

NeXT-Icon Frequently Asked Questions

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Q. What is the NeXT-icon e-mail list for?

Q. What do I need to participate?

Q. Where can I get list archives?

Q. How do I subscribe/unsubscribe?, etc.

A. All those and similar questions are answered in the subscription notification message that everyone receives upon joining the list.

NeXT-icon@gun.com Subscription Notification

Welcome to the NeXT-icon e-mail list! This message is being sent to you as receipt of your subscription request, and contains lots of important information that you must read and understand about the special requirements of the NeXT-icon@gun.com e-mail list.

For your verification, a copy of the original subscription request is included below.

How to unsubscribe

If you find yourself subscribed to NeXT-icon@gun.com and don't want to be, send a message with the subject 'unsubscribe' to NeXT-icon-request@gun.com. **Note: Do not** send unsubscription requests or administrative questions to NeXT-icon@gun.com.

NeXT-icon is a mailing list dedicated to the distribution of mail pictures, application and document icons, and cutting-edge .dir.tiff images. All messages posted to the list are NEXTSTEP-compatible multimedia mail format. You must have a NEXTSTEP-compatible mail reader in order to participate in this list. Unsubscribe now if you do not have a NEXTSTEP-compatible mail reader.

NeXT-icon accepts the following type of messages:

- 48 x 48 pixel application and document icons.
- 48 x 48 pixel .dir.tiff and .opendir.tiff images.

- 64 x 64 pixel mail pictures.
- Tricks and tips related to creating icon images on NEXTSTEP-compatible operating systems.
- Software reviews and recommendations that make creating NEXTSTEP icons easier.
- New product announcements.

Submissions to NeXT-icon may be color or black-and-white images of any pixel depth, and either compressed or uncompressed format. Please give each image a descriptive file name before you send them, so people don't inadvertently lose their own .dir.tiffs.

Take care to follow our guidelines; ignoring them will get you automatically unsubscribed from the list.

Please...

- DO NOT subscribe to this list if occasionally-frivolous NeXTmail irritates you.
- DO NOT send nextlogin.tiff panels, sounds, or any very large images.

You may reach NeXT-icon through the following e-mail addresses:

Submissions go to to:
NeXT-icon@gun.com

Administrative requests go to:
NeXT-icon-request@gun.com

Archives of this mailing list are included in **Skylee Press' Big Green CD** <info@skylee.com> at a relatively nominal cost. Free archives are also available on the **Internet** at
ftp://ftp.cs.orst.edu:/software/NeXT/graphics/next-icon@gun.com.tar.gz

This list is self-moderated. Each message goes to lots of people around the world. Please do not abuse this privilege and force formal

moderation of the list. All requests to add, change, or delete your address, or any other question regarding administrative services, should be addressed to `NeXT-icon-request@gun.com`. If NeXT-icon mail bounces to you, our administrative software will immediately and silently delete your name from the list. You may resubscribe if you suspect that your subscription has been deleted.

Those without NeXTmail may decode NeXTmail-format messages by copying the entire message to a file, opening a Terminal window, and running:

```
uudecode filename | uncompress -c | tar xvf -
```

If you have GNU tar, then you may execute the following:

```
uudecode filename | gnutar xvzf -
```

The text of the message will be in Rich Text format file `index.rtf`. Attachments will be in their own directories.

Supporters

This list would not exist without the time and services of its supporters. This list is administered by **Timothy Reed of Black Market Technologies, Inc.** in Brooklyn, New York as a free service to the world-wide NeXT community, and is completely unrelated to totally cool and reasonably priced NEXTSTEP and Solaris administrative products that Black Market makes and sells. Contact `info@bmt.gun.com` for more information about their software.

NeXT-icon is also supported by **Gotham Users of NeXT, Inc.**, the New York City NeXT Users Group. GUN encourages members' contribution of time and facilities to expand electronic services to dues-paying members and the world-wide community. Contact `info@gun.com` for more information.

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live with that, send a message to `next-icon-request@gun.com` and unsubscribe now.

That said, enjoy!

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Co-founder, Gotham Users of NeXT, Inc. (GUN)

Written documentation is an admission of failure.

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Q. How do I change a folder's icon in the NEXTSTEP File Viewer?

A. Save a TIFF image created with any popular drawing package (Icon.app, IconBuilder.app, Draw) under the name **.dir.tiff**. Change the "open folder" icon by saving a TIFF image as **.opendir.tiff**.

You will get best results if you make sure that the image is exactly square. Keep in mind that the image you create ultimately gets scaled down in size by the File Viewer to 48 by 48 pixels if it is larger. If you work with large images only, not that some don't scale down well.

Q. What are the dimensions of a folder icon?

A. Folder icons are 48 pixels high by 48 across.

Q. What are the dimensions of a mail icon?

A. Mail icons are 64 pixels high by 64 across.

Q. I have a monochrome monitor. Can I only use monochrome icons?

A. No, you can use either color or monochrome icons. In fact, many NEXTSTEP images and icons have both monochrome and color representations of the same image.

Q. How do I get Mail pictures to appear in the Mail application?

A. The first part of this answer is from NeXT Answers, followed by a posting from the list.

4. The Picture Database

To permit Mail to display the pictures of users in mailboxes windows and the Addresses panel, you need to create a database of user pictures. The picture database is a directory of TIFF files, where the name of each picture file is the name of the user who is associated the picture (plus a ^a.tiff^o extension.) The directory for the picture database is **/LocalLibrary/Images/People**, the same directory that you use for setting up the addresses data files **passwd** and **aliases** (see the ^aAddresses^o section).

The TIFF files should be a 64-by-64-pixel image, preferably stored with two bits per pixel. The pictures should probably be digitized with a scanner, although you can use the Icon demo application to draw your own pictures.

Here is an abbreviated example of how the files should appear in the **People** directory:

```
# passwd file
tom::34:::/bin/csh
dick::35:::/bin/csh
harry::36:::/bin/csh
```

```
# aliases file
Tom_Smith: tom
Dick_Jones: dick
Harry_Lane: harry
```

```
# tiff files in /LocalLibrary/Images/People
tom.tiff
dick.tiff
harry.tiff
```

End of section

One administrator I know actually adds this information to his /users and /aliases netinfo databases, and dumps them nightly directly to file and runs mailDBupdate. If you do this, make sure that you comment out the password fields to make break-ins more difficult.

