

# Organising your photographs

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**1 Introduction** This is **not** a prescription of the only right way to organise your photographs. Rather, it's a description of how I do it, but is easy for anyone else to adapt.

Let me explain how I work. The bulk of my photographic images are for panoramas stitched together from anything between 2 and 45 images files. The 2 and 45 files *must* be kept together, simply because they are parts of a single whole. Most people have more sense, and just want to organise individual images, as do I for some of what I photograph.

These days, computer operating systems (Apple OS X, Microsoft Windows) have clever *built-in* data management software. It makes quite a lot of sense to use this software, as using it doesn't cost anything extra, and you don't have to learn anything new beyond what you should know already.

**2 What is data?** A rough definition - data is what you yourself generate: photographs, obviously; word-processed documents like this one; stuff you download from the Internet and want to keep; spreadsheets; and so on. As data now is so easy to generate, it doesn't take long to produce a high-class muddle. As the muddle gets bigger, it gets harder and harder to organise.

**3 Two definitions** The names to note are "file" and "folder".

**File:** a self-contained chunk of data, such as a digital photograph or a word-processed document. A file has a unique "file-name" and a "suffix".

As an example, my Pentax camera produces things like IMG4300.DNG. The "IMG4300" is the file-name; the ".DNG" (dot DNG) is the suffix.

The file-name is quasi-unique: the next file-name is IMG4301. (This is fine and dandy up to IMG9999, after which the next file-name is IMG0001 - so, unique up to 9999.)

The suffix tells you what kind of file it is. DNG is Adobe RAW format, like Canon CR2: JPG is more common, and compressed TIF doesn't have the drawbacks of JPG.

**Folder:** a software gizmo for keeping related files together. "Related" can be anything you like, such as files for a stitched panorama, or the date or place of taking (or both) of a group of photos.

When a folder is first created (OS X: right-click>New Folder) it's cleverly named by OSX "Untitled folder" under a little picture of a filing-cabinet's hanging folder.

If another folder is created immediately after the first, it is even more cleverly named "Untitled folder 2". The third is "Untitled folder 3", and so on.

These names can be changed by clicking on the folder, then (OSX: right-click>Rename) and over-writing "Untitled folder" with what you want. Folder names have no suffix.

A very important attribute of folders is that they can be nested, one inside another.

**4 File and folder sorting** The sorting capability of your operating system is what you use to organise your photographs. It is *absolutely essential* to understand what the system gets up to.

Things have to be named, otherwise you don't know they're there. File and folder names are (in the jargon) alphanumeric character strings. "Strings" just means the characters are one after the other. Keeping things as simple as possible, "characters" are what you pick out on your keyboard to make a file or folder name. "Alphanumeric" means that the names can be mixtures of letters and numbers.

"Sorting" just means arranging according to some kind of scheme. To keep things as simple as possible, we'll consider only the scheme "arrange by name".

Suppose we have some things (files or folders) with distinct but unsorted single-letter names, such as F, A, B, D, C, E, ... (we're ignoring suffixes). If we tell the computer to "arrange by name", on the screen the names will be shuffled into the arrangement A B C D E F ..., as in a dictionary. The same thing happens with single but repeated numbers: they are arranged in ascending size order (e.g. 2 2 5 6 6 7 9 ...).

Things get more interesting (and confusing) with names made of letters and numbers. Reading the names left-to-right and character-by-character, the first character is most important, the second character is next most important, then third, and so on, and *numbers come before letters* in the pecking order. For example, A1 and 1A are "arrange[d] by name" as 1A A1.

The only way to become really confident with file and folder naming rules is to *experiment* - you won't break the computer or use up its supply of characters. Learning by doing rules - OK?

**5 Including dates in names** Always use numeric year-month-day form for dates, ideally formatted as YYYY-MM-DD to be century-proof, though in 2021 you can get away with YY-MM-DD for the next 79 years. Be sure to use 01 (zero one) for January through to 09 for September, otherwise (unhelpfully) October, November and December will immediately follow January. Likewise use 01 to 09 for the first nine days of the month, for much the same reason.

If the date is made the first part of a name, "arrange by name" will always put folders in date order.

For no very good reason, I put an underscore "\_" between YYYY and MMDD, as in 2021\_0125. It may be a serious failing on my part, but I've never been able make anything other than file-by-date work properly. For me, getting date order on demand has a lot to recommend it.

If you want to be really precise about *when*, it's possible to include the time as well, in the format YYYY-MM-DD-HH-MM, where HH is hours and the right-most MM is minutes. The date ordering works just as well if these additional *numbers* are added.

For every individual photo file, its EXIF data gives its date and time, *provided the camera is set up correctly*. (OS X: left-click file, right-click>Get info).

**6 Including places in names** From the standpoint of organising, perhaps the most important things about a photograph are *when* and *where* it was taken. All that's needed is to tack onto YYYY-MM-DD the place text, like this: 2021\_0119 Wooler Water near Iron Bridge; or this: 2021\_0119 R Till at Weetwood Bridge.

Note that both examples have the same date. If they are folder names, and you tell the operating system to "arrange by name", then the second folder will precede the first since " R Till at ..." is ahead of " Wooler Water..." because " R" (space R) is before " W" (space W) in a dictionary.

**7 Other ways of organising** It may suit you better to organise your photographs by category, with names such as "Animals", "Zoos", "Castles", "Churches", "Bridges", "Beaches", and "Picnics". If you tell the operating system to "arrange by name" these headings will be arranged alphabetically. It's all fairly obvious once you get used to it.

**8 The folder hierarchy** A hierarchy is a series of levels of classification, from broad to detailed. There is a top level and a bottom level, sometimes coinciding (i.e. only one level).

In a digital computer the top level is the name of the disk holding the files saved on the disk. My iMac computer has three disks, named "Internal SSD", "StarTech" and "Time machine backup" (note alphabetic name order!) all of which are displayed on the desktop. See Figure 1 on the next

page. The first disk, Internal SSD, runs normal business: it is the computer's internal disk. The third disk, Time Machine backup, backs up the internal disk. "StarTech" and "Time machine backup" are external USB drives.

The second disk, StarTech, is actually two disk drives in a single enclosure, in a so-called "RAID-1 mirroring" arrangement. StarTech, which I use to hold only image files, automatically saves identical copies on both disks.

File names that come out of the camera very often, but not always, are at the lowest level of a folder hierarchy. This should be no surprise as your pictures (i.e. the camera-generated files) are what you are trying to organise. It should also be no surprise that some camera files are not at the lowest level. You may choose to edit a camera-file in some way, and keep the result in a folder linked to the source file. This typically happens when camera RAW files are converted to JPGs or TIFs.

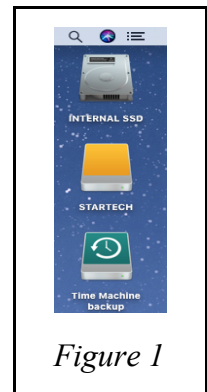


Figure 1

**9 Folder varieties** A left-double-click on the StarTech thumbnail displays the contents of StarTech. See Figure 2 below. (To some extent, telling people to look at your folder structure is a bit like asking them to inspect your underwear drawer.)

