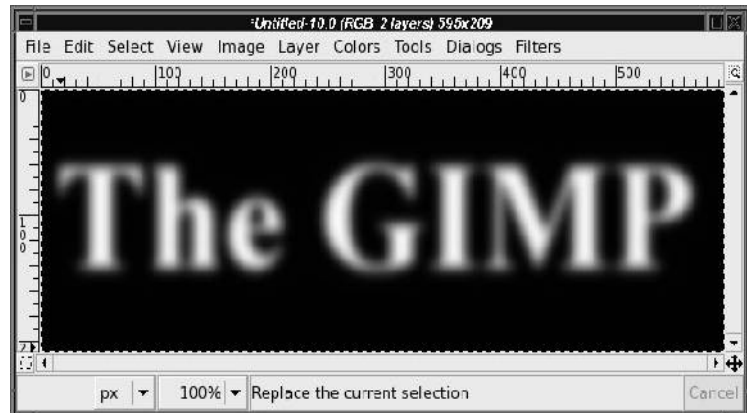
## Making 3-D glass letters with layer modes

1. Start with black text on white (merged together in one layer).



### 3-D glass letters with layer modes, cont.

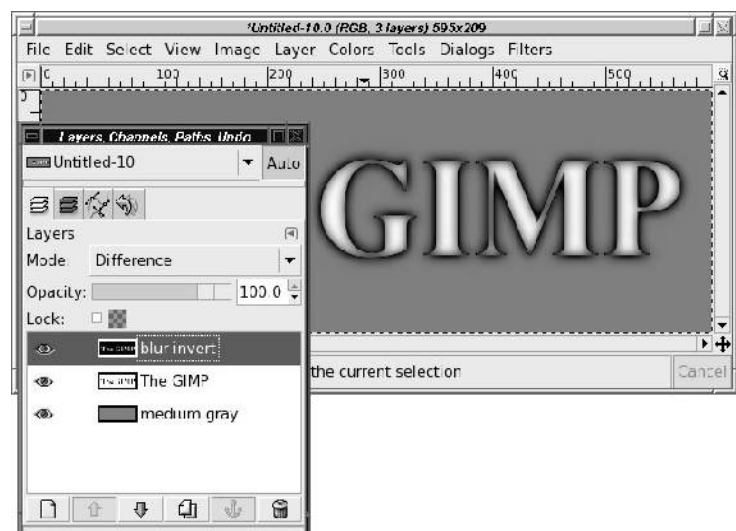
2. Duplicate the layer, and blur and invert the copy.



3. Make a medium gray layer as the bottom layer, and set the black-on-white layer to Multiply mode.



4. Set the top (blurred/inverted text) layer to Difference mode. (Drag the top layer around to see how the effect changes.)
5. Optionally, add a color layer on top in Overlay or Darken only mode.



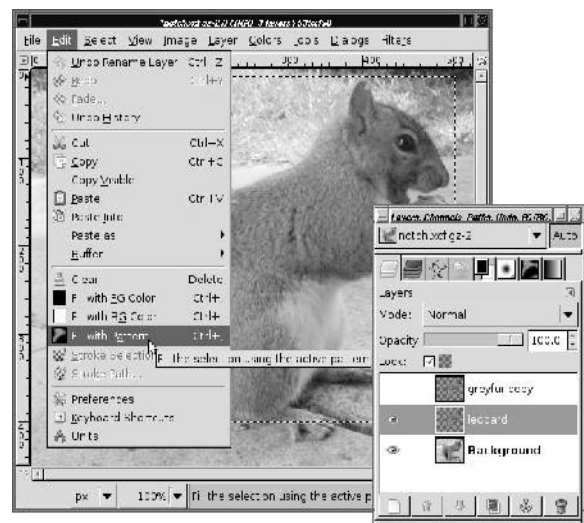
## Grain extract/merge modes for patterns (“healing”)

GIMP 2.4 added a “healing brush”, but it’s hard to use. You can combine colors, patterns and texture better by using the special layer modes called *Grain extract* and *Grain merge*.