For pictures of people outside your local network:

- Name the TIFF file after the address attached to mail *you send*. If your e-mail attaches a UUCP bang-format return address, then there's not much you can do besides naming it 'hostname!yourname.tiff' and letting the rest of us relative-ize it. To test the return address, send yourself e-mail through some machine outside your network and check the From: address.
- Make sure that the image is 64 x 64 pixels. 48 x 48 (commonly used for .dir.tiffs) is too small, and doesn't cover up the image left by the previous message you read.
- Include a line from your /LocalLibrary/Images/People/passwd file for your image (see below for the format). If your return address is UUCP bang-format, then the rest of us will have to relative-ize this address as well. Replace the second field (your encrypted password) with an '*' - to preserve the health and security of your computer *do not* include the actual contents of that second field. If you're directly on the internet, *do not* include your actual UID, GID, home directory, or shell either. See below for more details.

Attached is treed@bmt.gun.com.tiff. To get my bright, shining face whenever you get mail from me, do the following:

- Copy the TIFF file to /LocalLibrary/Images/People.

The name of the file should match the from address in mail I send - usually treed@bmt.gun.com - the only part of the From: address you should be concerned with is what appears within the '<>'.

· Add the following line to the aliases file in that directory:

```
treed@bmt.gun.com:*:200:200:Timothy  
Reed:/nosuchdir:/nosuchshell
```

· If you don't have an aliases file there, the following command executed in a Terminal window should do the trick:

```
nidump passwd / > /LocalLibrary/Images/People/passwd
```

Q. How do I configure Newsgrazer to display pictures?

A. Follow the above instructions to add pictures to Mail, but replace the @ in the filename with '!'. Name the file `treed.bmt.gun.com.tiff` instead of `treed@bmt.gun.com.tiff`.

Q. Where can I get more pictures of people from the Internet?

A.

From: Glenn Brown <gbrown@raven.ctr.columbia.edu>

For those who want more NeXT icons in Mail and NewsGrazzer:

I also have the following _NeXT_ people from the 'Faces3.tar.Z' collection on sonata. The faces collection has tons of non-NeXT people, but I _never_ see any them from this 5 meg of icons in NG or Mail and most of the icons aren't so hot. You'd be better off just getting these few icons from me, IMHO, than getting the 'Faces' collection.

* => I've seen this person on the net. + => It's a particularly interesting icon.

(Icons already in the next-icon archive or in

ftp://nova.cc.purdue.edu:/pub/next/graphics/Images/icons/people are not shown.)

amm.NeXT.COM.tiff

*andrew.stone.com.tiff

bruce.pages.com.tiff

*bryce_jasmer.next.com.tiff

bshirley.gleap.jpunix.com.tiff
dnanian.uw.com.tiff
dnanian.uw.com.tiff
eht.cs.cmu.edu.tiff
*eps.futon.sfsu.edu.tiff
*eps.toaster.sfsu.edu.tiff
Felix_A_Lugo.att.com.tiff
*hardy.golem.ps.uci.edu.tiff
*izumi.pinoko.berkeley.edu.tiff
jacob.gore.com.tiff
jchin.wcraft.wimsey.bc.ca.tiff
jchoi.pages.com.tiff
Jeff_Wishnie.next.com.tiff
jfreeman.freemansoft.com.tiff
+js.hafoc.princeton.edu.tiff
j-germuska.nwu.edu.tiff
kevin.pages.com.tiff
+Lovstrand.EuroPARC.Xerox.COM.tiff
lrb.rri.uwo.ca.tiff
mcohen.acoustic-srx1.ntt.jp.tiff
me.fiol.uib.no.tiff
mfriedel.monolith.rmug.org.tiff
pages.bwebster.tiff
peterm.hplabs.tiff
pgraff.next.com.tiff
ralf.reswi.ruhr.de.tiff
rkeene.east.sun.com.tiff
robertl.bucsf.bu.edu.tiff
robertl.rlaferla.lotus.com.tiff
samurai.mnemenh.cs.mcgill.ca.tiff
+scott.mcs-server.gac.edu.tiff (Scott Hess: Stuart
Author)
stukas.mbolo.cc.nd.edu.tiff
tom.incom.de.tiff
34t7ygg.cmuvm.bitnet.tiff

I'm perfectly willing to send the *'s and +'s to the mailing list if I get enough requests. I'll also email any of the other icons to individuals if they are interested.

Finally, I'll throw the FAQ at anyone asking how to install icons for NG and Mail.

--Glenn

Note that all these face tiffs work best if the filename is all lowercase. I never saw amm's picture until I changed those capital letters to lowercase. For example:

```
scott.mcs-server.gac.edu.tiff
```

Note that Scott also sends messages (or maybe it's usenet articles) as `scott.nic.gac.edu.tiff`.

I've done a similar thing as Glenn, picking out faces from one of the huge Faces collection as I see them pop up in NewsGrazer. The trick is that some of those people pop up as several different email addresses. I was thinking it would be nice if we distributed icons in a different format, one which would do a better job of keeping track of the information.

I'm not quite sure what to suggest for that format. I'd think it would be something along the lines of having the actual icons match a person's name, eg:

```
Garance.Alistair.Drosehn.tiff
```

and then have a little bit of text data which is also distributed with the icon. That could include things like:

- preferred email address
- other email/usenet addresses
- date of picture
- date that this info was last checked.
- originator of the info (kinda hard to define what that would mean. I mean being able to say "this tiff came from Faces3, this tiff came from Usenix, this tiff came from NeXT-icon list, and this other tiff is from the collection I've created from my own photo CD's")

This information could then be used to create hard links in the People directory, and automatically generate the correct versions of passwd and alias. Among other things, that would mean generating "gad.tiff" on host eclipse.its.rpi.edu if one of the email addresses is "gad@eclipse.its.rpi.edu". It also means handling unusual email addresses correctly, such as joe%realhost@bouncehost.com (last I checked the standard script for creating these files turns that into joe@realhost@bouncehost.com, which then won't be right for Mail.app).

