

The hitchhiker's guide to your hard drive

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I imagine the filing cabinet of an obsessive-compulsive with an addiction to letter writing. He may keep a folder for letters from America, another for letters from the UK, one for the occasional letter from Lapland, and so on. Within each of these geographically determined folders there may be a subfolder for letters on blue notepaper, another for letters on white notepaper, etc. Looking into the folder reserved for white-paper letters from Argentina, you might find separate folders for letters written on specific days of the week. At some depth in this hierarchy you would expect to find folders that actually contain letters rather than just other folders. Some folders might be empty (a Guatemalan with prostatism may simply not have written to him on red paper on Wednesday afternoon... yet) but it would be a little bizarre if there were no letters.

Your computer's hard drive is really a filing system similar to that described above. Double click on your hard drive's letter (often C) and a list of its contents will appear. These will mostly be folders but there could be a few files. What's the difference? A folder is merely a container, it does nothing other than hold things. A file, on the other hand, is the endpoint, the

purpose of the entire hierarchy, like the letters in the scenario sketched above. If you double click on a folder all that will happen is that its contents will be displayed. Files, on the other hand, are a very heterogeneous bunch, and the result of a double click will depend on the exact nature of the file. Some will launch a programme, some will display a document, others will simply stare insolently at you while the computer asks you what programme should open the file. Folders may contain other folders, files, or both.

You may wonder where all these folders and files came from. Most came into existence when the operating system was installed or when programmes were subsequently loaded onto the computer. For example, let's say you install a programme called "Drawing Bunnies for Six-year-olds" (to help your six-year-old to... well, um... draw bunnies). The programme has separate little modules for drawing blue bunnies, pink bunnies and white bunnies. If, having installed the programme, you inspect your hard drive, you might find a folder called BNYDRW and contained within that folder might be other folders called BLUEBNY, PINKBNY and WHITBNY. Within these folders (or folders inside them) you will find the files that are, collectively, the actual programme.* The names of these files may end in "file extensions" like 'exe' or 'dll' which give some clue as to their purpose - folders do not have these endings as they all have the same purpose: they are containers. You have little control over the names and organisation of these folders and files that the installation of programmes places on your hard drive. However, you have full control over folders and files that you create.

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Philips Medical Systems: successfully starting of the millennium with a completely new MR program

Reporting record orders for its Gyroscan Intera MR scanners introduced at the 1999 RSNA, Philips Medical Systems used the European Congress of Radiology to announce yet another system introduction, the Gyroscan Panorama, featuring the most patient-friendly of all open magnet designs: a C-arm.

The Gyroscan Intera is Philips' new general-purpose family. This new generation of MR scanners makes truly interactive scanning a reality. Recently installed at a number of hospitals in Europe, the USA and Japan, its users are thrilled by the very significant advances in image acquisition and reconstruction speed, as well as improvements in user interface and patient environment.

In addition, Philips' new Gyroscan Intera CV, dedicated to cardiovascular MR, has been launched alongside the Gyroscan Intera I/T that is especially suited to interventional procedures and assistance in therapy. Intera's flexibility and advanced capabilities replaces traditional imaging exams with faster, less costly and more informative MR studies such as high-resolution contrast-enhanced peripheral angiograms, comprehensive stroke and cardiac exams and whole body screening.

Intera's new RapidView reconstructor is the industry's fastest, with up to 196 images per second reconstruction speed. Acquisition and reconstruction speed combine with the industry's most flexible RF spectrometer to provide truly interactive scanning: the ability to change geometry and contrast parameters in real time. This brings the equivalent of X-ray fluoroscopy to MR.

Furthermore, its magnet is believed to be the shortest, the most open and lightest presently on the market: a great help in eliminating patient anxiety, providing free patient access and facilitating installation.

"We're truly excited about showcasing our new MRI solutions for the first time," explained Jacques Coumans, PhD, Global Marketing Manager for MR at Philips Medical Systems. "We believe that MR continuously changes how the world looks at diagnostic imaging and that our new Gyroscan Intera changes how the world looks at MR." This statement will be even further substantiated by the introduction of SyncraScan and Explorer gradients. Philips' new SyncraScan package (based on the Sensitivity Encoding (SENSE) principle), provides for an immediate doubling of acquisition speed. With Explorer gradients delivering up to 60 mT/m, diffusion imaging becomes an even more sensitive diagnostic tool for stroke than previously.

The dedicated Gyroscan Intera CV helps physicians diagnose cardiovascular disease more quickly, accurately and economically.

Using this new system, scanning most patients can be completed in one hour and diagnosis is possible the same day. This contrasts with the traditional diagnostic pathway of ultrasound, nuclear medicine and X-ray studies that take several days of scheduling and cost far more. Vectorcardiogram (VCG) triggering separates the true ECG from distortion caused by the magnetic field and RF effects, raising triggering accuracy to nearly 100 percent. Furthermore, the system's MotionTrak technology allows patients to breathe freely while being examined – a definite plus for patients who are chronically short of breath.