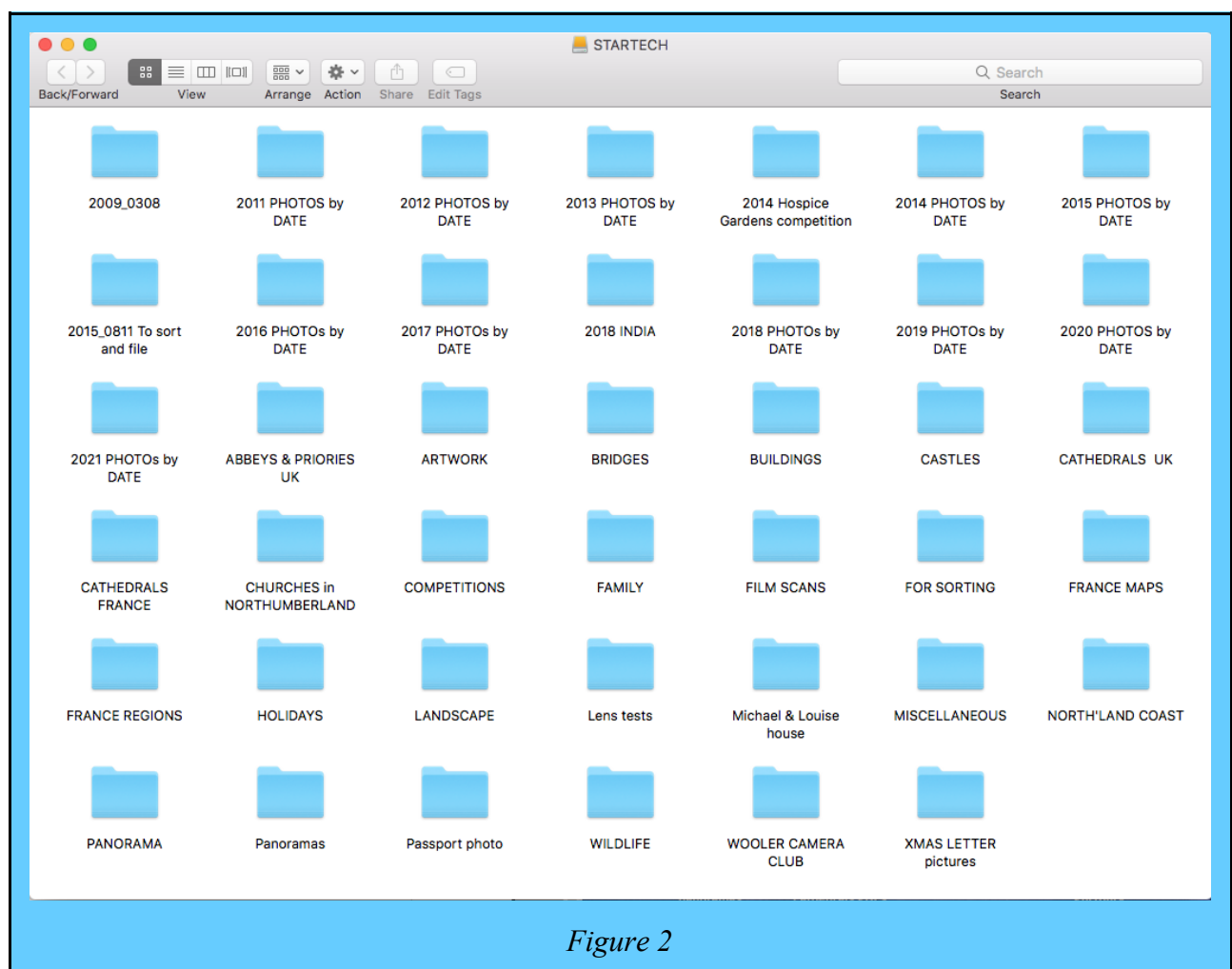


Figure 2

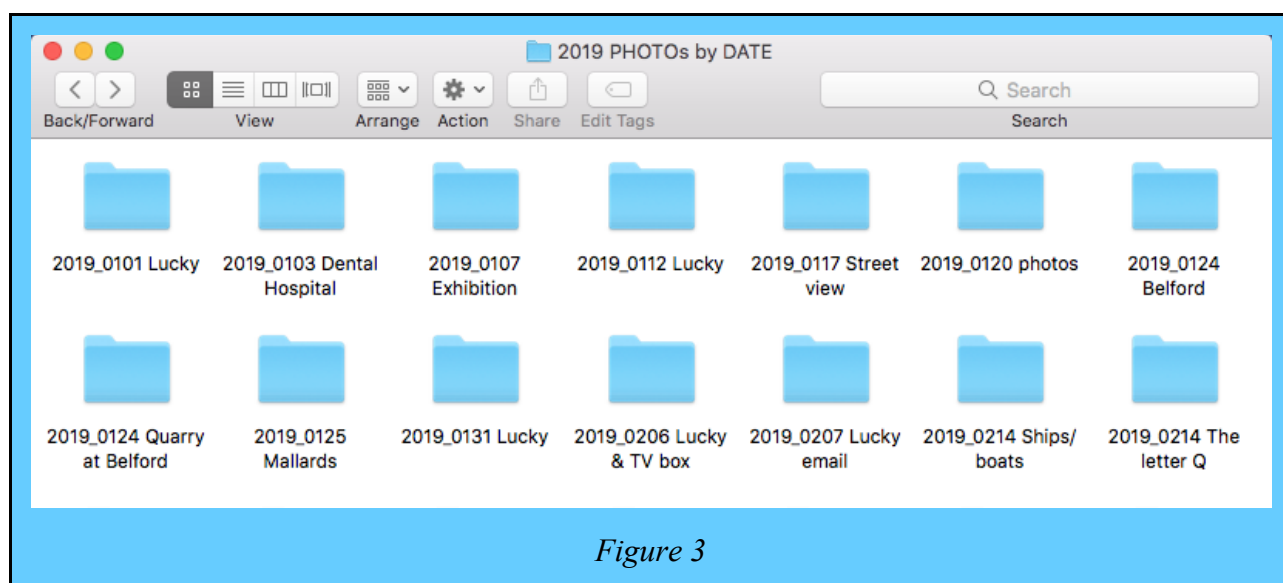
At the top of the display panel is a grey rectangle. At top centre is the disk name "StarTech", so you know you're in the right place. The "Back/Forward" arrows are greyed out because nothing is selected. The dark square above "View" shows that displayed items are shown as icons. Clicking on "Arrange" produces a drop-down menu, the first choice of which is [arrange by] "Name": clicking "Name" produces neat rows, ordered by name according to the rules described earlier in §4 to §7. If you wonder about it, the top-level "StarTech" indeed is *arrange[d] by name*.

Roughly the upper half of the folders are arranged by date, exemplified by folder names "2011 PHOTOS by DATE" to "2021 PHOTOS by DATE". (There is also evidence of neglect of thorough organisation in the dated folder names: some are NOT named "*year* PHOTOS by DATE").

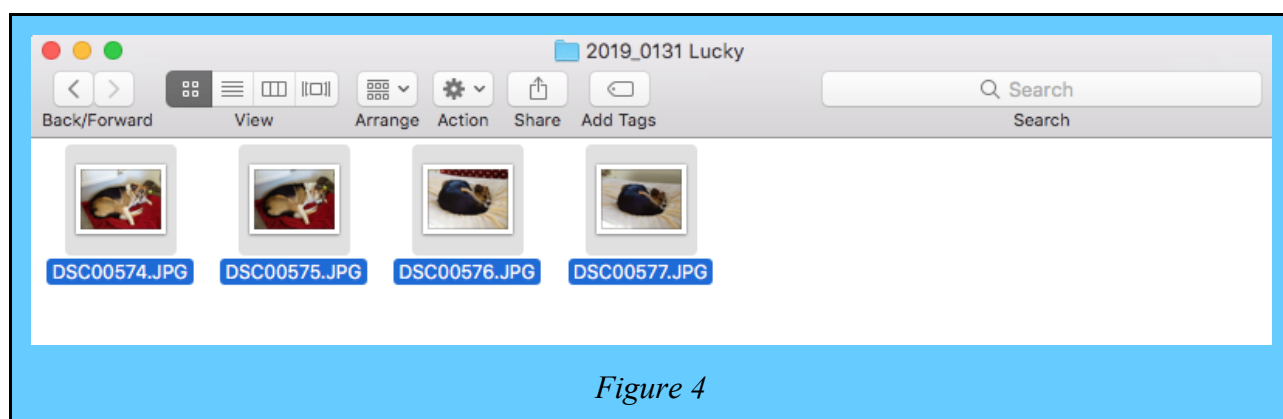
The lower half of the folders in Figure 1 are arranged alphabetically by category (see Section 7 above). It should be no surprise that category folders are in the lower half: remember that *numbers come before letters*. As will emerge, date and place organisation are present in lower hierarchical levels. The most complicated folder is "CATHEDRALS FRANCE".

## 10 Lower levels of the hierarchy

**10.1 PHOTOS by DATE folders** These folders are explicitly a file-by-date scheme. Each dated folder collects a year's-worth of photographs that I've taken for no particular reason other than the subject took my fancy at the time. From the second row of Figure 2, arbitrarily I've chosen 2019 PHOTOS by DATE to open. Figure 3 shows the first two rows of what's in that folder.