Problems with the above example idea include:

- Names which are more common than mine (such as John Smith), and how to uniquely specify them.
- There may be perfectly reasonable reasons that people won't want to be included in any such global database (which is, after all, what we are building in the People directory). I might want my face tiff available to people at RPI, but not at the world in large.
- People who may be posting from a lot of different hostnames. Students here at RPI may very well send usenet articles from any of a few hundred workstations. Not sure what could be done about that, unless NewsGrazer and Mail worked off "Reply-To" addresses as well as "From" fields.

Garance Alistair Drosehn	=	gad@eclipse.its.rpi.edu
ITS Systems Programmer		(handles NeXT-type mail)
Rensselaer Polytechnic Institute;		Troy NY USA

Q. I noticed when I viewed these in PixelMagician that they seemed to have multiple tiff representations. How does one do that? I'd like to have face tiffs with one picture for 2-bit grey (which have to be a bit brighter to look right on a grey NeXTstation), and another picture for everything else.

Commercial painting applications all seem to support multiple representations of an image in a single tiff, although drawing packages do not. TIFFany, Wetpaint, IconMaker, and IconBuilder all properly display and edit multi-part tiffs; Create, Diagram, Virtuoso, and Draw do

not (and aren't supposed to).

You can create multiple TIFF images in IconBuilder. Start IconBuilder and click Document->New Layout. You'll get a panel titled 'New Document' that includes options for creating a file with 2-, 8-, 12- and 24-bit images. Use the pop-up menu at the bottom of the document window to move between images. There's a bug in IconBuilder that sometimes clears one of the representations, though I haven't seen this happen in TIFFany 1, 2 or IconMaker.

- Tim <treed@gun.com>

Q. How do I get Icon.app to run in 3.0?

A. Icon.app was a free paint program included with NEXTSTEP 1.x and 2.x. There was a time when Icon.app was the best paint program around for NEXTSTEP. Fortunately the situation has greatly improved since.

In brief, Icon.app requires the 2.1 shared libraries - the path to the shared libraries appears twice in Icon.app/Icon. The following are the steps that I took to make the change, and after that are the original postscript document that Karl wrote and a program he wrote that automates the process. I have not run the program and can't vouch for it.

Execute any and all of the following steps at your own risk. My enclosed instructions are brief, to the point, and hopefully accurate. Same with Karl's lengthier document. If you don't know Emacs, or aren't comfortable manipulating (and maybe fixing) your system configuration, don't try the following - find someone who can do it for you.

That said, execute the following steps to modify Icon.app so that it runs in NEXTSTEP 3.0:

- Make a new folder in the root directory of your 3.0 machine and name it /2.1.
- Make a new folder in /2.1 and name it shlib.

- Get your 2.1 installation OD or backup, and copy the following files to /2.1/shlib


```

/usr/shlib/libNeXT_s.C.shlib
/usr/shlib/libsys_s.B.shlib

```
- Copy the original Icon.app to /NextDeveloper/Demos.
- Open the executable, Icon.app/Icon, in a binary editor. I used **emacs**. If you use Emacs too, remember to type (in Emacs) **Alternate-x set-variable require-final-newline nil**.
- Search for both occurrences of the string /usr/shlib and change the string "usr" to "2.1" The resulting new paths should have the same number of characters (or bytes) as the pathnames that they replace. if the number of characters in the new location of the 2.1 libraries do not match the number of characters of the original path, then this patch will not work.
- Save the file and launch the patched Icon.app.

Q. How is everyone producing such great icons for their NeXT applications, with all the detail, shading, and color? Are you creating oversized images, then shrinking them down to 48 by 48 tiffs? If so, with what application? My icons look so PRIMITIVE compared to those from Pixel Magician, enTar, NewsGrazer, Create, BackSpace, etc.

Q. How can I draw good icons?

A. From: spagiola@leland.stanford.edu (NeXTMail encouraged)

Well, I can hardly claim to be in the same class as K.O., but here's some pointers:

For those who have not yet found it, Icon's detail view (under tools on the menu) is the way to go to draw icons. In this view you edit the picture a pixel at a time, while keeping an eye on the icon in its real size to see how the results turn out.

Drawing big and then reducing generally doesn't work very well. Its

more a matter of trial and error. The trick is to fool the eye into thinking there's more there than there is. Look at some icons in detail view, and you'll see what i mean: they all look pretty terrible when you blow them up.

Icon.app is a less than intuitive app to use, but some help is available inside the app wrapper (it doesn't come up through the menu help, so you have to go fish it out) and in IconDoc.ps.Z, which is on the archives. The latter in particular is very helpful.

I think keith's talent (in addition to his obvious artistic talent) is mainly in having a good eye for what makes a great icon: simple yet powerful. The art of creating an icon is more akin to creating a logo than a Rembrandt painting. Aspiring icon-meisters should check his column in NeXTWorld a couple of issues back. In general, look at a lot of icons, and try to see what makes some work and some not (even if they are well executed).

Now if someone could explain how the compositing works and how one can paste text into an icon, i'd be grateful too. Those two aspects of Icon.app have defeated me entirely.

From: sam_s@NeXT.com (Sam Streeper)

Sam Streeper (that's me...) writes:

> There are two subtle effects that often separate the great icons >from the "amateur" ones. These are a 3D effect and dithering.

Oops! The effect I was thinking of (and describing) wasn't dithering, it was anti-aliasing. I must have been really sleepy when I wrote that.

Sorry 'bout any confusion.

From: kieffer@spf.trw.com (Robert Kieffer)

Wellll... Let me cover my ass first by saying that I'm no icon guru but I have developed some neat icons [in my eyes]. So, having said this... Notes on icon design using "Icon":

Good icon design requires two things...

- A good understanding of what the Icon application can do and
- Some amount of artistic talent.

What I use:

- The detail panel - a 1:1 ratio while editing icons is lunacy.
- The marquee - rotate, skew, etc... very useful.
- The Marquee merge operations (Sover, Dover, Din, etc...) - These really allow you to add dimension/depth to an image without resorting to a strict cut and paste scheme.
- Gradation - to get shading effects, and zip up areas that might normally have a single color. This can do a lot to improve an icon!
- Fill - I use this more as an eraser than as a strict fill tool. Set your color to totally transparent, play around with the tolerance, and use this to trim around objects in scanned images... Then overlay those on the background or whatever.
- The text combined with gradation using the Sin operator... to whiz up your text.