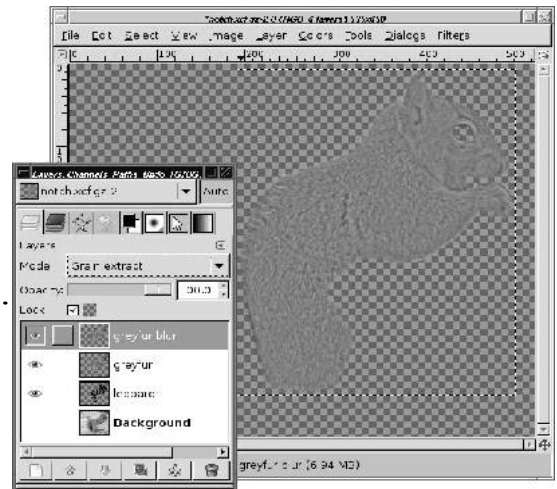
1. Start with an image, and select the part you want to change (here, the gray fur).
2. Copy then Paste to get a layer consisting of only the fur.
3. *Duplicate* the layer (now you have two copies of just the fur). Make the top copy invisible.



4. In the lower copy, enable *Lock alpha* in the Layers dialog.
5. Fill the lower copy with your pattern.
6. Try different layer modes (*Overlay* works well for the squirrel).
7. Make the top fur copy visible again, and make the Background and pattern layers invisible.



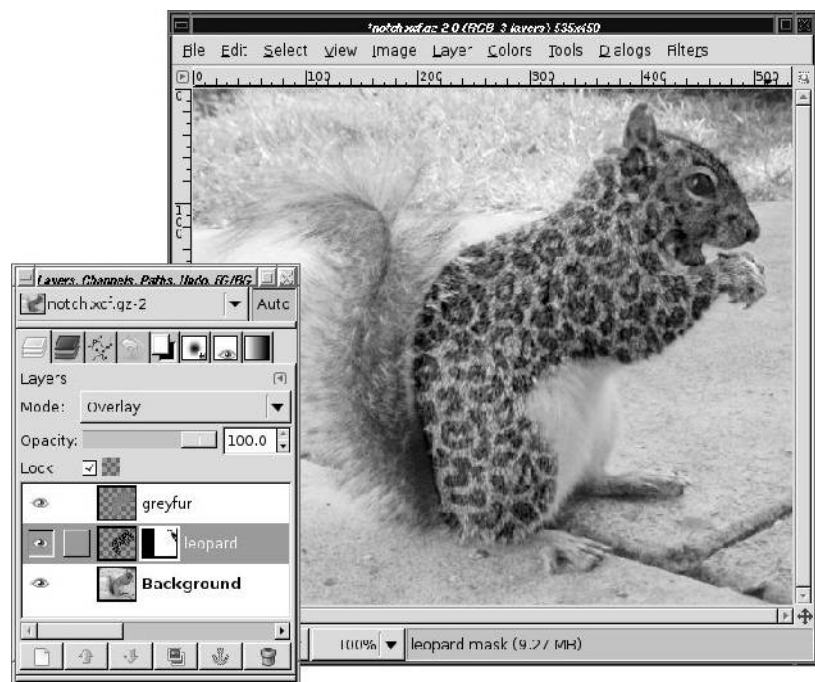
8. Make another copy of the fur (top layer).
9. Blur the topmost copy until you can't see any fur texture in it.
10. Set the blurred layer to *Grain extract* mode.
11. Merge the blur layer with the fur layer beneath it.



12. Set this combined layer to Grain merge mode.
13. Adjust to taste.

Add a duplicate of the combined texture layer to add more texture, or reduce the layer's Opacity for less texture.

Use a layer mask to eliminate or reduce the effect in places where it stands out too much (like the face).



## Layer Masks

Don't confuse Layer *Masks* with Layer *Modes*.

A Layer mask specifies which part of the layer is visible:

white = visible, black = hidden, gray = partially visible.

Use layer masks to make one layer seem to “hide” behind another one (like the “j” hooking under the “m” at right) or when you need to make one layer fade / blend into another.