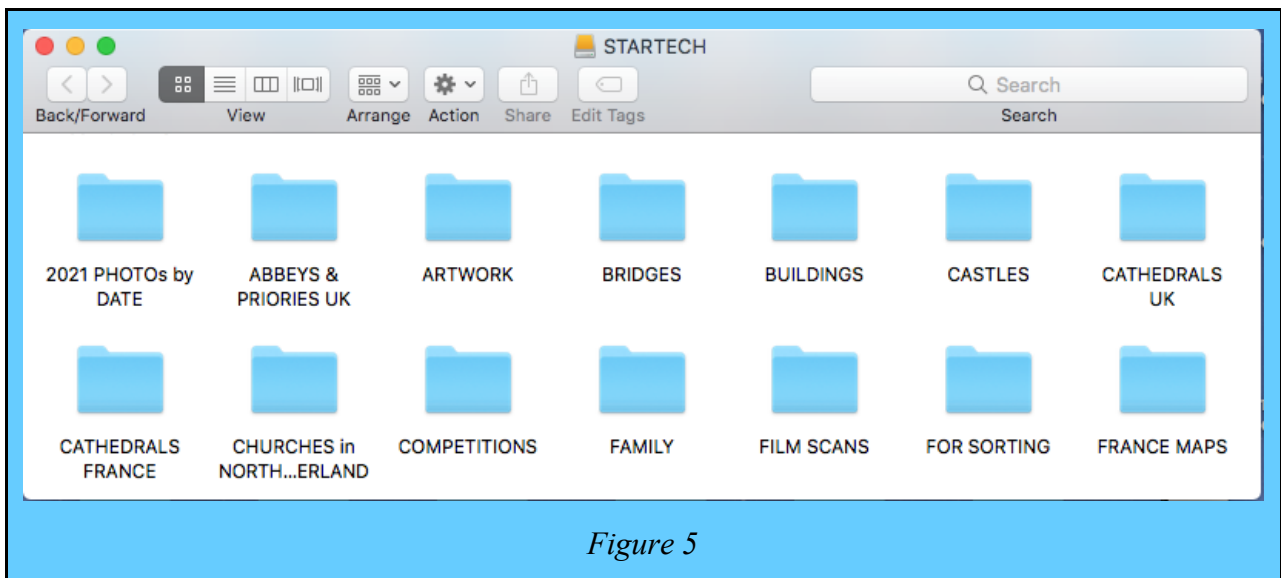


The folder 2019 PHOTOS by DATE holds eight rows of seven folders, a total of 56. Each folder name starts with the date in 2019, and the text following is either the place or the subject. The other 42 of the 56 are more of much the same. I've chosen 2019\_0131 Lucky to open. See Figure 4.

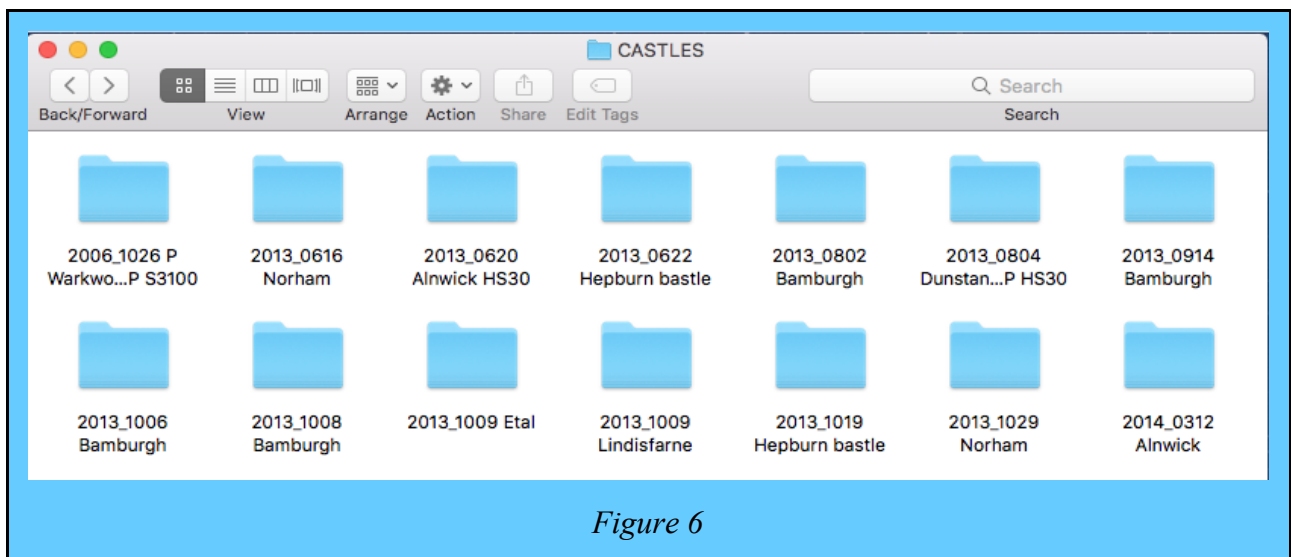


We are now at the lowest level in the 2019 PHOTOS by DATE hierarchy, the image files. (N.B. "Lucky" is my Collie *chiienne*, not a win on the horses.) The file names are what comes out of the camera: I don't change them, though sometimes I may add some text after the numbers.

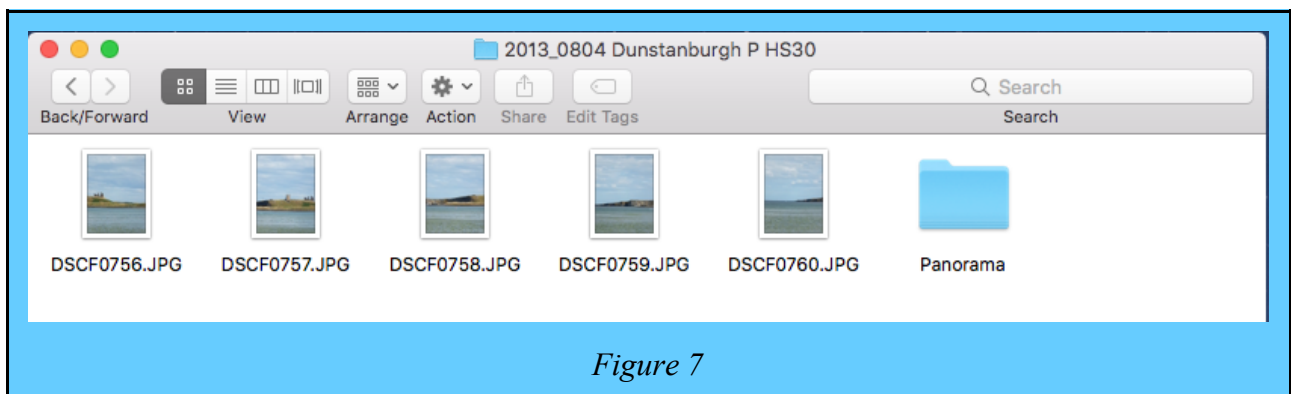
**10.2 Category folders** Category folders are in the lower half of Figure 2. The middle two rows of Figure 2 are shown in Figure 5 below.



After opening the folder "Castles", the first two rows of folders are shown in Figure 6. The folder names all are in the "YYYY-MM-DD & Place" file-by-date-&-place format.



Opening the folder "2013\_0804 Dunstanburgh P HS30" displays in Figure 7 a single row of five portrait-aspect image files, terminated by a folder named "Panorama".



The "P HS30" at the end of the folder name is there to remind me that the folder contains a stitched panorama and that all the image files are from a Fujifilm HS30EXR camera.

Opening the folder "Panorama" displays in Figure 8 two stitched-panorama image files.

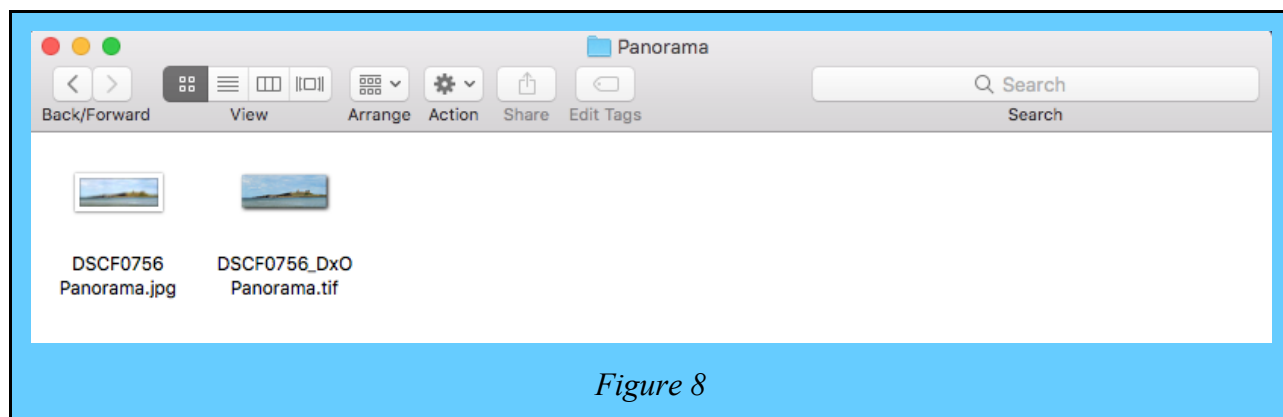


Figure 8

The image file named "DSCF0756 Panorama.jpg" is the result of the stitching operation on the image files in the folder named "2013\_0804 Dunstanburgh P HS30". The image file named "DSCF0756\_DxO Panorama.tif" is the result of pre-processing in DxO PhotoLab. In this instance, creating the lowest-level folder Panorama is not essential, as the two stitched-panorama image files have distinct names not in conflict with the image files from the camera.

The 5-level hierarchy just described is represented in the diagram of Figure 9 below. The black boxes are objects (files, folders) in the hierarchy. The ellipses (thus ...) each side of a name indicate that there are similar names at this level.