Other recommendations:

- LEARN TO USE THE MERGE OPERATIONS!!! Dover, Sin, Source, etc... can all be used to create great effects when combined with various tools.
- Blend works well to smoothly integrate objects into a scene/icon. Blend and Airbrush tend to require a very fine touch to be used effectively.
- Use the Draw functions to create a rough sketch of your icon design (in a single, bright color... I use red) and then flesh it out a little bit at a time... You can use Fill to remove any of the sketching when you're done. This is a good time saver.

I really like to use varying opacities in my icons... The effect when they get moved around is really worth it. Just try to keep in mind what they will look like over backgrounds of different colors (transparent blue water moving over a red area for instance!?!?!)

Work on being able to give them "depth" (3D, shading, overlapping

objects).

- Make them understandable (it's easy to clutter up a 48X48 area).
- Try working with/from scanned imagery... it tends to be more realistic and, at the very least, it gives you a good starting point for your work.

And lastly...

- A good icon is just a matter of spending time on the design and how you draw it.

Q. How can I include text in my icons?

A. From: zazula@pri.com (Ralph Zazula)

Scary, but I know how to do this one! Just press Command-t in almost any drawing or painting app and you'll get a somewhat peculiar font panel. Just select the font, size and "effect" and textify your icon. You can't paste directly into the icon but you could paste into the text object in the font panel and then set the text in the icon...

Q. How does one change one color to another. How would I change a black to white gradation to blue to green?

A. TIFFany and TIFFany2 from BMD and Caffeine Software both feature the ability to map one or several color and/or opacity values to another. Check the tutorials included with either package for more information on how to replace colors and transparency.

Q. Could some one give the actual description of Dsin, Dsover , etc ... I like experimenting, but stumbling around is frustrating!

A. Those terms refer to compositing operations, and describe different ways of combining two images. Here is the complete glossary:

CLEAR	Sets affected area in the destination to 100% transparent
COPY	Replaces destination data with source data. Ignores source transparency
SOVER	Places source data on top of destination data. Recognizes source transparency.

SIN	Places source data in regions of non-transparent destination data. (Invert transparency of destination and place source "under" it). Good for "painting" into text.
SOUT	Clear's destination data where source data is non-transparent
SATOP	Places source data on top of destination data only where destination data is non-transparent.
DOVER	Places source data "under" destination data. Recognizes destination transparency.
DIN	Destination into source". Clears destination data where source data is transparent. (mask destination data with inverse of source transparency)
DOUT	Clear destination data where source data is non-transparent.
DATOP	Places destination data on top of source data where source data is non-transparent. (Places source data in areas of transparent destination data.)
XOR	Destination & Source both non-transparent = CLEAR Only one transparent = use it. Both transparent = CLEAR
PLUS	???
MINUS	???

. or at least to my best understanding!!!

Q. How can I make a large image icon-sized?

A. No free NEXTSTEP applications will resize a TIFF image, however nearly every commercial drawing and painting program does, including WetPaint, TIFFany2, IconMaker, AppsSoft Image, Create, etc.

Q. My drawing app doesn't refer to pixels, only points, inches, and centimeters. How can I tell if my image is 48x48, or 64x64?

A. A point is equal to a pixel.

Q. I'd love to know what tools you are using to create your Icons.

Q. What are the best tools for creating good icons?

A. By far the most popular tool for NEXTSTEP 3.0 and 3.1 users was Icon.app that ships with NeXTSTEP 2.1. It was also one of the most hated, since it shipped with lots of bugs that made it difficult to use for

any length of time. Bugs are fairly reproducible; one you learn a new bug, you rarely repeat it.

IconBuilder shipped with 3.0, and although it is an extensible editor, it ships with very limited functionality. It is also extensible only by programmers familiar with Objective-C and its API.

Fortunately, NEXTSTEP 3.2 users have a choice of several commercial-quality painting and image processing applications that exceed the capabilities of similar applications on other platforms.

Commercial applications good for building icons include anything that can generate TIFF images, including Create, Diagram!, Appsoft Draw, Appsoft Image, and Adobe Illustrator. Many find that these applications are overkill for building icons, and that they do not easily permit the kind of easy detail work that the original Icon or IconBuilder do.

From Timothy Reed <treed@bmt.gun.com>

The Transform tool in Papersight takes TIFF images of any size and shrink them down intelligently to 48 by 48 pixel size, and the reduced image still looks great!! We scanned a page from a newspaper at around 300 dpi, Transformed it to icon-size and the resulting icon still looked like a page from a newspaper. We also scanned the front of the DOS Lotus 123 manual cover and reduced it, and it looked fantastic. Try reducing a selection in Icon - the information loss results in an unrecognizable and unusable image. The program uses some kind of intelligent dithering algorithm to keep transformed images looking good. Transform also lets you skew the perspective of images you transform as well. Truly an amazing and unique feature.

IconBuilder : Let's not even talk about that thing.

Icon : Crashes even more often (if possible...) than in 2.2

Draw : Not the right tool, too primitive and massive (I don't know if my English<->French translation is correct here)

IconMaker is built for making icons. It has excellent compositing tools, and is very fast and rock-solid. Easily manages TIFFs that contain multiple images. Optionally saves files with .dir.tiff and .opendir.tiff

filenames. It's also priced right. For more information, send a message to BlueSky Software <gsl@netcom.com>.

Drawing programs are less useful for TIFFs since they deal with objects not pixels : Create, Illustrator, and Diagram are drawing programs.

3DReality will help you create cool Renderman 3-D images. It may be easier to create very large, even-sized images with 3DReality and let the File Viewer reduce the image for you.

MetroScan is an excellent scanner controller. Less waiting for the scanner to init, some threading of scanner hardware interaction, and much easier to use. Highly recommended if you already own an HSD or U-Max scanner.

Q. As I was sitting here tonight watching my folder with the skull icon open, I thought how neat it would be to add a ".snd" file to the directory that would play when the folder was opened. Does anyone know how to do this? I tried naming the sound file as ".opendir.snd" but that didn't seem to work. I'd sure appreciate knowing how.

A. To my knowledge, there's no way to do that. It would be nice if there was a utility for the NeXT that allowed you to assign sounds to various system events, like SoundMaster on the Macintosh, but no one's written it yet. I believe its on the list for an upcoming release of Metrosoft's MetroTools however. For now, its fairly easy to assign a startup sound but that's about it.

