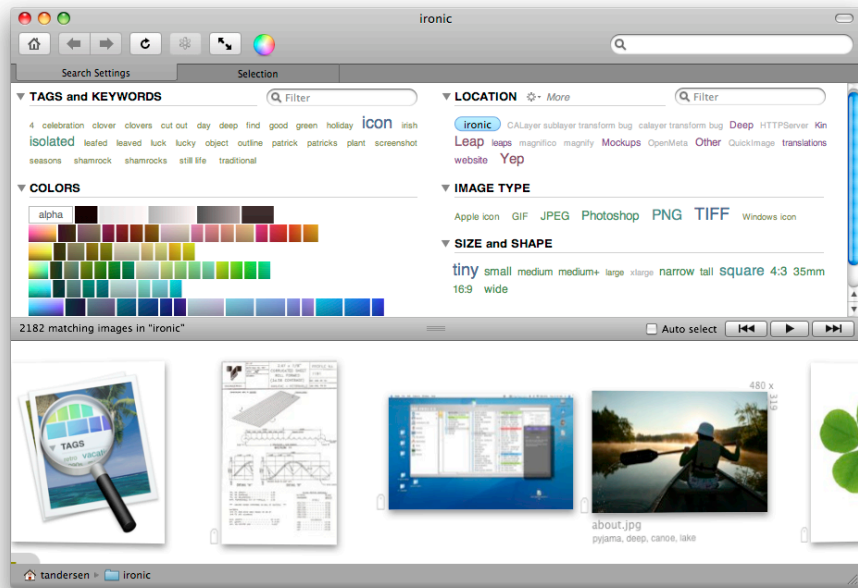# DEEP

IMAGE SEARCH

INTRODUCTION

Deep is an image browser and search tool. With it you can quickly find images based on search criteria that you have on hand, such as location, color, image type or tag. Use any or all of these ways to find the image that you need for that next project.

INITIAL RUN AND INSTALL

Just run Deep as you would any other application. It will initially start up and locate all the images in your home folder. You can change the folder that Deep starts up in using the preferences, and you should change the start up folder to a smaller collection to improve startup time, especially if you have a large number of images in your home folder. Whenever Deep encounters images that have not had their colors palettes generated, it will create the palettes on the fly. If you have a lot of images, this could take a while. Quitting Deep during this process is OK, as we will continue processing palettes on subsequent runs. You can use Deep while the color palettes are being generated, but of course color searches will not be accurate until all colors have been calculated.

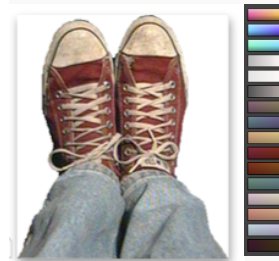**Quick, for people in a hurry:**

Use the top section to narrow down the group of images that you are searching for, then view then in Deep or open them in your favorite editor by **pressing the 'o' to 'open' the image**.

In general, Deep has keyboard shortcuts for any of the actions that you might repeat often. For instance, to see the results as a slideshow, just press any of the **numbers on the keyboard**. The speed of the slideshow is controlled by the which number you press. **Fullscreen can be activated by pressing the 'f' key** ('f' again or 'esc' to get back).

Deep also supports **multiple windows**, so you can have a few different searches going on at once.

What is a palette?

A palette is the range of colors used in a single image. Deep calculates palettes for each image by analyzing the pixels and calculating the most popular colors in each image. In the picture of sneakers on the left, the palette shows the dominant colors. At the top, there is a swatch that is a red - orange color, below that a blue - purple one, followed by a cyan one. These three are the dominant colors in this image. Looking down the palette, you can see the top colors in this image.

Here is the palette of the Deep icon, or rather the Deep icon with a 'new' badge on it. A 'Genius' search in Deep for this image finds images with similar palettes, which includes versions of the icon like the original 12 MB Photoshop file, the actual icon file, and other related images.