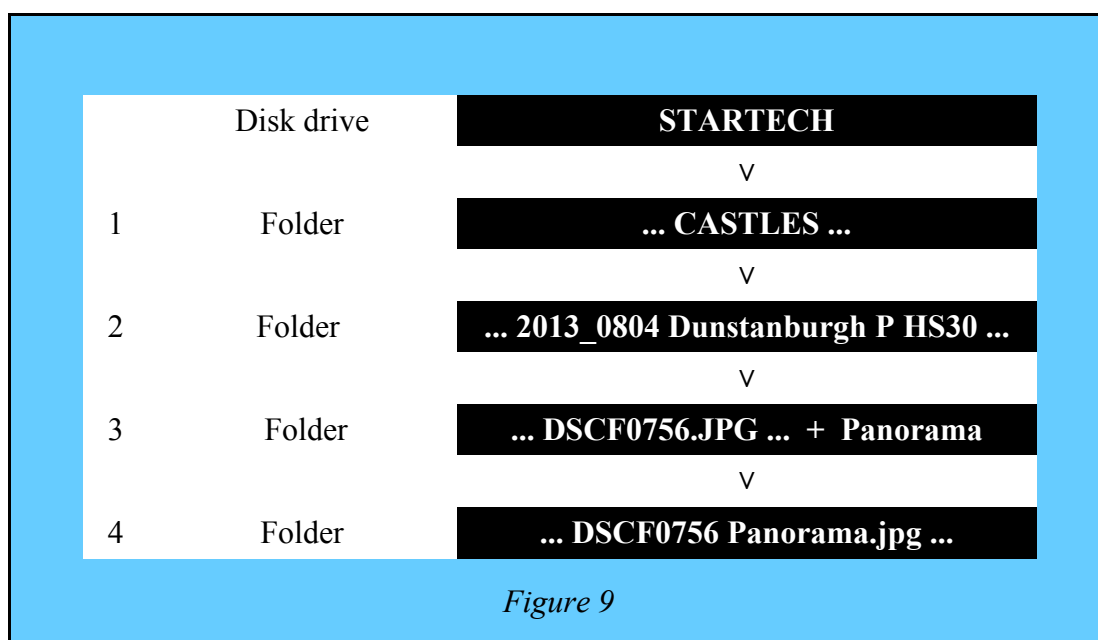
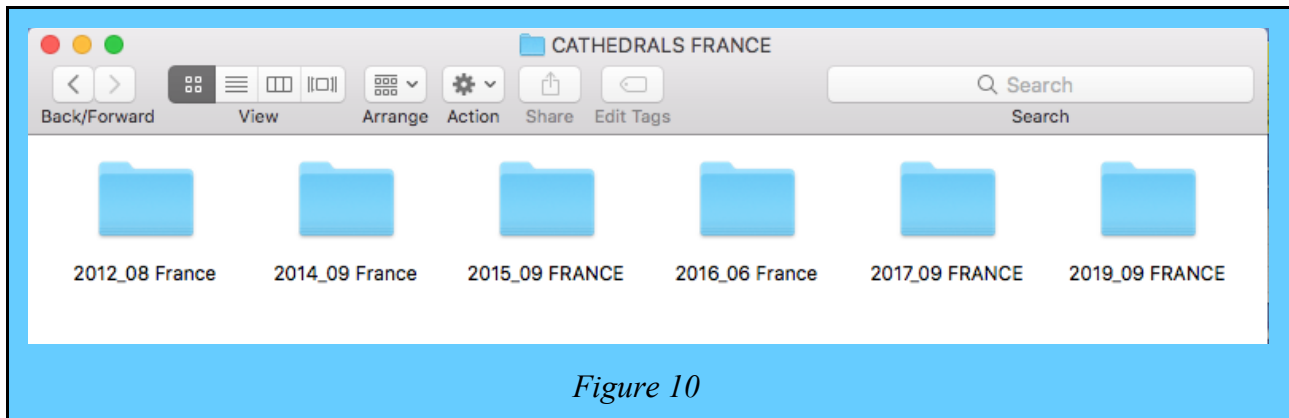


Figure 9

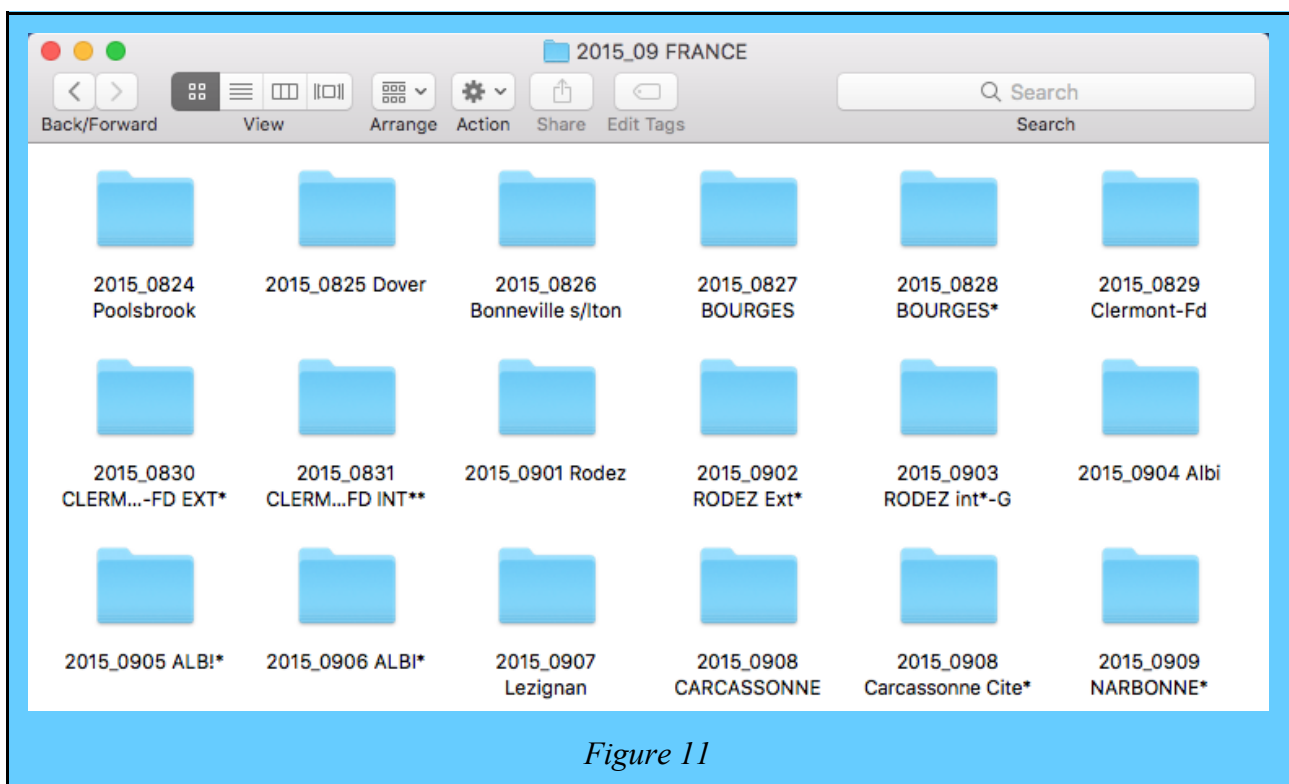
As can be seen from Figure 9, a three-level hierarchy is about the minimum degree of complexity for organising your camera files. Whether you organise by date-&-place, or place-&-date, and with camera files at the lowest level, you can't get away with fewer than three levels.

If you have only one disk on your computer (i.e. the internal drive), you will have to create a folder on your disk called (imaginatively?) PHOTOS to separate it from your text documents, etc. Then you will have one more level in the photograph hierarchy. Having only one disk is dealt with in my "**Keeping your photographs safe**" (to be published).

**10.3 CATHEDRALS FRANCE folder** This folder (See Figure 5, bottom-left corner), though others are similar, has the most complex structure I've found necessary. Opening the CATHEDRALS FRANCE folder exposes the file-by-date structure of Figure 10. Each folder is a record of an annual expedition to France to photograph French Gothic cathedrals.