Q. I want to make sure that my work looks good in mono as well as color. Has anyone on next-icon come up with a list of colors that look correct on color and mono displays? Specifically, are there colors that resemble the white/dk gray/lt gray/black on mono screens.

Q. What's the best way to create icons that look good in mono and color? Do I need a double-headed cube?

A. Next TIFF files can have a number of images in it - 2-bit to 24-bit. Both the 2.0 and 3.0 Workspace is smart enough to grab the right one for the display. It's apparently very easy to use BlueSky's IconMaker or NEXTSTEP's IconBuilder, since it let's you create layers of bit-depth, although `tiffutil -cat` lets you do the same thing on the command

line.

From: artlogic!garret@bmt.gun.com (garret)
Subject: Re: Colors that look 'good' in color and mono? (NONE)

I think the answer that your looking for is.....

-none-

ta da! You don't have to worry about what colors look good. Rather you create the color 8bit,12bit, or 24bit, and gray 2bit icons and pack them into one tiff image using the tiffutil command which is in the Unix manual pages.

When the system boots the Workspace knows which bit depth to use. For example, /usr/lib/NextStep/nextlogin.tiff consists of a color and a 2-bit tiff packed into a single file.

```
artlogic# tiffutil -info nextlogin.tiff
Directory at 0x2432
  Image Width: 440 Image Length: 176
  Resolution: 72, 72
  Resolution Unit: pixels/inch
  Bits/Sample: 8
  Compression Scheme: Lempel-Ziv & Welch encoding
  Photometric Interpretation: RGB color
  Samples/Pixel: 3
  Rows/Strip: 24
  Number of Strips: 8
  Planar Configuration: Not planar
Directory at 0x2f44
  Image Width: 440 Image Length: 176
  Bits/Sample: 2
  Compression Scheme: Lempel-Ziv & Welch encoding
  Photometric Interpretation: "min-is-black"
  Samples/Pixel: 1
  Rows/Strip: 297
  Number of Strips: 1
  Planar Configuration: Planar
```

A lot of NeXT icons are going to be like this in 3.0. For more information, look in the NeXT Developer on line manuals under `NextStep/Reference/05_DataFormats.rtf` under **NXTIFFPboard**.

Note that a double-headed NeXT Dimension cube will not help much in creating good-looking mono and color icons. When you drag an image to the mono monitor, the Workspace images the desktop as 32 bit even though it's on a color screen. Hence colors you think look good on a mono screen of a double-headed cube will probably end up looking lousy on a real 2-bit screen.

Q. Where have all the icons that used to be located in NS2.1 in `/usr/lib/indexing/files/images` gone? I'm now running NS3.0 and cannot find any of these anymore.

A. They're all in `/NextApps/Librarian.app/Images`.

Q. How many possible 2-bit icons can be made on a Next computer?

A. This is the amount of all possible Icons that one can make in 2 bit:

2.3834717937669257e+63

That is 48x48x4 colors and no alpha. Now guess how long it will take to make them all on one NeXT!

Q. Where can I download corporate logos and e-mail pictures?

A. The NeXT-icon archives include an extensive selection of logos belonging to our subscribers' employers.

Also...

The faces archive (mentioned in my .sig) includes a 6 MB set of corporate logos. Just about everyone on the net is represented.

Mark

Mark Warren

warren@us.oracle.com

(415) 506-4639 Voice or 506-7292 Fax

300 Oracle Parkway, office #423, mail #659304

Redwood Shores, CA 94065

Friends don't let friends run DOS

--

The X-Face: header is my picture! Use `faces' from iuvax.cs.indiana.edu.

Q. Does anyone know if NeXT format TIFF files can have a copyright string or statement of authorship, etc. embedded in it? If so, are there any command line tools that will add this string? I didn't see it in 3.2 beta of the TIFF utils.

A.

From: molaro@cpsc.ucalgary.ca (Donald Molaro)

I would use the author field, I don't recall the specific tag but it allows for a nice free form text field that works quite well for this purpose.

If you plan to use this i can forward you a code fragment using (The tiff library of course) that accomplishes this.
don

Date: Mon, 4 Jan 93 11:23:34 -0800

From: ted@insight.com (Ted Slupesky)

Subject: Re: Statement of authorship in TIFF images?

There are several fields that can be added to any TIFF file header for informational purposes. There's one for "Artist", among others: Aldus says of this field, "If you need to attach a Copyright notice to an image, this is the place to do it." Leffler calls this field TIFFTAG_ARTIST.

There's nothing NeXT specific to this field. The TIFF routines in the appkit won't write out such a field, and they ignore it on reading (which is proper). At least some NeXT software (which doesn't rely on the appkit to read and write TIFF) makes use of these fields. Our application, ElectroFile, does (though not for copyright purposes). So does HSD's PowerScan, I think.

tiffinfo (from Sam's tiffutils), or the equivalent tiffutil -info on a NeXT, will display the fields. I don't think there's any way to add such a field, except by writing your own program (which wouldn't be that hard with libtiff, especially if you start with the source to tiffcp.

A. I was wondering the same a couple of months ago... But I never found out anything the TIFF format is from Aldus the number I have is 206 628 6593 The way I understand it the TIFF format that NeXT uses is the 5.0 spec (ver.2.1 of nextstep). I have a file that gives the specs for 6.0. (what's the TIFF format for 3.0?) they say that "TIFF allows the inclusion of an unlimited amount of private or special purpose information." But they ask you not to use that with out getting assigned 'tags' for you special purpose fields.

Some tags are pre-assigned one is for the field ARTIST for a ascii name. there are tags for a copyright statement and Dates of creation.

now the question is how to add fields or 'tags' to a file..... your gonna need a hex editor.

That's all I've found in the docs after a quick glance Drop a note if you want the specs on the 6.0 tiff format...(it's sorta a neat doc if you like graphics)

Q. Where can I get more icons.

Q. Where can I get more skull icons.

A. There are several places to go for cool icons.

- Make them yourself. A scanner and a drawing package are all you need. Good source material includes the Macmillon Visual Encyclopedia, as well as medical journals, Spy and Spin magazines.
- Buy them from a vendor who specializes in making good looking, inexpensive icons.
- Ask someone on next-icon to make and post them.
- Purchase a commercial painting package that includes sample artwork. IconMaker and TIFFany2 both include a good selection of sample TIFF images that you can start with.

