How to Properly Resize Images for Facebook

Love it or hate it, Facebook has become an important social media platform for not only promoting your work, but also for finding new clients. Whether you choose to create a fan page for your business or just upload your photographs in your own profile, you might be wondering what the best resolution and export settings should be for your images, so that Facebook can display them at the highest quality. In this article, I will not only go over Facebook's resizing and compression behavior, but also show you the proper settings to use when exporting images from both Lightroom and Photoshop.

1) Facebook Image Resizing and Compression

A few years ago, Facebook was terrible at resizing images. If you were to upload an image back then, it would not only make it look awful by compressing the heck out of it, but it would also strip out the color profile. If you were not very careful about the particular resolution you resize to and if you exported images in anything other than sRGB, your photographs would look nothing like they did on your computer. Since then, a lot of things have changed for the better – Facebook's image processing engine has gotten much more advanced and better, so most issues of the past have thankfully been addressed. Still, Facebook recommends to resize images to certain resolutions before they are posted, as explained in this article. As of 11/09/2014, below are the recommended sizes for uploading photographs to Facebook:

1. Regular Photos: 720 px, 960 px, 2048 px
2. Cover Photos: 851 px by 315 px
3. Full Width Link Thumbnails: 484 px by 252 px
4. Profile Picture in Header: 180 px by 180 px

Based on the above data, the three best resolutions to extract photographs are 720, 960 and 2048 pixels. What I wanted to find out, was what happens if one is to upload images at these and at different sizes. What is the impact to a photo, if it is uploaded at say 980 pixels instead of 960? And what happens if one accidentally uses a different color profile like Adobe RGB or ProPhoto? Let's take a look at these case scenarios and see.

1.1) Facebook Image Compression

What does Facebook do to an image that is extracted at a recommended resolution? Let's take a look at the before and after of an image that I extracted from Lightroom at 960 pixels wide resolution and 77% JPEG Quality:

The original file size was 204 KB in the "Before" state and Facebook resized it to 64 KB, so there is a pretty aggressive compression algorithm taking place here. If you look closely, the

"After" image shows some artifacts in the sky and around the subject, but it is not bad and certainly tolerable. How much compression is applied? It depends on each image, but it seems like the compression varies between 47-61% quality equivalent in Lightroom. In addition to compressing the image, Facebook's image compression algorithm also removed all of EXIF data, PPI data and changed out the color profile information, replacing "sRGB IEC61966-2.1" with a "c2" color profile. When looking at images using a color space aware image viewer or my browser, I can see no difference between the two, so the "c2" profile is indeed very similar to sRGB, as indicated in this article from a Facebook engineer.

Summary: Even if you upload at the recommended resolution, Facebook still applies a compression algorithm on images. The only way to prevent compression is by uploading images that are smaller than 100 KB (which is often too little for a high-quality image).

1.2) Facebook Image Resizing

Now let's take a look at what happens when one uploads an image that is slightly different in size than the recommended value. For this test, I uploaded two images – one at 960 pixels and one at 980 pixels. Below are the results for the 960 pixel image:

Just like in our first test, there is a massive amount of compression taking place. For this second landscape shot, I extracted the image at very high quality – 85%, which is a step lower than 100% JPEG quality. The original image size was 772 KB, with EXIF and other JPEG data preserved. Facebook's compressed the image all the way to 150 KB and removed all the embedded data. Again, the embedded color space was replaced from "sRGB IEC61966-2.1" to "c2".

But what happens if the image is not provided at the recommended resolution of 960 pixels? Let's see what happens to an image that I exported at 980 pixels:

Interestingly, the image looks remarkably close to the image that I extracted at 960 pixels. Facebook's algorithm did not resize my 980 pixel image to 960 pixels and the only thing that happened here was compression again – the image went down from 802 KB to 159 KB and EXIF data was wiped out again. The only difference is, this time, the color space was replaced with "sRGB IEC61966-2-1 black scaled". Not sure why the profile's name was not "c2", but the image did not differ in any way in terms of colors.