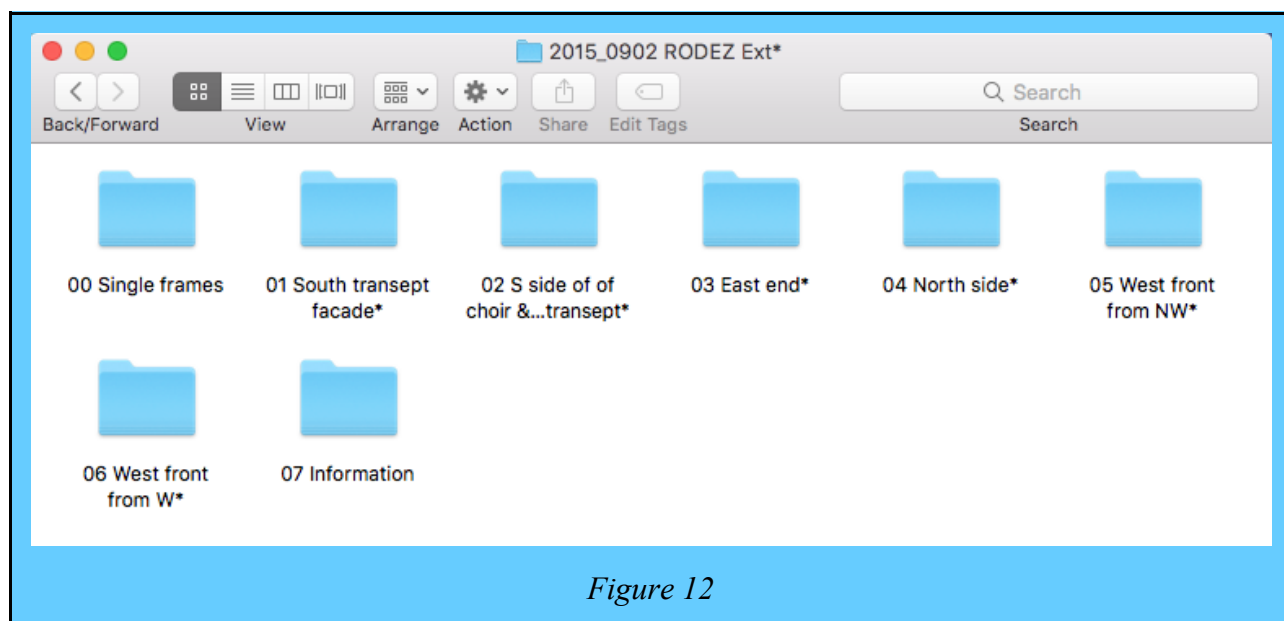
Opening the 2015\_09 FRANCE folder exposes the file-by-date-&-place structure of the folder, as shown in Figure 11. Only the first three rows are shown. A glance at the folder names shows that the folder dates change one day at a time. Folders of cathedral images are in capitals.



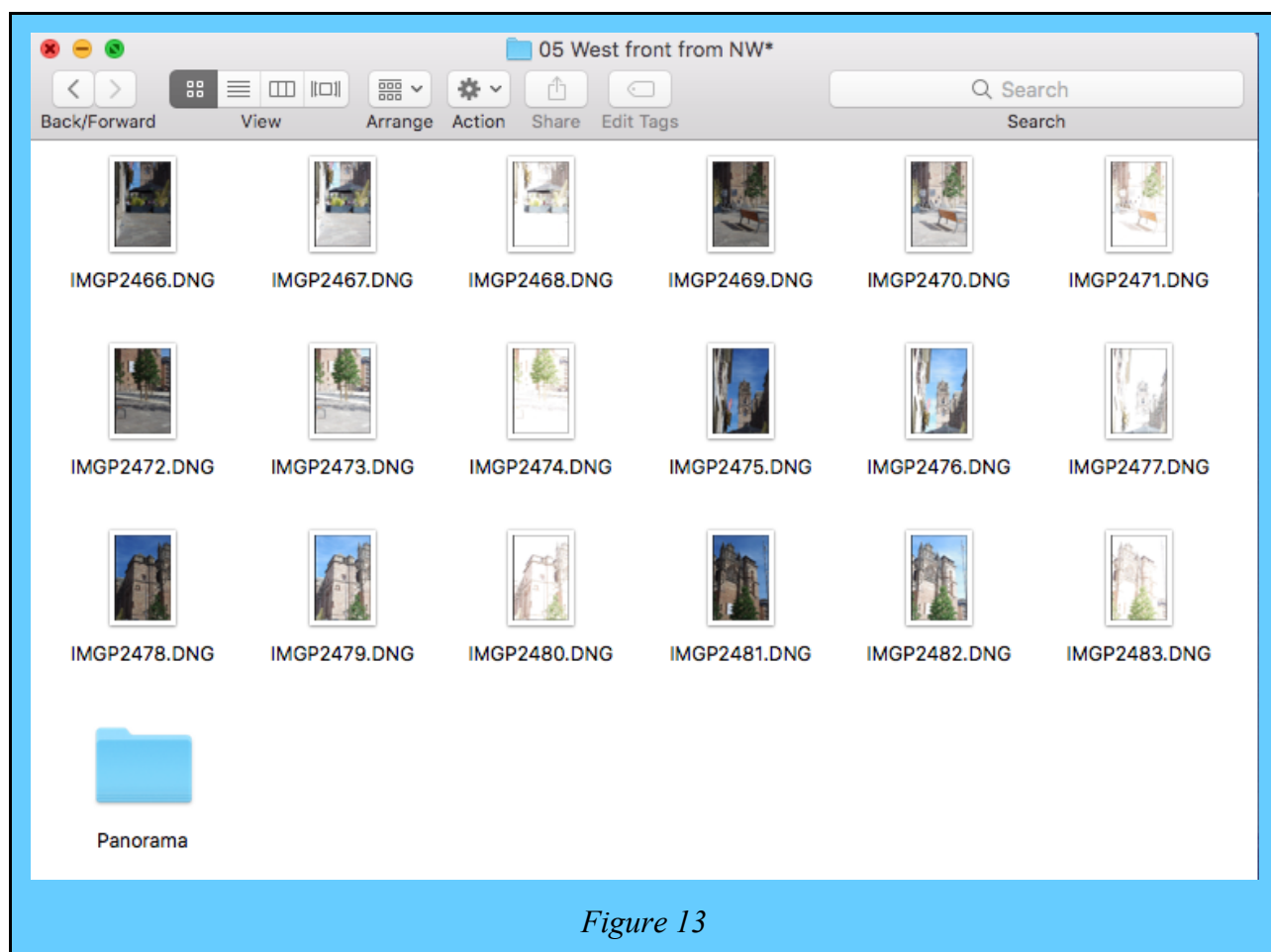
Opening **2015\_0912 RODEZ Ext\*** displays the folders in the next level down. "Ext" is a reminder that the images are of the cathedral exterior: similarly, "Int" means cathedral interior. I omit both reminders if a folder contains both "inside" and "outside" images. The asterisk (added *later* to the folder name by renaming *after* processing) means that all the panoramas in the folder have been processed. Asterisks with the same meaning are added *after processing* to the folder names contained within the folder originally named 2015\_0912 RODEZ Ext.



The names of folders inside folder 2015\_0912 RODEZ Ext\* (see Figure 12) are a variation on "date-&-place" ordering, with each name starting with a 2-digit number, the order of taking.



Opening "05 West front from NW\*" displays what is being organised, image files. See Figure 13.



The 18 image files in "05 West front from NW\*" are all DNG (raw) files, in six groups. The groups of three are bracketed images. The six groups are two rows of three forming the panorama. All of the DNG files **must** be kept together, otherwise the panorama will be incomplete.



The folder "05 West front from NW\*" also contains the folder labelled Panorama. See Figure 14.

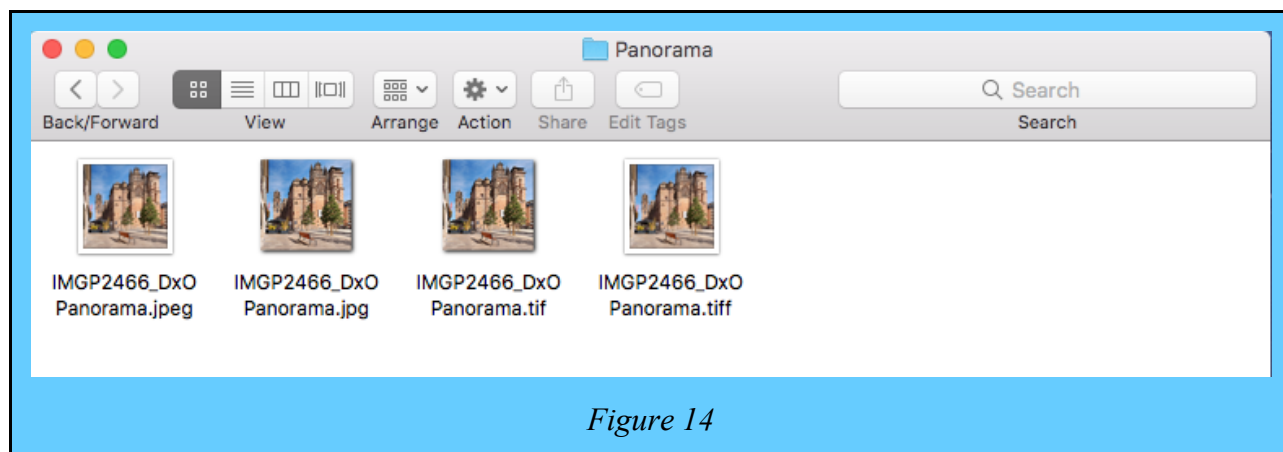


Figure 14

"Panorama" is the lowest level in the hierarchy of **saved** folders and contains the panorama image file resulting from processing the DNG files of "05 West front from NW\*". There is, however, a **temporary** folder which is **not saved**, and is between "05 West front from NW\*" and "Panorama". This temporary folder is used to contain converting the DNG files to TIFs, and for stitching the TIFs into a panorama. At the time "05 West front from NW\*" is created and filled with DNG files, the folder "Panorama" can also be created but left empty. Alternatively, "Panorama" can be created in the temporary folder and filled, then moved to "05 West front from NW\*".