Q. How can I check the alpha values of an image in IconBuilder?

A. Select the document window (not the magnifying window) and hold

dow the '1' key.

Q. Could you give me a specific rundown of currently commercial paint programs for NEXTSTEP?

A. Here is some summarized feedback on the question of Paint and Image Processing programs for NeXTstep.

Respondents included:

TR Timothy Reed (next-icon man)

KS Kevin Solie (Director of Development, benchMark

Developments)

DW Daniel Wasserman (Light Printing Co.)

NG Neil Greene (benchMark Developments)

MB Madeleine Bryan

SJ Stan Jirman (President, Caffeine Software)

DK Dylan Kohler

BW Brian Willoughby

Appsoft Image

[TR] I have these criticisms of Image:

- it is slow.
- it hangs
- The results of its special effects aren't as nice as Tiffany.
- No multi-image TIFF support.

It does however have some nice features:

- Freehand marquee tool
- Multiple selections.
- Image's special effects have lots of options that are easier to use than Tiffany.
- Great documentation.

Basically, my advice to my friends has been that if you think that you need Image and have the money, buy it now rather than wait for someone else to pick it up. I use Image rarely, but it is useful to have it available for special jobs. And yes, I was a chump and paid full wholesale price for it; it is horribly overpriced at anything above \$300, so the \$99 is a pretty good deal.

[DW] Not worth \$ 99.00

Summary+comments

The \$99 is very attractive±how wrong can you go for a hundred bucks? Tim's criticisms that it is "slow" and "hangs" are just about the two biggest things I don't want in any software. It's a pretty strange policy this "after you buy the Motorola version, then we'll ship you the FAT version". Maybe Appsoft will find someone to pick up Image, maybe that someone will fix everything that needs fixing, maybe the price will go back up to its original \$1000 list. But that's a lot of maybes. My take is forget it, especially in light of Tiffany (see below).

Tiffany II

[TR] Tiffany II isn't available yet, so commenting on it is a little difficult! I really like Tiffany I though, but only for image processing - i.e.special effects and resizing. I haven't figured out many of the controls - mostly cause I don't have the time to explore them, and because there's no documentation. There is an online help system (but not NEXTSTEP-style help) that I use, but it doesn't include any tutorial, which the more sophisticated or unusual function (like color processing and other weird stuff) could really use. It has three methods of resizing, which is really great cause some images look better resized with one method over another. And the resizing it does is really amazing - the best of all the commercial image processing apps I've used. It was a good deal at the Expo special price of \$250 or so; although I use the application all the time, I would be hard pressed to pay it's list price.

[KS] I must tell you that TIFFany 1.52 is a very impressive program. However, there are a few things you may find in Photoshop that are missing in TIFFany... TIFFany II (you are correct, it will be shipping this January) on the other hand is a complete rewrite and has much more power than Photoshop...

[NG]

(this info did not get copied over in copy/paste to Edit. It was a graphic on pricing for Tiffany I and II±tlc)

[DW] You can get Tiffany 1 now.

Tiffany2 will do things that Photo Shop can not. Mostly because of the NeXT operating system. But I do not think you will be able to print from it. For that I would recommend you bring the finished tiff into Virtuoso. They have a good tiff color separation program.

[SJ] My opinion may be biased; I cannot say more than that TIFFany is the best product, shipping in FAT, having really floating licenses, etc. The company is there, product distributed by benchMark Developments <info@bmd.com>, supported by 3rd parties not to be named. There is an upgrade path from T1 to T2. Street price for T1 is \$395, edu \$145. Upgrade T1 to T2 not yet decided, but less than buying T2 only - our way of an introductory pricing.

Summary+comments

Extremely responsive developers. Half the respondents were associated with the product. They sent me complete feature lists (for both Tiffany I and Tiffany II), pricing, and offers for free demonstration versions including beta copies of Tiffany II. Sounds like Tiffany II will be much better than Tiffany I (the feature list is quite impressive). I recommend getting this list from bMD <info@bmd.com>. The list price is nearly doubling for the new version, however. All in all, Tiffany II sounds like the product to get, of all these listed here. But I can't figure out if you can Paint with this program (does it have pencils and brushes?). And if DW is right about printing from it, that's a bit of a problem. Does it only save TIFF format?

Additional comments:

[KS] TIFFany II most definitely has painting facilities.... Actually that is one of it's powers... Anything you can do to an image (we call "Actions",) like color correction, sharp, smooth, paint, color replace, etc. can be done via any of the tools from the tool panel:

paste.tiff ↵

Here you will see tools such as many area select (freehand, text, rectangular...), draw, and fill...

In short, you can brush on a sharp action to the areas you desire. You could also make very complex area selections (any combination of the different types) and apply the action to the inside, outline, or outside of this selection...

Color Separation:

TIFFany II will allow you to convert your image to many different color models (RGB,RGBA, 8 bit grayscale,CMYK) When converting from RGB to CMYK, you will have control over the Under Color Removal and Gray Scale Replacement curves. These curves determine how much of the CMY channels are converted into the K channel.

Daniel Wasserman is partly correct with his statement about printing from TIFFany... I feel his statement should be read as you would not want to really print from TIFFany for a serious layout project. TIFFany should be used to prepare the images that then would be assembled in a true layout program such as Virtuoso...

You can however print from TIFFany via the standard command-p style printing.

TIFFany file formats:

TIFFany will read GIF,JPEG,TIFF, and EPS but only write TIFF format. I suggest Pixel Magician for good image conversion...

Kevin Solie (bMD)

[AO] I use Tiffany I and here are the paint related tools it has:

- paint bucket (to fill in current colour block)

- options: tolerance level of fill, intensity of fill coverage and maintain/ discard original shading pattern

- copy pen (to copy pixel info from one location to another -- like a dropper tool)

- options: brush size, intensity of colour overlay on copy
- freehand pencil

- options: brush size, intensity of colour, brush shape

- smear (smudging with finger effect)

- smooth (dropping water on colour effect)

sharpen (increases contrast between adjacent colour areas)

air brush

options: size of area covered, intensity of colour coverage

I don't think it has any brush textures (i.e. feather pen, charcoal) or different layers for painting, but I am just a casual user ...

