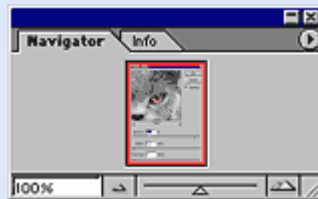


Sharpening I.

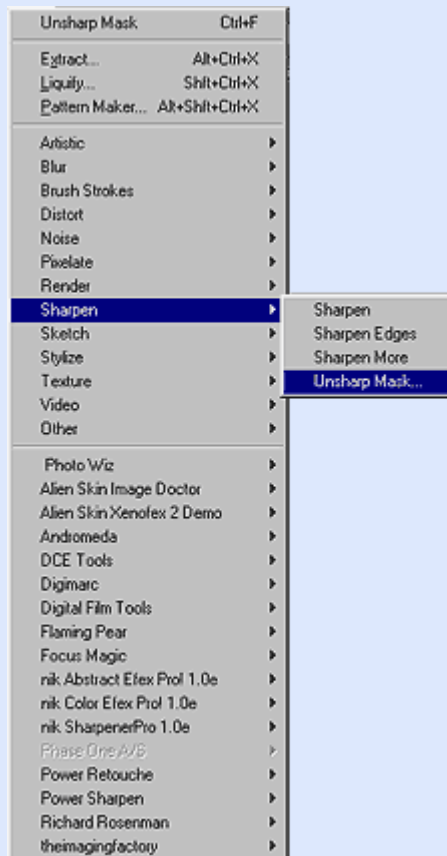
Level: Very easy

You have just shot the greatest "nature photo" of your favorite pet, but the result is a bit blurred. It badly needs some sharpening. What should you do if you are totally unfamiliar with image manipulation software? Don't panic, read the practical advices below instead. They may come handy later on.

After starting **Photoshop**, click **File/Open** to open the photo from the location where you have copied it.



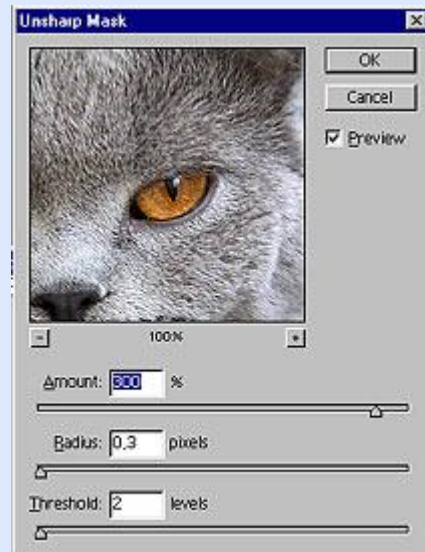
When the picture displays on the Photoshop workbench, you can zoom it as you like. In the upper left corner of the workbench, you can see a small window with tabs called **Navigator** and **Info**. You can set the zoom rate in the **Navigator** window. 100% displays the image in its original size. This does not increase or decrease the real dimensions of the photo, you just see it this size in the application. You may want to use a **100%** zoom value even if the picture doesn't fit on the screen, so that you can see the borders of the sharpening area exactly.



You may use different filters for sharpening. These can be found in the **File/Filter/Sharpen** submenu. In the **Photoshop** version I use (v7.01) you can choose 4 different filters called **Sharpen**, **Sharpen Edges**, **Sharpen More**, and **Unsharp Mask**. The first three does sharpening in a predefined way so they should only be used for very quick sharpening jobs that need to be done in a few seconds. You can achieve the best results by using the filter **Unsharp Mask** that can be set in relatively different manners. In the following section, we provide a more detailed description of this filter. A few words about the other sharpening procedures: **Sharpen** does a mild automatic sharpening on the whole picture. **Sharpen Edges** sharpens the finer edges in the photo. **Sharpen More** provides a stronger sharpening on the image

Now let's get back to **Unsharp Mask**. After clicking this menu item, a small

window appears with the preview of the image in the upper left corner for checking the results of your actions in advance. Set zoom rate to 100% to see the photo in its original size. Make sure that **Preview** is selected in the upper right area. It is selected by default. You can also monitor the sharpening procedure outside the window, on the main picture.