The folder hierarchy is shown in Figure 15. The numbered levels are only those saved to disk. The temporary folder is not saved because it can always be reconstructed from the DNG image files.

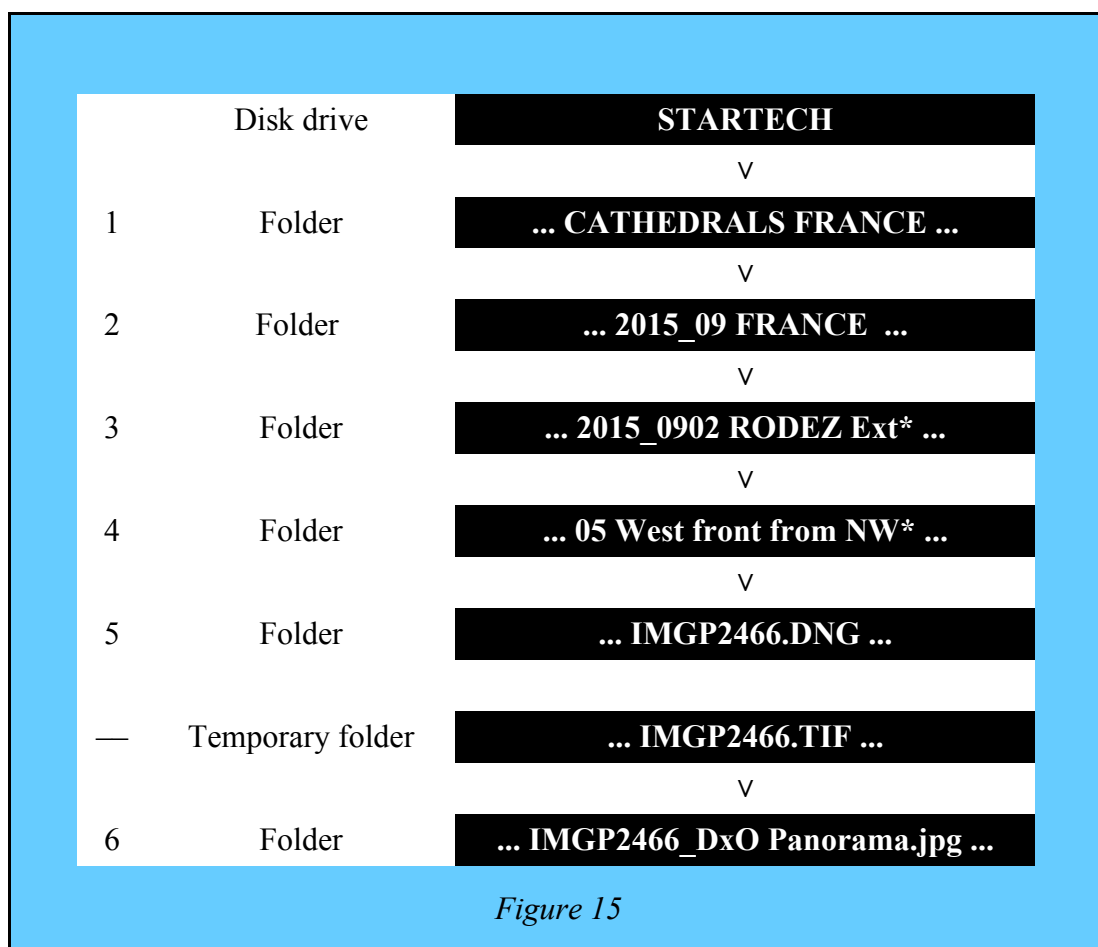


Figure 15

**11 Disk space used in folder creation** It can be seen that, from the descriptions above, the number of folders can easily run to hundreds or thousands. Depending on what has to be organised and saved, the number of levels in the folder hierarchy will be three to six or more. This raises the question - *how much space on the disk does a folder hierarchy cost?* The question is important because any disk space needed to specify the folder hierarchy is not available to store image files.

The yard-stick is the size of one image file. A 20 MPx (MegaPixel) best-quality JPG image file straight out of the camera is 5-7 MB (MegaBytes) in size. The latter number is the storage space on disk needed to save that one image file.

To save 10 such images, the total disk space needed will be 50 -70 MB. Suppose you put the 10 images in a labelled folder. If, using your system tools, you ask how big is the folder containing those 10 files, the answer you will get will be the sum of the individual file sizes. The folder doesn't seem to cost any space! How can that be?

To get to any particular file your system uses the file's *path-name*. The path-name is a *character string* made from the nested folder names tacked together in order. The path-name normally must not exceed 255 characters: that is 255 Bytes, or 0.000255 MB.\* (i.e. This paragraph up to \*) The folder hierarchy does indeed have a space cost, but it is *utterly trivial* compared with the space needed for the image files. This is true even if a lowest-level folder contains only one image file.

For all practical purposes, you can construct whatever folder scheme you need. If it's too complex, however, **you** yourself won't be able to find your way around it!

**12 Photograph retrieval** If organising your image files has any point, it is that organising allows you to **retrieve** an image file you want, possibly years or decades after its taking.

At one extreme, you can throw all of your photographs away, if you won't ever look at them again (the fate of mobile phone photos?). That raises the question - *why did you bother in the first place?* - but we won't spend time on that.

Slightly less drastically, you can throw all of your photographs into (the internal-disk equivalent of) a box labelled "Photos" and keep them. If you want to find a particular photograph, you have to rummage through the whole box, looking at each photo in turn. If they are partially sorted, it is only because your camera has been kind to you.

With the wisdom of a certain amount of hindsight (about rummaging in the Photos box), you decide to put related groups of photographs into smaller boxes, each box labelled by year, within the Photos box. You notice then that rummaging in one of these smaller boxes is quicker and easier.

One bright idea begets another, as they do: you put a yet-smaller labelled box, labelled with the year and month, within the already year-labeled box. You notice that rummaging in one of these yet-smaller boxes is even quicker and easier.

Being a methodical soul, you decide to increase the number of boxes, in such a way that each box contains only one photograph. Then no rummaging is needed. All of these boxes are labelled meticulously, so you know from the label exactly which box contains any particular photograph.

You decide to find a particular photograph. You discover, with mounting dismay, that rummaging through the box labels takes just about as much effort as rummaging through the photographs.

Is organised photograph retrieval doomed to failure? Answer: no. Why? Because, unknowingly, you have happened upon a minimisation problem. What you have to minimise is the **total** of the *work of creating and labelling the boxes*, the *work of putting the photos in the boxes*, and the *work of rummaging through the boxes*. The very important thing to realise is that you don't have to **exactly** minimise the total work. Being **near** the minimum will do very well. They're your photographs after all, and *you know about them*.

Since you know your own photographs, you're well-equipped to know what boxes (folders) to put them in. Any particular box (folder) which doesn't have many image files in it will be easy to search, to find exactly the photograph you're looking for. That, practically, is solving the minimisation problem.

The point of this little parable is to bring out two conclusions. They are

1. You need to create a folder structure that embodies what you yourself know about your own image files. Nobody else can do it for you.
2. Finding a particular image involves *some* searching in one or more folders. Searching is quick and easy, if the folder structure is well thought out.

Recognise that folder structures work like post-codes. NE71 sends you to Wooler, and 6BH sends you to the High Street, but you have to search along the street for the shop you want.

For digital photographers, one of the great advantages of OS X is the ease of searching through the image files in a folder. You open the folder, hold down the "CMD" key and tap the "A" key: this selects all the image files. Then you tap the space bar: this displays the first image file. Then you tap the right-arrow key to display the second image, tap the right-arrow key again to display the third image, and so on. To go backwards, tap the left-arrow key. If, say, you take a 10-second look at each image file, you can go through 30 images in 5 minutes. Searching within a folder isn't really too troublesome, so long there aren't too many files in the folder.

**13 Organising: where to start** Sooner or later (always later?) it will dawn that your collection of photographs has grown so big you can't find that special one you really want for a competition. You are not unique. Clearly, the time has come for you to organise your photographs.

