

**HTML and Images**  
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**EDM 310**

Pictures, referred to as images in HTML code, must be processed before they are used on a web site if you want to make the response time for a user tolerable, especially if they are still connected to the internet by a modem and the picture is a high quality digital photo, or a high quality scan that would allow the picture to be printed at high quality.

Task Number 1: Modify the Storage SIZE of the picture. We use size to mean two things when we talk of pictures. It can mean the Physical Size of the picture when displayed on a screen or the Storage Size of the image. The latter is what we are addressing here. Everything stored on a hard drive, a pen (USB flash) drive or any storage device takes up space on that device. High quality pictures taken with the best modern digital cameras can take 8 – 10 megabytes of storage space. If you put images of this storage size on your web page you use excessive space on the server (which often costs you money) and the time it takes to send the image to a user is radically increased.

The goal is to have pictures that are approximately 50 kilobytes in storage size. If the picture starts at 10 megabytes and you want to get it to 50 kilobytes, you must reduce its storage size by a factor of 200. In other words you must end with an image 1/200 the storage size of the original.

Task Number 2 is to make the Physical Size appropriate for your web page. There are two ways to do this. We will use both approaches. One approach to deal with the Physical Size is to establish an upper size at the same time we deal with the Storage Size issues. Later we will actually set the size in html code (which is not discussed here but is discussed later in this document.)

**Setting Storage Size and Upper Limit for Physical Size**

How do you change the Storage Size of an image (and set an upper limit for the Physical Size at the same time)?

We will do it in Adobe Photoshop Elements.

Open Elements.

Close the screen that opens first, leaving a blank work area and the toolbar.

Open the picture with which you wish to work.

Image menu – Resize Image

Make sure Constrain Proportions and Resample Image are selected

Change width or height to 6 inches (or larger if you need a larger size on the screen. You should set it to the largest Physical Size you are likely to need for your website. Seldom is that larger than 6 inches. You cannot INCREASE the size later without severely damaging the appearance of your image. That is why we set the UPPER limit we may need.)

Change the Resolution to 72 pixels/inch

Save As ... Be sure to indicate for web. Follow naming rules (all letters and numbers, all lower case, no spaces in names, must end in .jpg) For example I might name a picture of trees as treesweb.jpg

When asked, set .jpg quality to 6 or 60%.

Be sure the picture is saved in the folder with your html documents if it is to appear on your web site. If it is not in that folder it will not appear on your web site!

### Writing the HTML Code to Display a Picture

After you have changed the Storage Size of your image and after you have set an upper limit to the Physical Size of the picture, you are ready to write the HTML code that displays a picture on a page.

The code consists of the `img` tag and two modifiers or attributes of that tag. Interestingly, the `img` tag does NOT have a closing tag.

Example:

```

```

Two modifiers we use in the `img` tag are:

1) **src** `src` means source, or what is the name of the image to be used and where is it located? Since we will put it in our folder with our html pages, all we have to do is correctly identify the picture by the name we have given it (following the naming rules).

2) **alt** the `alt` tag is MY requirement. It makes the image tag compliant with accessibility standards. The text you write for the `alt` modifier will be read to a blind person using the internet with a special computer. The blind person will not see your picture but will know about it because of what you have included in the `alt` tag.

### Changing Physical Size in Code

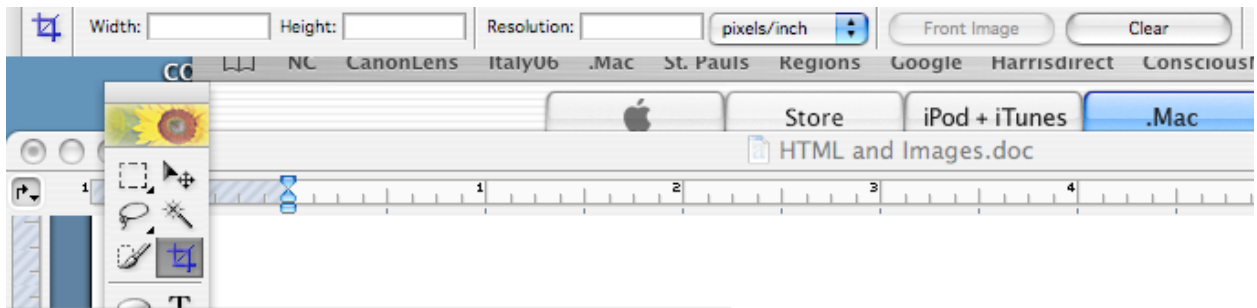
We can also change the Physical Size of an image in code. BUT we should not use this approach until we have reduced the Storage Size and set an upper limit for the Physical Size as outlined above. Then we can set a size in code – IF NEEDED.

We will need to use this approach if we use the same pictures as link buttons. Where I would like to make a button out of my `treesweb.jpg` image, I would add this third modifier to an `img` tag: `width="100"` (or maybe 125 or 150) UNLESS I was using a portrait picture in which case I would write `height="100"` (or maybe 125 or 150). You can include both height and width in the same `img` tag but it is not advised. If you use only one, the computer will keep the aspect ratios the same. It is harder to do it on your own which is necessary if you include both (unless you want some strange alteration of your image).

In determining what number to use, take into consideration that 72 is about one inch on a typical 640x480 screen. You may make adjustments after you try out your web page.

## Other Uses For Elements

Another important use for Photoshop Elements is to crop your picture. If you mistakenly scanned white space with your picture, crop it out in Elements. To do so, click on the crop tool.



Click Clear in the special menu for the crop tool. Drag around the area you want to keep in the picture. Then double click on the image. **DO ALL OF THIS BEFORE** you reduce the STORAGE SIZE or the PHYSICAL SIZE of your image!

### Making An Image Into A Link (Button)

You already know that a word or words can be a Link or a Button (something that a user can click). An example would be the word home in the following code:

```
<a href="index.html"> Home </a>
```

In the example above the word Home is a button that will take the user to the page named index.html which must be in the same folder as the html code for the page on which the link (button) resides. The a tag creates a link, the href="..." is the hypertext reference address. This is followed by the button text, then the end a tag </a>.

The same procedure is used when an image is to be used as a link (button). Instead of the word to be clicked we put the image tag that will show the picture that will be the link. For example my trees picture could be a link using the following code:

```
<a href="index.html">  </a>
```

Compare the two lines of code. The only difference is that Home has been replaced by the img tag! That's all there is to it.

And remember – I added the modifier width= "100" because the trees picture is a landscape picture. If I were using a portrait picture I would add a different modifier: height="100".