Mosaizer Pro Tutorial

Make a picture library and use the Match Probe

Here you learn how to create a picture library. This library is required to make a photo mosaic or any other effect that Mosaizer Pro can create. We also show how a picture library can be analyzed and resized, and how this resized library can be saved on the hard disk in a new folder.
Finally we demonstrate the use of the Match Probe and how this tool can be used to visualize the color spread and accuracy of the library for a given source file.

How to make a picture library

About picture libraries

A picture library is a file that contains the location pointers to a series of pictures on the hard drive. This file is read by Mosaizer Pro to locate the pictures for the photo mosaic. A photo mosaic is created by replacing a part of a source picture with an image from this picture 'library', and doing this for every part of the source picture. So, the colors of the source picture are replaced by (smaller) images that have a similar color impression.
Therefore, a good picture library consists of many (small) images with a variety of colors. It is very difficult to have the full color spectrum available, and a picture library usually lacks a few or more colors. However, the more pictures are available, the more colors will become available and the better the match of the color will be.
The size of the library pictures is also very important. Very small pictures (less than 24 px in width or height) tend to give very unsharp results, while very large pictures (e.g. 800 px or more) will take huge resizing time to match the library picture on the photo mosaic. A good photo mosaic will generally suffice with a *cell* size ranging from 48 to 144 px (each sub-picture is called a 'cell'). The more the library picture differs from the mosaic cell size, the more time is required to calculate the photo mosaic.

Requirements

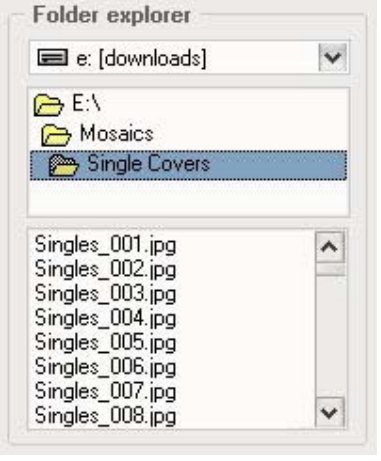
To create a good picture library the following is required:

- a large collection of almost equal sized pictures
- 10-25 Mb disk space to store the (resized) library files

The steps to create a picture library

Step 1: select the picture folder

The tab *'Libraizer'* has two sections: to create a new library and to add an existing library to the program. We use the top section, so press the button *Create new library*. A new window will now appear. Use the mini-explorer on the left to navigate to the folder which contains the collection of pictures (here: 'E:\Mosaics\Single Covers').
In case no large set of picture is available, you can download several thousands of library images from our website.
It is recommended to have at least 1000 pictures available.
We will make a picture library of 977 single covers.



> *TIP: when pictures are distributed in different folders, copy these into the main folder of your choice. You can then use sub-directories to keep the original names of the folders. To select sub-directories, simply check the box* 'including sub-dirs'*.*

Step 2: create the library

Now, focus your attention to the right side of the new window. Press the button *'Make library'* and choose a name for the library. We recommend to also put the number of pictures in the name to quickly assess the size of the library later. We accept the proposed name 'Single covers 977'.

Press the Save button (or press Enter). The library file is now saved on the hard drive and has become available for next sessions.

This can be checked by selecting a library as if it was already available (see picture below).

***Information**: when the library name is chosen, the library is first analyzed, then added to the list of libraries, and finally made active.*

Left: the active library.

Resizing a picture library

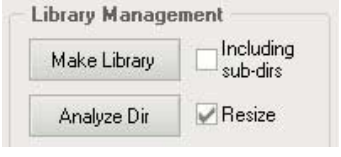
Sometimes the library source files are too large to be used in the picture library. For instance, you want to use your holiday pictures, shot with a digital camera. Usually these pictures are megapixel in size, where the required library only uses maximum of e.g. 48x48 px in size for a photo mosaic. Here is explained how to resize the large pictures and create a lean picture library for Mosaizer Pro.

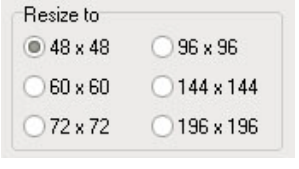
The steps to resize a picture library

Step 1: tick the 'Resize' checkbox.

When this box (left) is checked, the application follows a different route to save the picture library. It is also required to indicate to what size the pictures need to be resized (right picture).

This is a pre-selection only. We selected to resize down to 48x48 px.

