

Change EXIF Date & Time in Nikon Raw files (NEF)

For whatever reason, on one camera the year did not roll over as it should have. The results were the metadata (EXIF) was dated January 2008, and should have been January 2009. Normally this would not be a problem, but 5 years from now I will be asking myself how was that picture taken in 2008 when that model camera did not exist then.

There are several date fields involved here. In Windows Explorer, there is the File Modified Date. In the metadata, there is Modify Date, Original Date, and a Create Date. When I say Date, it is really Date and Time, and all of the fields have both, even if the field is just labeled Date. Some even have an offset from the Greenwich meridian for the time zone.

Raw files are not changeable, so the book says. Most programs will not modify the dates in raw files, but JPEG files are modifiable. If it's just a JPEG file that is incorrect, I would use the program "EXIF Date Changer". You just Add 365 days, 0 hours, 0 minutes, and 0 seconds. Presto! This program will allow you to change time zones also. If your camera is setup for Mountain Time zone, and you shot in Eastern Time zone, you can just add 2 hours. This is a free program (donations accepted) available here: <http://www.reliksoftware.com/pages/products/exif-date-changer.php>

"EXIF Date Changer" will not touch the raw files. The only program I have found so far, is "ExifTool" by Phil Harvey available here: <http://owl.phy.queensu.ca/~phil/exiftool/index.html#shift>

These programs do not touch the actual picture data, just the metadata. ExifTool is not for the casual user. You really should have some of the old DOS experience to use it. Although you can set it up to double click it, for flexibility, I decided to set up some batch files to do the work. The program is platform-independent and uses a Perl library. What's a Perl? Don't worry about Perl, you can download either a Windows executable version, or a Mac OS X package. There are 21 pages of application documentation, but it is for the programmer, not for the end user. The documentation will be "Greek" to most folks. Here are the steps I went through to change the dates on a bunch of raw files.

Download the Windows version and follow the ExifTool installation instructions.

Place a copy in your windows directory. (Mine is E:\WinXP) This will allow you to run it from a batch file, or you can do Start/Run/ExifTool and add your parameters on the command line. I recommend the batch file.

Create a Temp directory and copy the raw files that need to be changed. Note I said copy, NEVER work with the original files! In this example as the last step, I will copy over the original files, but I also have a backup copy on a CD.

Create a batch file called "ShiftDate.bat" or a name of your choice. This is what it looks like:

```
:: shift all dates forward by 1 year. (the year was wrong in the camera)
::
exiftool.exe -P -k "-AllDates+=1:0:0 0:0:0" C:\temp4
```

A quick explanation is in order here. The double colons with a space after them is a comment line. The “-P” says Preserve the date/time of the original file (Windows Modified Date). The “-k” tells Exiftool to pause before terminating at the end so you can see what happened in the batch file. In the “-AllDates” parameter, the plus says add, “1:0:0” is Year, Month, Day, followed by “0:0:0” which is Hour, Minute, Second. I placed a copy of the files to be modified in C:\Temp4 directory, and the last parameter points to it.

ShiftDate will go to the Temp4 directory, and for every picture type file, copy the files to a new file with an extension of xxx_original, and then change the dates. When run, you double the number of files in Temp4, the original files and the modified files. Let’s say I had the following files in Temp4:

```
DSC_0388.NEF
DSC_0389.NEF
DSC_0390.NEF
ShiftDate.bat
PrintEXIF.bat
```

After running “ShiftDate.bat” (just double click it), I would have the following files in Temp4:

```
DSC_0388.NEF          these are the modified files
DSC_0389.NEF
DSC_0390.NEF
ShiftDate.bat
PrintEXIF.bat
DSC_0388.NEF_original  these are the original files but renamed
DSC_0389.NEF_original
DSC_0390.NEF_original
```

(This part is optional, if you have a good EXIF viewer.) I also have a batch file that prints out all of the EXIF data fields called “Print EXIF.bat”.

```
:: create a text file of the EXIF data
exiftool.exe -k -a -u -g1 -w txt C:\temp4
```

This batch file will create a .TXT file for every source file. This TXT file is a listing of all of the EXIF data that is included in the raw file. Each file is about 4 printed pages long. If you run a “Before” and “After” printEXIF, (before you run ShiftDate and after you run ShiftDate), you can compare what was done to the data.

After running "PrintEXIF.bat, I would have the following files in Temp4:

DSC_0388.NEF	these are the modified files
DSC_0389.NEF	
DSC_0390.NEF	
ShiftDate.bat	
PrintEXIF.bat	
DSC_0388.NEF_original	these are the original files but renamed
DSC_0389.NEF_original	
DSC_0390.NEF_original	
DSC_0388.txt	these are the EXIF text data files
DSC_0389.txt	
DSC_0390.txt	

Double click on one of the .txt files and look at the EXIF data. Check to see that all 4 dates are correct. Windows Explorer should also show the correct date. Check a couple more .txt files, just to be sure. Bring up your picture viewer, the dates it shows should now be correct. Lightroom shows some date information, XnView shows most of the information, and even Photoshop CS4 will show the EXIF information. If all looks good at this point, continue on.

You can now copy the newly dated files back to your original location. (You ARE using a Copy, aren't you?) The .txt files you can just erase, and the same with the ones marked NEF_original. Be careful, now is not the time to say "Oops"!

Have fun,
George M. Kindt