Aki Ohno

[DK] I don't know about Tiffany II, but Tiffany I was only for image processing--it didn't have nice painting tools (brushes, pens, whatnot).

Dylan Kohler

WetPaint 1.2

[TR] I have not used this program as much as I'd like, but I don't know anyone who has it, and I don't like it's demo and haven't gotten a response to my request for a temporary review license. It seems like a pretty functional painting program, but without as many of the image processing features as Tiffany or Image. Drew Davidson is really nuts over it, but I don't like the quality of it's resizing tool, and I think that it's a little overpriced at \$299. This ships fat, and I believe has multiple image TIFF support and is the easiest of all these applications to use. WetPaint is sort of like an Icon that works.

[DW] Very good user interface. Not as good as Tiffany for image manipulation.

[MB] I use adobe illustrator and wetpaint i used to use icon and iconbuilder, I have tried image and it was memory intensive and the learning curve was steep. adobe works well to model and wetpaint is powerful enough for me...the WETPAINT tools are probably a bit more like PIXELPAINT ... I am not a photoshop power user so I cannot compare them well.

Summary+comments

I don't have much input on this one. It's more of a paint package than Tiffany I, apparently, but don't know how it would compare to Tiffany II. The list price is \$295, and I would have to agree with Tim that this is steep for an "Icon the works".

Additional comments:

[DK] As a paint program, I'd recommend WetPaint, based just on the demo version I played with. It's fast, simple, and has a very clean user interface, very easy to pick up on the first try. Get the demo from cs.orst.edu.

Dylan Kohler

IconMaker

[TR] This is a new application that specializes in creating icons. Scaling is excellent, the app is very fast, excellent multi-image and compositing manager, includes lots of free icons, and runs efficiently without allocating lots of swap space. Nice gradient tool - this app needs a more thorough review, but in my opinion is the best app for knocking out good-looking icon-sized images.

Compose In Color

[TR] This is strictly for special effects - it is not a painting program - and has a really bad UI. You can tell that the guy who wrote it knows what s/he's doing, but the user interface is so difficult that I just got out of it immediately. The app is really slow too, though I don't know if they support multiple-image TIFFS or Intel. Nothing at all is intuitive in this app, and it is incredibly overpriced at whatever they're charging for it.

[DW] Never got past the demo.

Summary+comments

I saw this one over the years at different shows. I had met the developer: seemed like a nice enough and knowledgeable sort. Price through Alembic is \$1,295. The custom accelerating hardware runs from \$5K or \$6K to \$200K. Yup, \$200,000 US. You can buy a Flame system for this price! I played with CIC that was loaded on a NeXT hardware reseller's computer once. Couldn't figure it out, and every time I selected a function

it would take a few minutes to perform the function. I usually like the user interface of European software better than American software, but I can't say that is the case here. I get the impression that it is developed by one person (that can be a negative in my book, nothing personal...). On the other hand, this is the only package that bills itself as a high-end solution (at the level of say a Paintbox as opposed to Photoshop).

Icon/Icon Builder

[TR] I just deleted [icon] from my system cause I don't need it anymore. I use IconBuilder usually after I use Tiffany or Image on something.

Summary+comments

I don't know what Icon Builder is. I gather that it's the replacement from NeXT for Icon, but I don't have it. Icon was better than nothing, and it's what I used to make icons that I sent to the list. Since I upgraded to 3.0 and 3.1, I haven't had anything with which to make any more icons, so no more freebees for the list and no more fun for me!

Additional comments:

[BW] If you have 3.x, you have a copy of Icon Builder in
/NextDeveloper/Apps/IconBuilder.app

It doesn't do as much as Icon, which I still use, but I still use it quite often. Check it out!

Brian Willoughby

Conclusion

Sounds to me like Tiffany is the best bet here, but like I said above, I don't know if this is a paint program or not. All of this also leads to the question: will the pictures be able to be used in Page Layout programs (say PasteUp)? Can they be separated into CMYK files for four-color printing? It seems like all the commercial apps above ship FAT, or are at least available FAT. This is important to me, because right now I only have a mono Motorola NeXTstep system and I'm pretty sure that my future color NeXTstep system will not be Motorola.

Although the introductory pricing offered by BMD for Tiffany II is attractive, personally I'm a bit tired of "speculating" with

NeXT/NEXTSTEP products and have decided to wait until products actually ship now before buying in.

Additional comments:

It is inconclusive.

But I do know a lot more now and am even more anxious to having color NeXTstep. The latest hardware compatibility guide for r3.2 from NeXTanswers lists 3 Intel-based systems that will do 32-bit color (my guess is 24-bit + 8-bit Alpha). Two of these are at only 640x480 spatial resolution, one will go to 1024x768. The maximum graphic mode supported otherwise is 16-bit color. Personally I would want at least 24-bit color, 32-bit but with higher spatial resolution, and preferably 48-bit color. Does TIFFany, or any of the other apps, support at least 24-bit color?

Thank you to the respondents for the feedback, in particular to Tim Reed and the crew at BMD. Some of the responses were shortened for brevity, or because I thought the comments may have been of a personal nature and not to be widely re-distributed.

Q. Where can I find good digital source material?

A. Enclosed is a JPEG self portrait of Vincent van Gogh. I got this from a great server in Germany.

`fau143.informatik.uni-erlangen.de`

look in `/mounts/epix/public/pub/pictures/art` directory. It has a lot of stuff.

`jspears@weston.com`

If you have direct access to the Internet, Mosaic is an excellent tool for picking up weird and useful source material for icon work.

Q. Where are the home .dir.tiff houses located?

A. For 3.0 and earlier home shoppers, check :

`/usr/lib/NextStep/Workspace.app/WM.app/English.lproj/neighbor.tiff`

/usr/lib/NextStep/Workspace.app/WM.app/English.lproj/
openNeighbor.tiff...and so on...

In 3.1, the home icons are in

/usr/lib/NextStep/Workspace.app/WM.app/English.lproj/h
ome.tiff

Q. Are there just two icon files (.dir.tiff and .opendir.tiff) for directories or is there a third one used when dropping files in (seen just after the folder first opens)?

A. Only two tiffs? Yes, only 2 tiffs per directory for now, unless you work on the Workspace Manager team at NeXT, in which case you have about 4 or 5 options--until 4.0 arrives, that is.