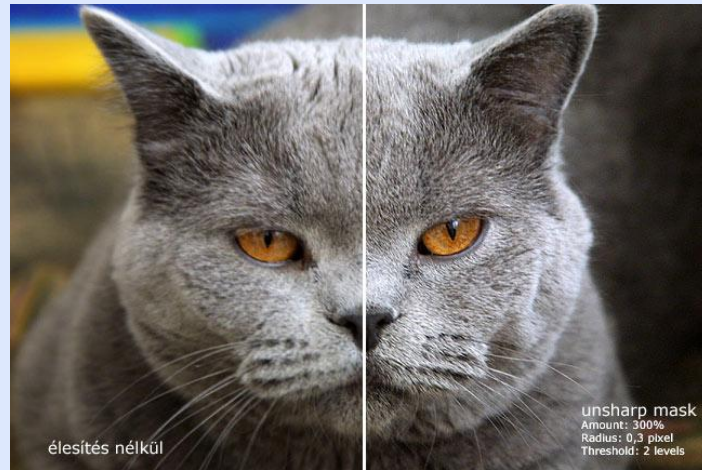


At the bottom of the window you can see 3 sliders. Amount sets the sharpening value from 0 to 500%. Radius specifies the width of the sharpening relative to the detected edges. Lower values result in sharpening the tiny, finer details while higher ones apply it to the rougher, broader edges. The value can be set from 0 to 250 pixels. **Threshold** sets the limit under which the application decides that an area should be sharpened. The value can be set from 0 to 255 pixels. When set to 0, the sharpening effect will be applied to any area that can be detected as an edge. The higher the value, the smaller the actually sharpened area. You may find this a bit confusing at first, but you don't need to learn the text by heart! Try the functions repeatedly, and after a while you will feel which value you should change.

Let's see an example. You have loaded the portrait of your little favorite and opened the **Unsharp Mask** window. You can see that the fur appears in tiny, fine details in the picture. You want to emphasize these details more. Set **Amount** to 500% at first so that you can see the effect of sharpening in its wholeness. You will lower this value to refine the effect later. Leave **Threshold** at 0 to have the sharpening applied to the whole picture. Now try **Radius!** If you drag the slider towards higher values, you can easily see the result of the effect. As the image contains finer details, too high values cause it to "fall apart": Unrealistic, rough edges appear, followed by enormous contrast. You only need to emphasize the finer details but keep the natural character of the photo. In this case, the very fine **Radius** value of 0.3 leads to a result pleasing to the eye. 0.4 is already a bit excessive. It can be used as a rule of thumb that pictures containing many details can be sharpened nicely by using an **Amount** of 500% and a **Radius** of 0.3 or even 0.2. In this particular case you can keep 0.3 but reduce **Amount** to about 300% and **Threshold** to 2, as the aggressive, too light edges look disharmoniously even at a **Radius** of 0.3. These settings can be generally used for photos of furry animals or, for example, landscapes. When dealing with even finer details, a **Radius** of 0.2 and an **Amount** of 400 to 500% may lead to a nicer result. Because of the silvery nature of the cat's fur, a **Radius** of 0.3 is not very irritating. Generally, keep **Threshold** low, you may even leave it set to 0. Keep in mind though, that sharpening smaller details may not only enhance the characteristics of the fur but also cause the appearance of small grains called noise. Your basic guideline for sharpening is: BE CAUTIOUS!

If the image contains fewer details (as with a photo of a building or a human silhouette, where you don't want to emphasize the small details) you may want to set **Radius** to 1 and leave **Amount** on a low setting of about 50 to 100%. This way, relatively broader edges, silhouettes will be sharpened but finer details and noise won't.

In the next sharpening lesson, you will get acquainted with more complex procedures. Until then, have a good time with **Unsharp Mask!**



Without sharpening / unsharp mask