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From: Robert Kieffer <kieffer@lighthouse.com>
Date: Mon, 16 Jan 95 11:02:18 -0800
To: next-icon@gun.com
Subject: Image Curator + Thumbnailing Technique (Was "Is there a utility...")
X-Diagnostic: Not on the accept list
X-Envelope-To: next-icon

Hi Folks,

I've got a couple of things I'd like to cover here... not the least of which is a shameless plug for Gemstone Systems and Image Curator.

First of all, I once again find myself thanking Alex for some great product pushing. Thanks, Alex!

Image Curator and Gemstone are both alive and well. Image Curator is still available and will hopefully be turning tri(quad?)-fat someday soon. If you're curious, the following is the Image Curator drop sheet:

ImageCuratorDropSheet.txt ¬(ImageCuratorDropSheet.txt)

A demo version of Image Curator is available at:

[ftp.stepwise.com:/pub/Vendors/Gemstone_Systems_Inc](ftp://stepwise.com/pub/Vendors/Gemstone_Systems_Inc)

[ftp.cs.orst.edu:/pub/next/demos/graphics/ImageCuratorDemo.tar.gz](ftp://cs.orst.edu/pub/next/demos/graphics/ImageCuratorDemo.tar.gz)

For more information about Gemstone, Image Curator, or the Emerald Image Tool, Gemstone's high-end, large-scale, image processing app, please contact Gemstone at:

Gemstone Systems, Inc.

19616 Redbeam Avenue

Torrance, CA 90503

310-370-4557

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Having subjected you to that product plug, let me offset it by sharing one of my favorite techniques for

manually creating very high quality thumbnails. This technique is similar to the one used by Image Curator and I think you'll find that it works quite well... although it is a little tedious... and Image Curator would do this for you automatically... if you had a copy... hint, hint. :-)

All right, the basic idea here is that we'd like to resize the image by averaging since this maintains the correct color distribution and avoids introducing artifacts. Unfortunately one byproduct of averaging is that the result is smoothed. So to counteract this we apply an edge-enhancement. The edge-enhance operation, on the other hand, usually ends up being too severe. To balance these two processes we use transparency and the composite operations to combine some fraction of the sharpened version with the averaged version.

The steps:

1. Get an image processing tool that lets you do sharpening and resizing by averaging. I recommend WetPaint. The italicized comments are how each step would be accomplished in WetPaint.
2. Open the image you want to resize.
paste.tiff ↵ (The original image)
3. Resize-average the image to the thumbnail size that you want and create two versions of the resulting

thumbnail.

Select All. Open the Filters panel and select the Anti-alias filter (The B/W letter 'A'). Select the reduction factor and 'Apply All'. This should give you nice thumbnail. Hit Cmd-'x' to cut and Cmd-shift-V twice to create two images from the pasteboard.

457622_paste.tiff ¬(thumbnail 1) 497309_paste.tiff ¬ (thumbnail 2)

4. Sharpen (edge-enhance) one of the thumbnails.

Select All. In the Filters panel select the matrix filter. Select the 'Edge-Enhance' function. Make sure the 'difference' radio button is selected, not 'average', for operation. Also make sure you use the 'copy' composite operator to place the selection back into the image.

306481_paste.tiff ¬(thumbnail 1 - sharpened. Note the features are too severe)

5. Halve the opacity in the sharpened image.

Set the composite operator to 'Din' (data in), Select the Fill tool and max out the tolerance at 255. Using any color with a 50% opacity setting, click in the sharpened image.

164958_paste.tiff ¬(thumbnail 1 - sharpened, 50% opacity)

6. Combine the averaged thumbnail and the sharpened thumbnail.

Using the 'Sover' composite operator, paste the sharpened/transparent image over the other, unaltered, thumbnail image.

Now, ugliness of the original image aside ;-), if you've done everthing right, this should have produced a nice, slightly sharpened, thumbnail version of your original image. You can adjust the amount of sharpening by altering the level of opacity you add/remove to the sharpened thumbnail.

823177_paste.tiff ¬(thumbnail 1 Sover thumnail 2, the final product.)
... and for comparison purposes...
265087_paste.tiff ¬(Resize by average, only)
19806_paste.tiff ¬(Resize by subsample, only)

By the way, in retribution for Alex posting the above, unauthorized, image of me, here's one of him taken later that evening:

kieffer.tiff ¬

(Actually, it's just my mail tiff :-)

Cheers, and happy thumbnailing!

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