



Kwikwap : The World's easiest web creation tool.

Outline of how “AFELO” Graphics compressor and resizer works.

Definitions

Pixel: This is a measurement standard used when referring to computer screens. A screen area (or screen size) will be defined, for example, as 1024 x 768 pixels, giving an exact dimension of the display area. This same unit of measure is used to specify the “space” a picture takes up on a screen.

Graphics compressor: This is a process that will convert the graphic to a smaller file size. The original dimensions (width and height) of the graphic will not be changed. Depending on the amount of compression, one may observe a loss of picture quality in the resulting graphic.

Graphics resizer: This process allows you to change the dimensions of the picture. No loss of picture quality is associated with this step, as the file size of the graphic remains very similar to the original picture.

Aspect Ratio: This is the ratio determined by the width and height of the borders of the graphic. If you make a picture’s height less, without changing it’s width, everything will look shorter and “fatter”. The opposite is true if you increase the height, while leaving the width intact. Unless you want some special effects on your pictures, it is important to keep the aspect ratio of your pictures intact.

Background

In order for a web site to display quicker on the PC screen over your internet connection, it is highly recommended to optimise your graphics (including Logo, pictures and photographs). There is nothing more frustrating than having to wait ages for a web page to download. This forced waiting is a sure-fire way to drive potential web customers away before they have even seen what you have to offer on your site. You can also use optimization on your graphics before you e-mail it to someone to speed up the sending and receiving of the file over the internet.

The average digital camera saves photographs of between 1 and 2 MB. On a well designed web site, which will download very quickly, you will very seldom find a graphic file size to be bigger than 200kB, one tenth of the size of a digital picture. (See examples below)

The optimization process of web-graphics needs to include both resizing AND compressing of the graphic to be fully effective. The “AFELO” freeware package described below, automatically compresses, without obvious loss of quality, and allows the user to decide on the resizing parameters.

When you design your web page, you should decide on the area on-screen that the pictures must occupy (size of the graphic). This choice is largely dependent on the whole ‘look and feel’ of the site, which should be affected by the type of business being portrayed.

As far as web standards go, there are several generally used and accepted sizes. A 800 x 600 picture is normally the biggest optimized picture you will find on a well designed web site. The smallest, practical graphic will not be smaller than 160 x 120 pixels. (These are measurement for ‘landscape’ oriented graphics, they are wider, than they are high.)

The “AFELO” program has these standards already built in as menu options, so you don’t have to remember the pixel height-width ratios. Although these measurements are for ‘landscape’ oriented graphics, AFELO will keep the aspect ratio intact, so you don’t have to worry about “skewing” of your graphics.

For this document, I used the ‘screen capture’ facility of “Photoscape” to be able to show you the AFELO screens here. The originally captured file sizes were 113kB, 234kB and 152kB. Using AFELO, and keeping the picture size the same as the original, the file sizes shrunk to 38kB, 77kB and 52kB respectively, saving 332kB on size for those 3 graphics alone! (Which is less than the total of the 3 compressed images together.) I will show further examples of Image resizing and compression later in this document.

The opening screen of AFELO looks like this:



In the “Settings” menu, you can change the language, as well as set up FTP parameters to upload your graphics to your web site. Luckily, you won’t need that, as Kwikwap already has the picture upload facility built-in for you!

The “Compress & Upload” option is the one you will be working with. Once you have selected that, AFELO will ask you if you want to

- a) work with a SINGLE image
- b) ALL images in one directory, or
- c) Several images from one OR more directories.