Q. What TIFF formats/pixel depths does NEXTSTEP support?

A.

(I say color rather than 8bit or 24 bit cause 2.0 Icon says it's 24 bit and tiffutil -icon says 8bit. Your guess.)

yes it's really 8 bits $2^8=256$ or the number of intensity levels (one lowly byte) times the number of samples (or planes) per pixel --- 256^3 = the 16.77 mill colors possible. one sample is the green channel, one the red, one the blue.

(24 bits is a 'understood' misnomer its 8bits+8bits+8bits) then there is the 8 bits of alpha channel which is non standard. which makes our full 32bit NeXT Dimension Board

12bits is three levels (RGB) of four bits each sample $2^4=16$ levels of intensity three of them makes $16 * 16 * 16 = 4096$ colors or the NeXT Turbo colors.

Now for the part I don't know as much about: besides the stuff in NXTIFFPboardType in the developers online manuals look under

findImageNamed:
bestRepresentation

in the NXImage object. (look at the rest for lots more) there you will see that the icon for a application can also be a EPS file and a description of

how the "best representation" is found. Best representation being a comparison of the current environment and the tiffs in the file. In theory you could have a hi-res 400 dpi image packed in to you tiff and it <should> be used for print out on the printer. I haven't checked it out.

One thing that does not work, however, is viewing both the color and 2bit images on two-headed cubes - at least this doesn't work in 2.0 I don't know bout 3.0. I had hoped to be able to view the color version of the tiff in the color monitor, and the 2-bit version in the megapixel monitor, however that doesn't work.

It would seem the problem is more along the lines that the workspace is not updating the environment variables for each screen rather it is defaulting to the deepest of the two. (this is conjecture from a mono-person). This has to do with the off screen cache too.

Q. Are there any additional posting guidelines that we should be concerned with?

A.

From: michael@afs.com

Subject: Suggestions for icon distribution

2¢ worth on standards for file naming and distribution:

1. Directory tiffs should be named like MyPic.tiff, MyPic.open.tiff, and MyPic.deposit.tiff. Leave out "dir" (e.g. MyPic.opendir.tiff) because there are more uses for these kinds of tiffs than just for directories. For example, I'm writing a shelf object that programs can use to display objects within a program, not files. The same dir/open/deposit paradigm that FileViewer uses applies to my shelf, i.e. objects have icons that get used the same way directory icons do. Naming the icons this way makes it easy for programs to use the same icon files for multiple purposes.
2. When posting pix (or any other file) to this list, always include the file name, centered below the file, like this:


```
Hobbes.tiff ↵                               Hobbes.open.tiff ↵
Hobbes.deposit.tiff ↵
Hobbes.tiff      Hobbes.open.tiff      Hobbes.deposit.tiff
```

Since we're using NeXTMail the formatting will look the same to all recipients (I hope HappyFace12Point.12a.tiff ↵). Including the name is helpful to people so they won't clobber existing files, even though Workspace warns you about name collisions.

3. Always compress tiffs prior to distributing them (lots of senders don't SadFace12Point.12a.tiff ↵). Avoid using JPEG since data can be lost with it (I prefer LZW). Compressing makes the mail messages shorter, and less disk space is consumed after the recipient copies the tiff out of the message (every tiff I am aware of at our site is compressed to save space). Use a command like the following at a shell prompt to compress a tiff:

```
# tiffutil -lzw MyPic.tiff -out MyPic.tiff
```

Naming the same file as input and output is OK with `tiffutil(1)`. Also, it doesn't matter if the tiff is already compressed, even with a different method; `tiffutil` just uncompresses and re-compresses with the method you specify. To make this easier, here's a little script I wrote that will LZW any tiff(s) you specify on the command line:

```
ztiff ↵
ztiff
```

Use it like in these examples:

```
ztiff MyPic.tiff
ztiff *.tiff
ztiff foo.tiff bar.tiff
ztiff somedirectory/foo.tiff
ztiff ~/anotherdirectory/*.tiff
```

Don't get me wrong - I'm not posting this as a complaint. I just had some random ideas about this sort of thing and I thought my fellow list

members might be interested. IMHO, following guidelines like this would make the list even better than it already is.

Thanx,
Michael

Date: Wed, 6 Oct 93 20:22:11 -0700
From: Brian Willoughby <brianw@sounds.wa.com>
Subject: Re: Suggestions for icon distribution

Here are my 2¢ worth (I guess we're at 4¢ now):

| 2. When posting pix (or any other file) to this list, always
| include the file name, centered below the file[...] Including
| the name is helpful to people so they won't clobber existing
| files, even though Workspace warns you about name collisions.

An interesting thing to note is that **Mail.app** from 2.1 (and 2.2a?) would show you the file name of any TIFF in a message body if you clicked it with the Control or Command key pressed (I can't remember which - the feature has since been removed).

| 3. Always compress tiffs prior to distributing them (lots of
| senders don't <). [...] Compressing makes the mail messages
| shorter, and less disk space is consumed after the recipient
| copies the tiff out of the message[...]

I would prefer compressed TIFFs, too, but I don't think they make the mail messages any shorter during transmission. The procedure for sending NeXTmail involves tar (to combine all the files), compress (to reduce the size of the entire message), and uuencode (to protect against IBM machines using EBCDIC instead of ASCII). In fact, I have been told that LZW compressed TIFFs actually make the compressed tar file larger! I checked this out and found it to be true. The compress utility has a hard time compressing data that cannot be made any smaller - and you can't stop **Mail.app** from using the compress utility, since it also compressed your text.

The .attach directories will be smaller, though, once the message has been received and processed by **Mail.app** into your Active.mbox folder.

My opinion is that the convenience of having the TIFF already compressed outweighs the small percentage of added transmission time, although folks who pay extremely high rates for NeXTmail might not agree :-)

Brian Willoughby Microsoft NeXTmail welcome Development BrianW@SoundS.WA.com	Software Design Engineer, BSEE NCSU , ex- <i>Sound Consulting: Software Design and</i> Bellevue, WA
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Q. How do people use the icons published on this list?
A. From: william@pinoko.berkeley.edu (William E. Grosso)
I use the icons for custom apps (and their custom file types). Of course, also use them in info panels and such.

Bill Grosso