This is what makes the palettes in Deep powerful - you can find images that have similar colors to one you are looking for, which often includes the 'same' image that has been altered, or is in a different format, size, color scheme, etc.
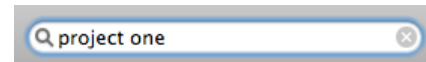
Here is the same icon without the red badge. Deep finds these as similar images. The palettes that Deep uses are composed of 6 primary colors, black, white, and 78 'spot' colors. The number and range of these colors was carefully chosen to maximize searching capability.

SEARCHING

We will now look at the various search tools available within Deep.
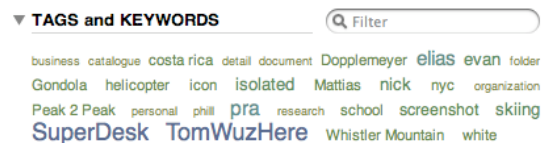
Search field

Don't forget the search field: This is at the top right of each window, and can be used to find images if you happen to know the file name, or some other text based detail about the image, such as a tag, keyword, **camera make**, etc.

Tags and keywords

Within Deep, tags are short (one word is best) descriptions of an image that you have added with Deep to an image. Keywords are similar, but are words found on the image by Deep that have been added by other programs. Keywords include such data as EXIF tags, Adobe bridge keywords, etc. In the preferences you can choose to turn off keyword display within Deep. Tags and keywords shown always reflect the current search.
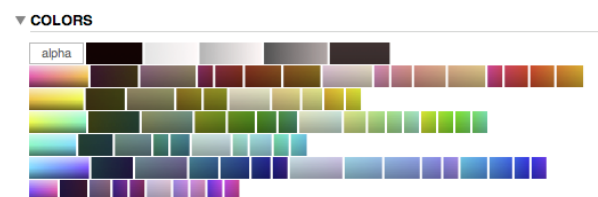
Adding tags is done by selecting one or more documents, then pressing the 'return' or 'enter' key. Note that two word tags are obtained by **using an underscore** character to join them. When tagging, the tab key will take you to the next document. 'Shift - tab' will take you to the previous document.

Tag searching tips:

There is a filter box in the Tags area that allows you to look for a specific tag. If you only type one letter, Deep shows all tags that begin with that letter. In the preferences you can set the number of tags that Deep will show. Even with keywords turned off, a search for a keyword can still be done in the main search field at the top of each Deep window.
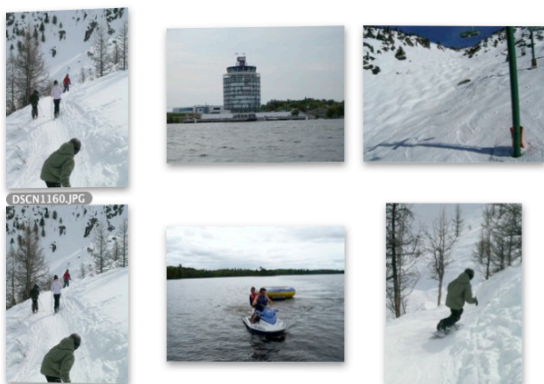
Color searching

Once color palettes have been created, you can search for images by color. There are two main ways to search by color. If you select an image (or up to 10 images) in a window, then press the 'Genius' button in the toolbar, Deep will look for images in your current search with palettes that are similar to the one(s) that you have selected. This is really useful: If you find a small thumbnail

image that you like, and would like to find any larger versions on your computer, the Genius search will often find those images for you. It will also often find pictures taken on the same day for photos, or for an image such as an icon/drawing, it will often find similar icons/drawings on your computer.
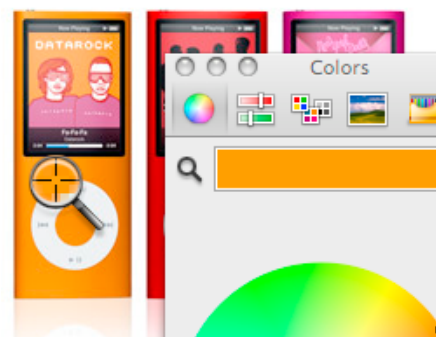
You can also search for a single color by picking the color from the 'COLORS' section or dragging in a color from a color picker, like the one included with Deep. Note that the standard Apple color picker allows you to select a specific color - use the magnifying glass tool on the color picker. After selecting a color, you need to drag the color into a Deep window for the color to be searched on.