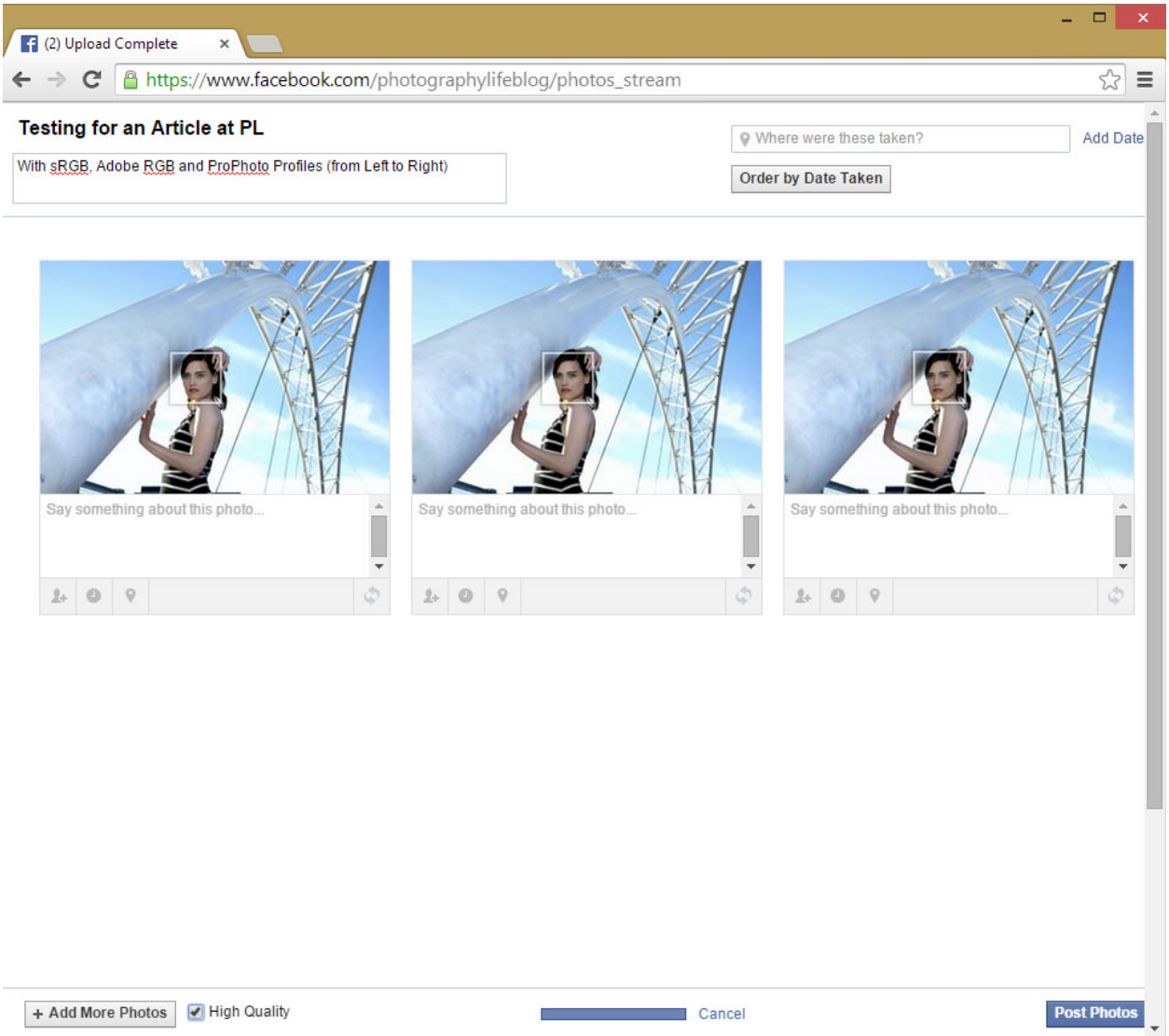
I also tried uploading higher resolution images at 1024, 1200, 1600 and 2048 pixels. All images were simply compressed and the data was removed, without any resizing taking place.

Summary: It turns out that the resolution of your images is not important, so it does not matter whether you extract images at recommended sizes like 960 or 2048 pixels. Any image size works and each image will be treated with plenty of compression and removal of embedded data.

1.3) Facebook Color Space Conversion

What happens if you accidentally export images with a different color space like Adobe RGB or ProPhoto RGB instead of sRGB? Let's take a look at the two images below that I exported in Adobe RGB and ProPhoto RGB color spaces (Before: Adobe RGB, After: ProPhoto RGB):

If you compare the two images above to the first image in this article, you will see that the colors are the same. This means that Facebook's image compression algorithm is also doing a conversion from Adobe RGB and ProPhoto RGB to sRGB automatically. So if you do upload an image with a non-standard color space, Facebook will still change it back to sRGB automatically. The color space change can be seen clearly from the below screenshot, where all three images appear the same, despite having different color space before upload:



Does it mean that one should not care about what color space to use during exporting? No, I would still use sRGB during exporting, because rich colors could get altered and look a bit

different after the conversion process. You are better off with color conversion taking place on your computer, rather than relying on Facebook's conversion engine.

Summary: Facebook automatically converts color space to sRGB, even if Adobe RGB or ProPhoto RGB images are provided. To avoid color conversion issues, I would still recommend to extract images with the sRGB color space.