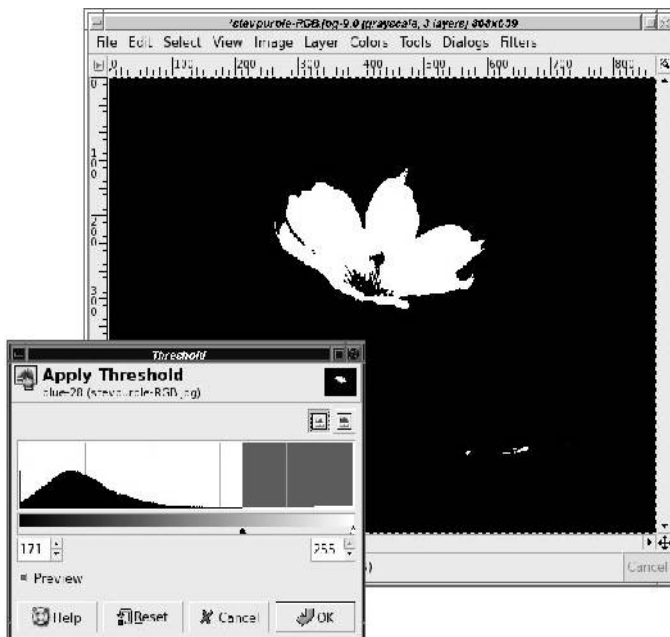
## Selection by Decomposition

Use *Colors->Decompose* for selecting otherwise difficult objects.

Try RGB and/or HSV, depending on the image.

Use whatever channel works best to isolate the object you're trying to select.

(For bright skies, try Value;  
for getting sky minus clouds,  
try Saturation; for flowers,  
Red or Blue usually works best.)



Then use *Colors->Threshold*  
(or *Levels* or *Curves*, to get  
smoother edges)  
to isolate the object.

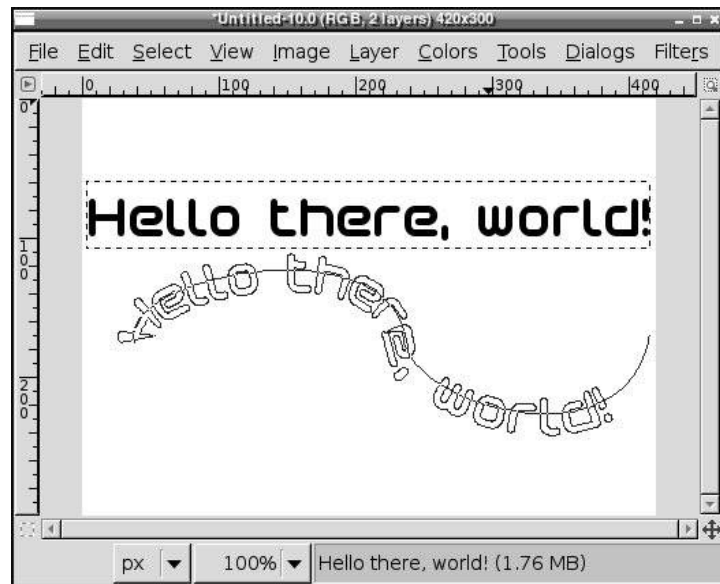
Clean up (with paintbrush, etc.)  
and paste into Quickmask  
or layer mask.



## Fun Stuff

### **Text Along Path:**

1. Define the path  
(Paths tool)
2. Create the text layer  
(in Text tool)
3. Click Text along path  
(in Text tool options)
4. In Paths dialog, click  
*Path to selection*  
(red square)
5. Fill, stroke or otherwise  
use the selection.