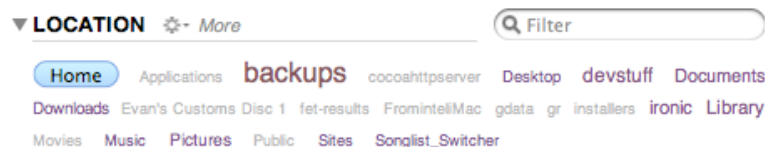You can also drag an image from your computer - or from a web page -

into Deep to find all the images on your computer that have similar palettes to the dragged image. If you pick more than one color, Deep looks for images that have all selected colors in them. If there is a Genius search in place, then Deep will show at most 200 results. Clicking on a selected color in the 'COLORS' section, will cause that color to be deselected for the search. The contextual menu on each document allows you to perform a Genius search over all local drives.

Finally, note the 'alpha' button in the COLORS section. This will restrict your search to all images that have some see through (i.e. clear) areas on them, like many icons, web images, etc.

Location

Deep always limits its search to the location that is selected in the Location section. You can search subfolders by selecting them. Clicking on the current folder (in this case 'Home') will take you one level up.

Deep also includes a handy subfolder search filter, that allows you to navigate directly to a **buried subfolder** of the current location.

Not to be missed: The 'More' menu in the 'LOCATION' section allows the selection of some useful locations for images. The 'Mail attachments' is in particular useful - there is no good method in

Apple's Mail program to search for images. When looking at images in your mail attachments, you can open the associated email with a single click on the email subject, which is shown alongside each selected mail message.
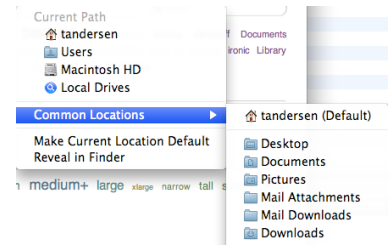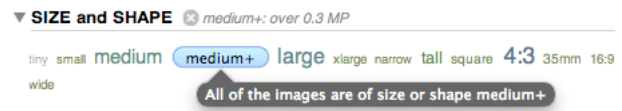

Image Type

Deep deals with images. By default all image types are shown. You can select which type of image to restrict your

search to with this section. If a file type is not listed, it means that no images in the current search are of that type. As with all the other search areas, a larger typeface means more images.
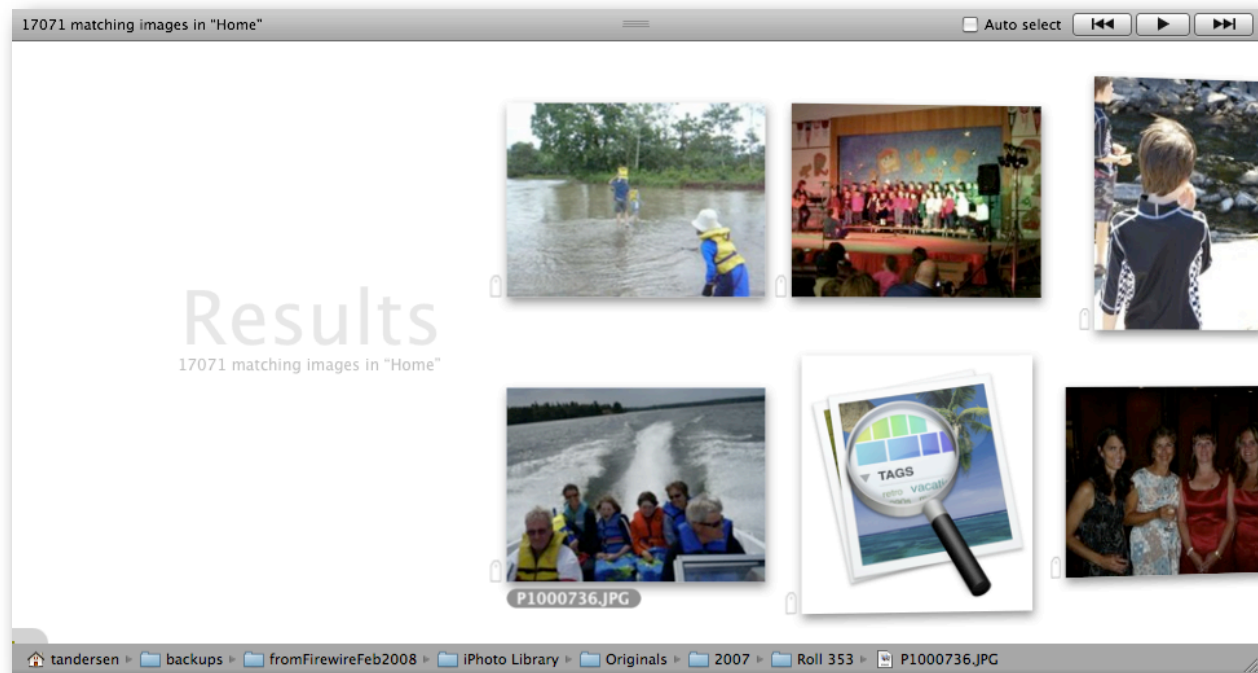
Size and Shape