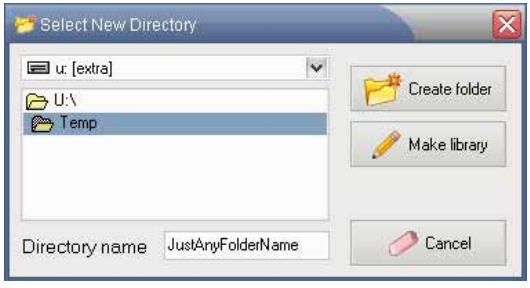




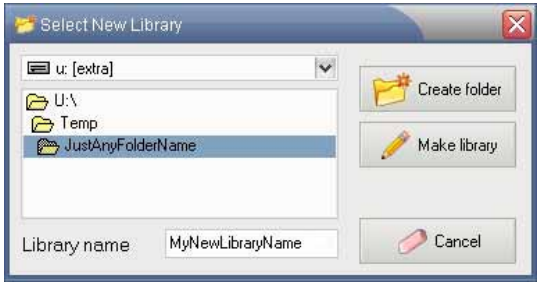
Step 2: select the folder and choose a library name

After the resize choice has been made, the folder must be selected. There are two possibilities:

- the folder of your choice does not yet exist and both the folder name and the library name must be chosen. In that case:
  - navigate to the required folder
  - choose a name for this new directory (left picture)
  - press *'Create folder'.* A new directory is created
  - next, select a library name (right picture) and press '*Make library'*
- the folder already exists, and only a new library name is needed. In that case:
  - first navigate to the intended folder and choose a name for the new library (right picture) *but ignore the text 'Directory name'!*
  - press *'Make library'*. The new library will be resized and added to the list.
  - The step to create a directory is simply skipped



Create a new folder (directory)



Make a new library

How to use the Match Probe

About the Match Probe

The Match Probe is a supporting tool to analyze and study the color match quality of a library. As mentioned before, the color match quality of a library depends much on the number of available pictures to choose from and on the color variety ('palette') of the library pictures. The Match probe can be used to quickly assess to what extent Mosaizer Pro will find suitable color matches for the intended photo mosaic. But, it's also fun to play with this tool.

Using the Match Probe

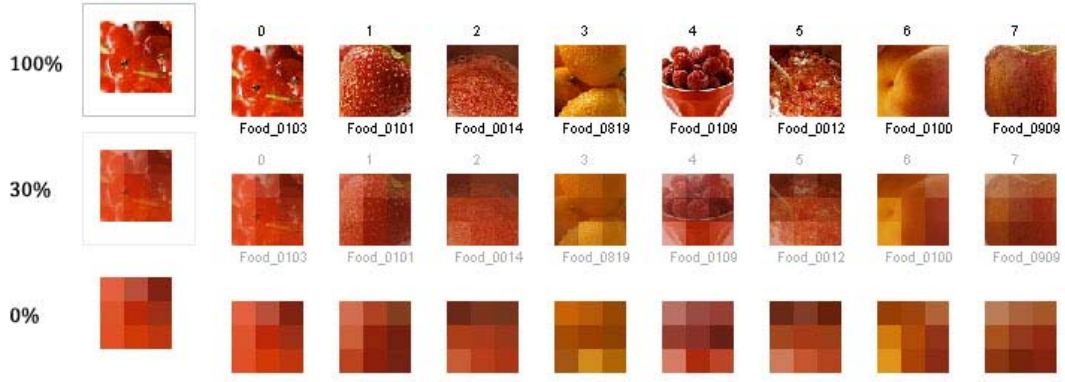
The Match Probe is activated by pressing the button *'Probe'* in the *'Control'* tab. The application then shows a matrix of pictures, where the left-top picture is the target picture for which matching cell replacements must be identified. Each picture has a number: the higher the number the worse the fit. The top row usually fits best (see picture below).

The Match Probe controls

There are only two controls for the Match probe:

- a horizontal slider at the bottom of the central viewing area
- the source of the target cell/color to be probed (can be set via *'Quick settings | Other settings | Probe the source file'*)

The horizontal slider changes the transparency of a layer on top of the Match Probe result. This layer contains a similar matrix of colored squares, each representing the average 3x3 color areas of the underlying picture in the matrix.
With the transparency slider the user can gradually switch between these two views. It can effectively show how an average color can deviate from the color impression by the human eye!



Picture: from top to bottom the transparency of the original picture decreases

The source for the probe's target cell can either be a random selection from the library (for which a similar colored pictured is then searched for), or a random square portion of the source picture. The latter is selected when the checkbox *'Probe the source file'* is checked.

A few suggestions

1. make sure that the folder from which a library file is made contains many images with a sufficient variety of colors
2. if this folder contains large images, it is strongly recommended to resize the entire folder and save the resized images in another folder (Mosaizer pro can do this automatically)
3. do not resize to a too small size if the photo-mosaic potentially uses large cell-images
4. do not move, delete or rename the picture folder from which a library was made

Mosaizer Pro

April 2009
www.mosaizer.com