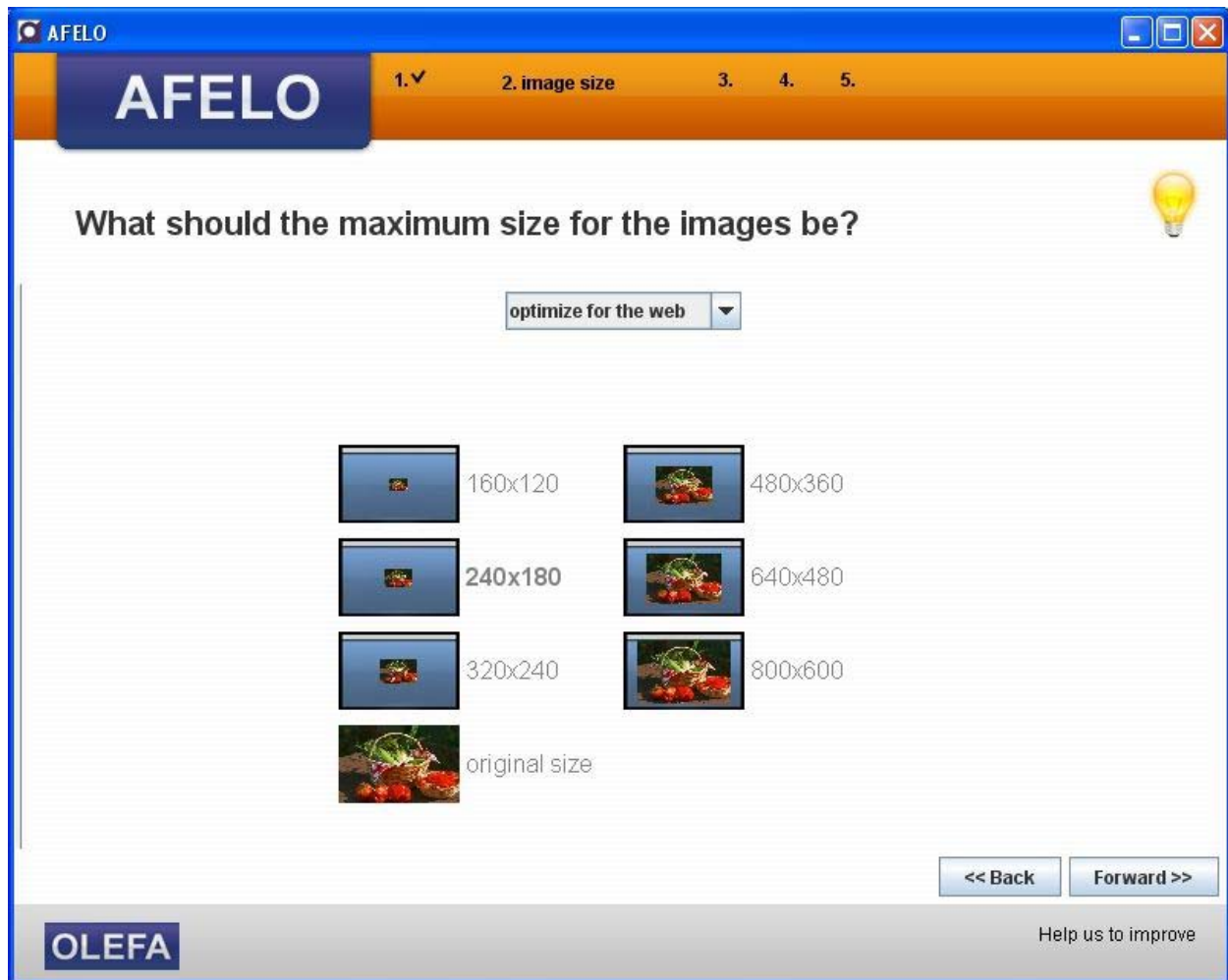
Then you will be guided through your directory structure on your computer to select either one or more images, or just one whole directory for compression and resizing.

Below is a sample of a graphics directory, from which I will select one image.



Select the picture(s) you want to work with, and press "Forward".

AFELO will now ask you to select the picture size on a screen like the on below:



Please note the drop-down box at the top of the screen. I suggest that you select the “Optimise for the web”. The other options allow you to resize the picture to your own specifications, and can be unpredictable, unless you know a bit about graphics and their settings.

The selected option above allows you to choose between the 6 most recommended and safely used sizes on optimised web sites.

After you have selected the size, AFELO will give you options to do basic editing on your graphic, and then ask for a target directory to save the new images in. In order not to overwrite my original images, I ALWAYS select a different directory to save the compressed files into.

Your optimised graphics are now ready to be uploaded to your Kwikwap site! (Please remember where you saved the compressed files, otherwise you are going to upload the non-optimised files to your site.)

Examples

I have selected a rather large photograph for this exercise. The original file size of the picture is 4.227 MB, way too big for any web site. The dimensions of the graphic is 3072 x 2048 pixels, much bigger than can be displayed on any computer screen at 100% zoom factor. Thus, it would be totally impractical to use such a photo on any web site.

I used AFELO to compress the file, but to keep the original size of the picture. The file size is now 501kB – less than 1/8 of the original file size! To demonstrate the quality of the picture, I have cropped a small section of the photo from the original file, and also one from the compressed file. See if you can see a difference in the quality and resolution (pixel density) of the two samples below:





You will be hard-pressed to guess, even on this size that the Original, 4.2MB picture, is the top one. This demonstrates how well AFELO manages to preserve quality, while massively saving on storage space and internet bandwidth.

To be more practical, I have included below, two pictures which were compressed and resized from the original file mentioned above, using AFELO. The first one is 800 x 600 resized, and the second one 240 x 180 pixels.

800 x 600 pixels



240 x 180 pixels



Play with the settings in AFELO to get the best size pictures for you specific web site layout.

	Picture Dimensions	File Size
Original Photograph	3072 x 2048 pixels	4.227 MB
Compressed ONLY	3072 x 2048 pixels	501 kB
Compressed and resized	800 x 600 pixels	108 kB
Compressed and resized	240 x 180 pixels	52 kB

As you can see from the above comparison table, your storage space and bandwidth savings are astronomical when you use a graphics optimizing package like AFELO.

You can download AFELO for free at <http://www.afelo.com/>

I hope you enjoyed this introduction, and invite you to send any feedback or comments to me at my contact details below.