Deep allows you to search by both the size (in mega pixels), and shape (aspect ratio) of the images. You can select both a size and a shape to help you narrow down your search. Note: the medium+ size search allows you to filter out small images from your search, restricting the results to images over about 640x480 in size.

RESULTS AREA

The results of your search are shown in Deep in the Results area.
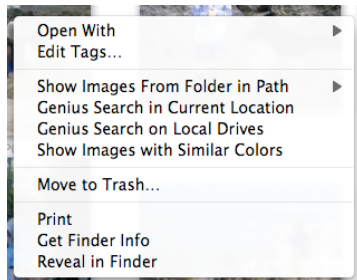

The results area can be resized to show from 1 to 4 or more rows of images. Within this area you can scroll browse through your results in various ways.

To scroll through your results:

- Use the scroll wheel on the mouse

- Use two finger scrolling with the trackpad on a MacBook

- Click in whitespace and drag with the mouse

- Click in whitespace and initiate a 'spin' with a flick of the wrist

- Click on an individual image and use the arrow keys to navigate

- Press the 'play' button at the top of the results area to start to spin at a controlled rate

- Press the keys 1 - 9 on the keyboard to spin at different rates

- Press the buttons next to the 'play' button to move to the start or end of the images

- Grab the small grey scroll controller at the bottom of the window, and move it left or right

- Note the very small block that is usually inside the grey scroll controller - it shows the current scroll location. The grey scroll controller shows where the results are scrolling to, while the smaller block shows where you are

Selecting and dealing with individual items:

You can click on an image to select it. You can drag a selected image out to the Finder, or other programs. To select multiple documents: Command - click on several documents.

There is a contextual menu attached to each document, with this menu you can reveal the image in the Finder, do various searches, and other tidbits. Moving an image to trash puts the image in the 'real' trash on your computer. The Genius searches are equivalent to pressing the Genius button at the top of the Deep window. The 'show similarly colored images' item does not do a Genius search, rather, it selects a number of colors in the image - this search will result in a different set of results than a Genius search.
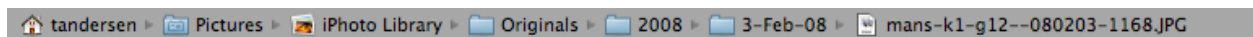
The 'Open With' item allows you to open the image with your favorite image editor: You set which items are your favorites in Deep's preferences. A shortcut to this is to select an image, then press the 'o' key on the keyboard.

Auto select: If this is selected, Deep will select whichever image is in the middle of the results view.

The path bar at the bottom:

This shows the path of any item you move your mouse over, or the selected image. If you click on an item in the path bar, the search location that Deep is using will change to that folder.

SELECTIONS AREA

When you click on an image in Deep, a large version of the image is shown above the results section in the Selections

tab. The selections tab shows the name of the file, the size of the image in pixels, the palette that Deep generated for the image, any tags that may be set, and finally the 'source' of the image, if known. The source is shown under the image name, and is often not present, but is for instance, used in mail attachments to allow Deep to open the email message associated with that image. With an image from a mail attachment selected, **clicking on the source** will open the email message that this image was in. If the image is an iPhoto image, iPhoto will be opened upon clicking.