### **Other ways of bending text:**

*Filters->Distorts->Curve Bend*

*Logos->Text Circle*

### **Other Fun Plug-ins:**

IWarp

Bump Map

Displace/Warp

Xach effect

Canvas/Glass tile/Weave

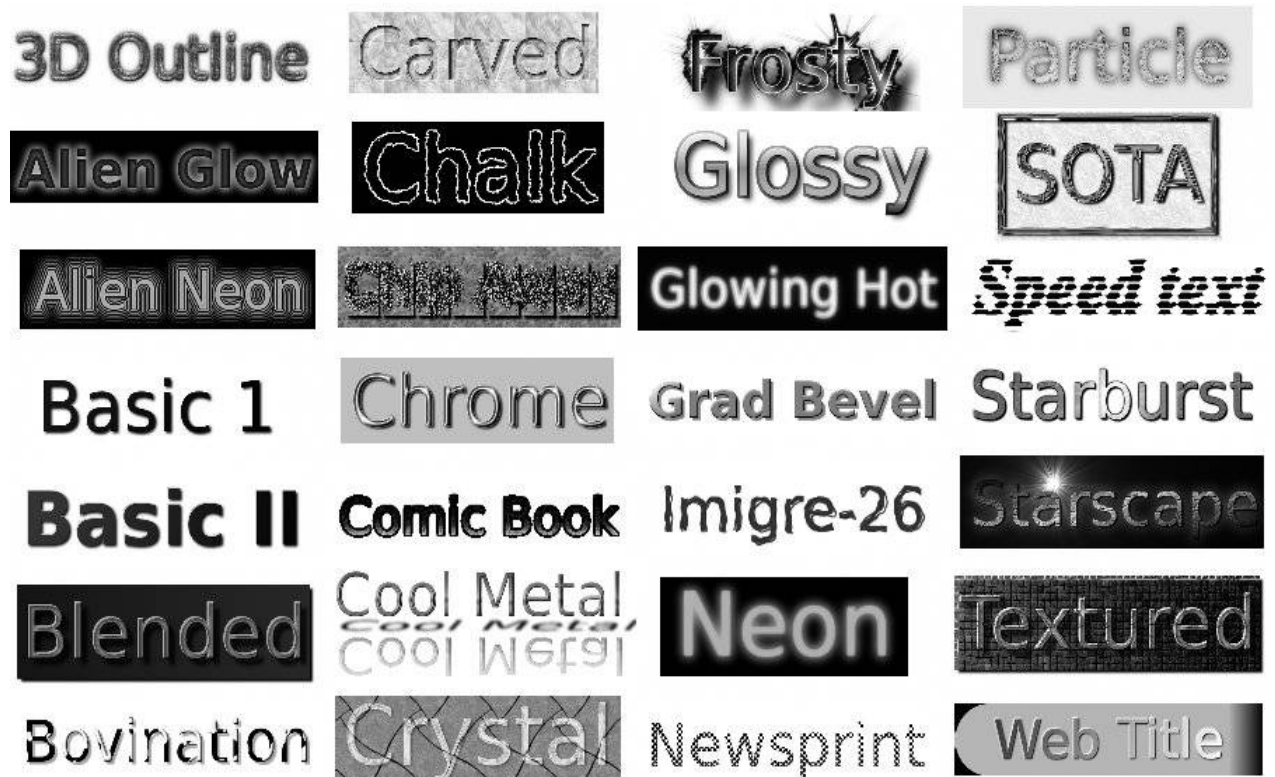
GIMPressionist

Page curl

Flare/Sparkle

## Logo Scripts

Run on existing text or layer from *Filters->Alpha to Logo*  
or run from Xtns->Logos (specifying text, font and size)  
to create a new image.



## **Finding GIMP Information**

### ***Xtns->Plug-in Browser***

Find plug-ins by their names (pattern matching).

### ***Xtns->Procedure Browser***

Used more for writing scripts/plug-ins:  
find built-in routines you can call.

### ***<http://docs.gimp.org>***

Online GIMP manual.

### ***Tutorials***

*<http://gimp.org/tutorials>*

*<http://www.wingimp.org/tutorial/>*

*<http://gimpguru.org/>*

*<http://gimp-tutorials.net/>*

*<http://gug.sunsite.dk/?page=tutorials>*

... lots more, see *<http://gimpbook.com/links.html>*

### ***Don't forget to have fun!***

... Akkana Peck

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