Once organised, how will you recognise that your photographs *are* organised? Simple: if they are arranged in a way that reflects how *you* photograph, you will be able to *retrieve* the photographs you want. **Retrieval is the test of good organisation.**

How to begin? Start at the end, not the beginning. Why? Because your recent photographs will be easier to remember, and they will suggest how to organise them into folders and sub-folders.

Look again at §10.1, §10.2 and §10.3. Try to find an organisation scheme (date-&-place, category, etc.) which fits (more or less) with how you photograph. It is always easier to *copy and adapt* an existing scheme than to *invent* a completely new one that does much the same job.

If you shoot single stand-alone JPG images (i.e. you don't bother with RAW, HDR, focus stacking, panoramas and other fun things you can do with digital images), there's a lot to recommend beginning with some variant of *date-&-place*. Under each Level 1 *year* folder are 12 *month* sub-folders, and under the 12 sub-folders there can be a total of 365 *day* sub-sub-folders, making a grand total of up to  $1 + 12 + 365 = 378$  folders per year.

**14 Organisation in practice** Assume for the purpose of explanation a *date-&-place* folder structure. Other structures are not very different.

**14.1 Creating a folder structure** While it's possible to create a decade's-worth of *empty* folder structure in one go, it's not advisable for two reasons.

1. You won't remember very well what you photographed years ago; and
2. You don't know what you're going to photograph in the future.

What structure works well for *you* can be found by experiment with your recent photographs.

In a *date-&-place* folder structure, Level 1 folder names differ only by *year* number (e.g. 2019 Photos, 2020 Photos, etc). The year number alone allows the folders to be date ordered,

whatever text *follows* the year number. Level 2 *month* folders, however, are the same for every year. The 12 sub-folders named 01 Jan, 02 Feb, ... 11 Nov, 12 Dec can be copied and pasted into every year folder, irrespective of year number.

Similarly, if *day* sub-sub-folders *initially named* 01 MT, 02 MT, ... 30 MT, 31 MT (i.e. numbers +MT. "MT" is a homophone code for "empty".) are created in the January sub-folder, they can be copied and pasted into the March, May, July, August, October and December *month* sub-folders. Likewise, the sub-sub-folders 01 MT, 02 MT, ... 29 MT, 30 MT are copied and pasted into the April, June, September and November sub-folders, and the sub-sub-folders 01 MT, 02 MT, ... 27 MT, 28 MT (29 MT in a leap year) into the February sub-folder.

The *day* sub-sub-folder names have the *day* name and *place* text replacing "MT|" (using *rename*) *only during folder population* with image files. When appending place text, the *day* name (e.g. "Mon") should precede the *place* text, because the *day number* is synonymous with the *day name*. When created along with Level 1 and Level 2 folders, Level 3 *day* sub-sub-folders should be *deleted* when not needed, as empty folders slow down retrieval. They can of course be *created* if needed.

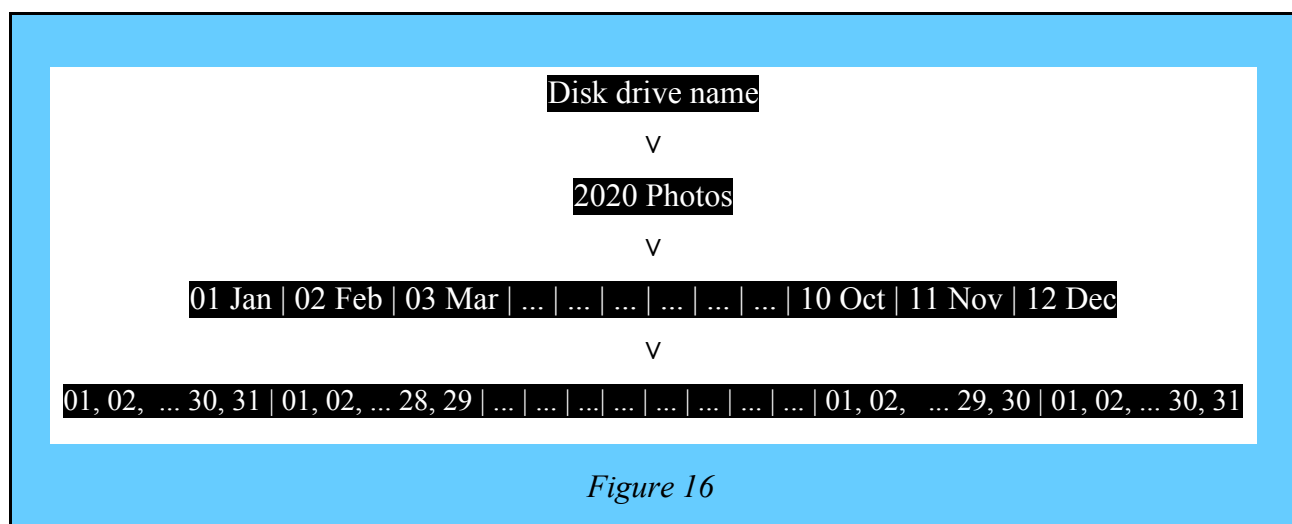
It is a good idea to create the empty folder structure just described, and save it with a Level 1 name such as "0000 Photos", ready for duplication and renaming. Doing so avoids the tedious job of repeated creation of folder structures that differ only in the easily-changed Level 1 *year* name.

**14.2 Creating and populating the 2020 structure** Now being 2021, a sensible plan is to create and populate with image files *only* the folder structure for the year 2020. Once populated, the resulting structure can be examined to see how well it works.

Assuming for the purpose of explanation that

1. Your image files from all the years earlier than now are in one folder named "Photos";
2. You've used only one make and model of camera for the whole period;
3. You've set the camera's date and time correctly;
4. Your camera *names* image files something like IMGP1327 (i.e Letters+numbers);
5. Your camera *numbers* your image files sequentially (i.e. IMGP1327 then IMGP1328); and
6. There are only image files in "Photos".

If folder structure "0000 Photos" already exists, move it into folder "Photos". The next step is to duplicate "0000 Photos" and rename the duplicate "2020 Photos". At this point, the empty folder structure for year 2020 exists (See Figure 16. N.B. "MT" is omitted to keep the lowest level to one line.) and is capable of organising every photograph you took in 2020. Now you come to the tedious part, transferring your date-ordered 2020 images files into your just-created folder structure.



With "Photos" open, tell your computer to "arrange by name". If the assumptions above are correct, your image files will be shuffled into date order, the last few being from 2021. As a result of *in-camera* deletions there may be gaps in the image file numbering. Preceding the image files will be the two folders "0000 Photos" and "2020 Photos" (because these folder names are *number+letters*, whereas the image files are *letters+number*).

If you select the first image file and display its EXIF data, you'll find the date it was taken. Do likewise with the last image file. Then you know how many years the image files extend over.

Now create in "Photos" a sub-folder named "Z 2021 Photos", then tell your computer to "arrange by name". (The purpose of the leading "Z" in "Z 2021 Photos" is that after "arrange by name", sub-folder "Z 2021 Photos" will follow the *last* image file.)

Either from memory or by looking at EXIF data, you can find the first image file of 2021. Select all of the image files of 2021 and move them into sub-folder "Z 2021 Photos".

Now create in "Photos" the sub-folder "Z 2020 Photos" and "arrange by name." Sub-folder "Z 2020 Photos" should immediately precede sub-folder "Z 2021 Photos". Find the first image file of 2020, then select all 2020 image files, and move them into sub-folder "Z 2020 Photos". Working backwards in time, create and fill "Z 2019 Photos", "Z 2018 Photos", ... At the end of the process all the image files will be in "Z *year* Photos" folders. All your photos are now partially organised.

On opening folder "Z 2020 Photos" and leaving it open, you have all the 2020 image files in date order. On opening Level 1 folder "2020 Photos", you see 12 sub-folders named "01 Jan" to "12 Dec". On opening "01 Jan", you see 31 sub-sub-folders named "01 MT" to "31 MT".

What you have to do now is select the first few image files in "Z 2020 Photos" with the same date.

If they were taken on January 1st 2020, you move them into sub-sub-folder "01 MT", then rename the folder "01 Wed *place*". If, however, the first few image files were taken on January 3rd, you move them into sub-sub-folder "03", then rename the folder "03 Fri *place*".

Continuing through January 2020 in the same way, you realise that populating just "2020 Photos" will be hard work. All you have to help is EXIF data if you can't remember any dates. On the other hand, once you know that January 3rd 2020 is a Friday, you know the day names for every other day in 2020: they are in a repeating 7-day cycle.

**14.3 Reviewing the populated 2020 folder structure** The main purpose of the review is to see whether any changes need to be made to the empty structure "0000 Photos", *before* duplicating it and renaming the duplicates.