This area can go full screen with the full screen button, the key 'f' or 'Command - f'. You exit the full screen view with the Escape (esc) key, the 'f' key of 'Command -f'.

While in full screen mode the arrow keys take you to the 'next' and previous documents.

To open an image in your favorite editor, just use the 'o' key - a list of the applications that you have added in the Deep's preferences will be displayed.

If you click on a color in the palette on the right, Deep will restrict the current search to images with that color in their palette.

User tags are tags that you set on an image. Keywords are tags that Deep finds in other places, like the Exif or other data associated with the image. You edit tags by pressing the enter key on the keyboard.

Tip: In both full screen and regular modes, **pressing the 'i' key will toggle on and off all the 'info'** - the palette, image name, etc

If you make multiple selections, Deep will show the first 5 or so across the selection area. You can make more selections, but only the first ones will be shown. You can tag all selected documents at once.

TOOL BAR

At the top of each Deep window there is a tool bar that has the following tools:

The Home tool takes you to your home location, clearing all search parameters.

The back and forward arrows allow you to go back to a search that you had previously done.

The refresh button tells Deep to perform the search again, to see if any results have changed. Deep does not do 'live searching'. This has the advantage that your results will not change out from under you.

The Genius button does a search for all documents similar in colors to the selected document, using the current search as a starting point.

The full screen button takes you to a full screen view of the currently selected document.

Lastly, the color selection window can be brought forward by using the color button in the tool bar. The color window's magnifying glass allows you to pick a spot color from a web page, or other image and then, by dragging this color into Deep, to do a color search.

Window title: The title of each window in Deep reflects the current search state that Deep is in. This is useful if you have multiple windows open.

iPhoto Support

Deep will search through your iPhoto folder for images, but you do have to **enable this feature in the preferences**. When you navigate to your iPhoto Library, Deep allows you to see (but not trash, edit, etc) any images in your iPhoto Library. Deep also filters out the small thumbnails that iPhoto generates.

Technical Details

Tags: Deep stores tags that you enter as 'extended attributes' on each document. This means that if you move an image with the Finder or through other means, the tags will follow the image around. In addition, most modern os x savvy backup services will also back up all these extended attributes. Spotlight also automatically indexes the tags that you set on each file. Ironic Software plans to move all their tagging software to this new format and will be publishing the details to this format in the form of a few open source files. We have searched high and low over the years since we started publishing Yep, and then Leap, for the ideal tagging solution. One of the most common methods of storing tags, namely putting them into the Spotlight comments we have found to be error prone, and difficult to work with. This new tagging and other meta data system is know as 'OpenMeta'. Please feel free to contact us with any questions on this subject. We have spent a long time developing, testing and using this new tagging scheme, and we know that it is robust, stable and scalable.

Colors: Palettes in Deep are also stored as extended attributes. This allows for tools other than Deep to locate images based on color.

Database: Deep has no real 'database'. It simply adds a few extended attributes to each image, and then lets Spotlight index that data. Thus, there is nothing to 'backup' - other than your existing files.

Servers: We tried to get Deep to be able to query servers running on the local network, but during development, we found that the speed issues that we ran into were basically too severe - they would make using Deep a chore. We have a solution coming out for networks in the coming months that will promise a very fluid, fast system, where everyone on the LAN will be able to log in and search with the same ease and speed as with Deep 1.0. Bandwidth conservation is a must for an application like Deep running on a network, and we have solved that problem. Please email us for more information - and also your needs, should you wish to deploy Deep on a LAN network.

Intel Only: Deep uses Core Animation heavily, and is therefore Leopard only. We decided to take the 'next step' and make Deep Intel only as well, since the testing and QA on the Power PC would have resulted in us having to cut corners and reduce the feature set that we were looking for.

Please ask questions: We have a public forum on our web site which allows you to ask and discuss Deep. Also feel free to email us here at Ironic if you have questions that are more appropriate for that.