The detail of the image file organisation is at Level 2 and Level 3. Questions are

1. After populating the Level 3 folders, how many "*number*+MT" folders are there in a Level 2 folder? If on average there are **more than 15** ( $\approx 31 \div 2$ ) **on weekdays**, consider retaining only weekend day folders in 0000 Photos, and *creating* other Level 3 folders as they are needed.
2. Perform a few retrieval exercises. Are the Level 3 folder names sufficiently informative to easily track down a photograph you want? If not, add more text to folder names.

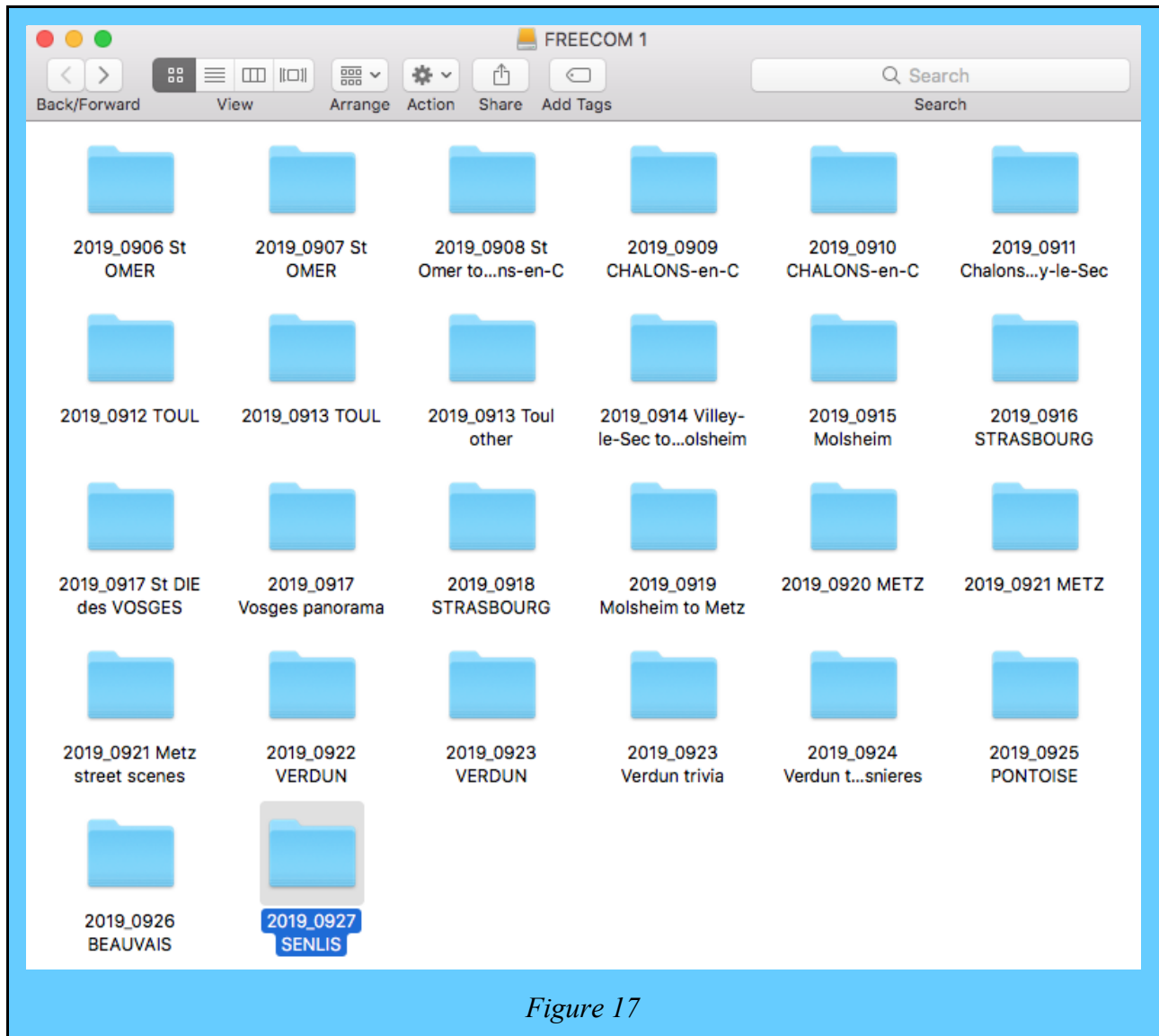
Answers to questions like these tell you how you yourself photograph. They also suggest how "0000 Photos" should be changed to improve organisation and aid retrieval.

During or after population, you can always *delete* empty sub-sub-folders (e.g. "01 MT", "02 MT" ...), as they are visual clutter that tends to slow down retrieval.

**14.4 Completing image file organisation** Once any desirable changes have been made to 0000 Photos, it can be duplicated and the duplicates populated following the procedure in §14.2. On completion of population, your existing files are organised, and 2021 Photos is ready for new files.

**15 Working away from home** If the computer you use for your photographs is a lap-top, "home" is where you are if you take your lap-top with you.

In contrast, if the computer you use for your photographs is a desk-top with attached disk drives and printers, "home" is where your computer resides. If you are away from home for more than a few days, you need to be able to store all the photographs you will take. One way of doing that is have enough SD cards. Another is to download from just one SD card to a portable disk drive.



*Figure 17*

In my own case, I take a lap-top computer and portable disk drives (360GB Freecom ToughDrives). As with previous expeditions, for my 2019 expedition to French cathedrals (see Figure 10), before leaving I created from my travel plan the folder structure I used to store my image files. See Figure 17. In the names, CAPITALS are cathedrals, but on the journey a few other folders were created to provide homes for things that deserved a photograph. Sub-folders and sub-sub-folders similar to those in Figures 12 and 13 are below the folders in Figure 17.

After each day's photography, from the camera's SD card I downloaded my image files to the appropriate *day* folder on the Freecom 1 drive. For additional security, the contents of that day's folder were copied to an identical folder structure on a second drive, Freecom 2. Only after the two copies had been made were the image files on the SD card deleted, ready for the next day's photography. Back at home, the folder structure of Figure 17 was copied, unchanged and entire, from Freecom 1 to the folder 2019\_09 FRANCE on StarTech.

**16 Saving image file copies in two or more folder structures** Filing the same thing in two or more places has attractions. For example, I could keep every photograph I take, including pictures of castles, in a *date-&-place* folder structure. I could also save copies of the castle pictures in a "Castles" *category* structure. This seems attractive until you consider storage costs.

While I use both *date-&-place* and *category* structures, I don't save image file copies. The reason is straight-forward. Compared with text documents, image files are *very* large. A 1-page RTF (Rich text format) *text* file is about 0.003 MB (3 kB) in size. **This text and images document** you are reading now has 15 A4 pages and is about 1 MB. A 20 MPx JPG image file is about 6 MB. A 24 MPx DNG file is about 30 MB. A 6 MB JPG file would produce a decent print on an A3 page, which is equivalent to two A4 pages. Conclusion: image files devour storage space.

There is nothing wrong with *category* folder structures. In mine, they have a date & place structure under the category. All this means is that *category* is most important, but does not preclude a useful *date & place* ordering. The decision about what is most important is *yours*, not anyone else's.

**17 Becoming organised** It's all too easy with a digital camera to take a lot of photographs. The only restraint is the capacity of the SD card: only when it's full do you have to change the card. It's also all too easy to download photographs to your computer, where there is no obvious restraint unless you look to see what storage space you have left.

The consequence is that photographs accumulate. While your computer *can* organise your photographs efficiently, it doesn't tell you *how*. I hope what I've said earlier offers some ideas (but only some, not all) about *how*.

It's vital to understand that there is no "one size fits all" solution to organising your photographs. How *you* organise them reflects how *you* photograph, not how other people do it.

You organise your photographs for one reason: you want to be able to find a photograph you know you've taken. When you've tracked down that photograph, at the same time you've shown yourself that the cues of *where*, *when* and *what* in your folder names are actually working. **Retrieval is the test of organisation.**

The folder structure you first thought of is **not set in stone**: it can be modified fairly easily as you use it. You can rename folders if you think of better names. You can invent codes (like "=>NE", meaning "looking north east") to shorten names. If you want to move a folder, it takes all its sub-folders with it. Above all, recognise that your folder structure **evolves** as you use it: it's **not static**.

A day's-worth of photographs is easy to download and organise, even when the photographs are in bracketed sets for panoramas. A week's-worth is much more trouble, and a month's-worth is a nightmare. Counter-intuitive though it might seem, small-capacity SD cards are a good thing, because they force you to download sooner.

Once your folder structure is in place, you know that the photographs you've taken today have a home to go to. It's sensible to get them to their safe new home as soon as you can. **Shoot today and download today** should become a habit.

I've given examples of how I organise my photographs, and why. If you've read this far, it should be all too obvious that I don't always follow the advice I dish out. My last piece of advice, however, is: every **now and then, have a tidy-up**.