Assistance in complex interventional and therapeutic procedures is made possible with the new Gyroscan Intera I/T, developed by Philips in partnership with leading medical research institutions. The image quality and high field capabilities of the Intera I/T, such as spectroscopy, functional MRI (fMRI) and diffusion, offer all the tools required for such applications as image-guided neuro surgery, biopsy guidance, molecular therapy imaging, MR-guided ablation therapy and endovascular interventions.

In the latest addition to this range is the Gyroscan Panorama, a high quality open MR system. With a patient-friendly C-arm design, the 0.23 tesla Panorama provides excellent all-round patient access and easy sideways patient entry.

The attractive features of the Gyroscan Panorama aren't limited to its openness – advanced technology ensures that it provides superb image quality across a wide range of applications. "Fast, strong gradients – combined with an extensive range of imaging techniques – make it an ideal workhorse for the general imaging department" Coumans said. "We are confident," he continued "that the inclusion of phased array coil technology as standard in the system will be seen as an indication of its intrinsic quality." The application bandwidth of the system is enhanced by a wide range of RF coils for head, neck, spine, body and extremities. Departmental efficiency is assured by its easy-to-use interface, the ability to prepare patients on the tabletop outside the examination room and reliable pre-set protocols.

The Gyroscan Panorama complements Philips' existing Gyroscan Intera family thereby offering customers the widest choice of systems and performance.

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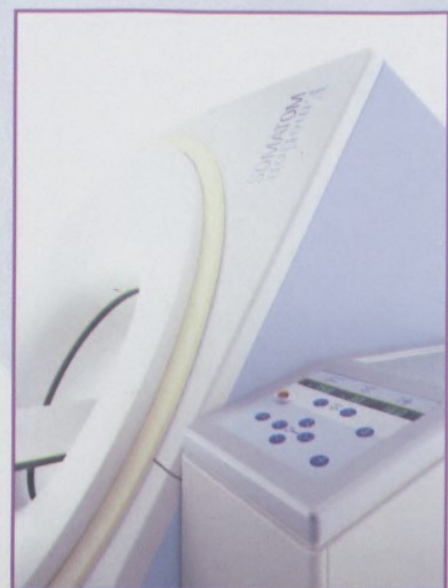
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Did you know?

Siemens' SOMATOM CT scanners are renowned for quality and durability that just seems to beg for a repeat performance. To facilitate the resale of previously owned equipment and to ensure that the quality throughout this second performance is equally high, the Siemens CT division has established the Encore programme. This programme focuses on assuring that the quality of each previously owned and resold SOMATOM is equivalent to that of a brand-new unit.

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Suppose, for example, that little Katie draws a lovely pink bunny that she wants to show to granny. She selects "Save As" ... from the "File" menu and up pops a box which allows her to choose a file name and to select the folder that this file will be stored in. If the user doesn't choose a folder, the programme will use a default. Some programmes use a fixed default folder, others use that which the user most recently stipulated when saving. This is a chance for you to break free and stamp your authority on your computer. Be daring. You don't have to save the pink bunny in the PINKBNY folder. You can create a folder called "Katie's Things" with subfolders for drawings, poems or anything else that she creates on the computer. Each person who uses the computer could have his or her own main folder and a hierarchy of subfolders relevant to what that person does on the computer.

I find it useful to have a "Delete Me" folder. Say, for example, that you're working on a letter. You're going to type a little each day and when its finished,

you'll print it. You need to save it each day but don't need to keep it on your computer after it's printed. If you save it under your "Documents" folder and forget to delete it after printing, it will probably live on forever as part of the "document fungus" that grows on every hard drive.

Similarly, you may have a "Back Me Up" folder in which you store all those documents that you would miss if your hard drive flew south for the winter. Backing up then becomes the simple task of copying this solitary folder to some sort of external backup medium.

A little aside: is your hard drive really this paragon of organisational virtue? No, it actually uses a system similar to the one I used as a child. When ordered to tidy my room I would open the cupboard doors and kick everything from the floor into the cupboard, letting it be "packed" where the compromise between gravity and my kick took it. But I made a mental note of where things landed and could find them reasonable easily. Similarly, files are stored in a seemingly chaotic way on your hard drive and

a single file may even be split up and saved in a few available spaces. However, there is a table that keeps track of where things are and finds them when you need them. This "fragmentation" of files does eventually slow your computer down and your hard drive should be periodically "defragmented", a process whereby the parts of files are reunited.

*This is a little simplistic. Although programmes do install most of their files into a few aptly named folders, they often deposit a few files elsewhere in places you will never find them. So, unfortunately, when Katie tires of drawing bunnies, deleting the programme is not simply a matter of sending BNYDRW to the Recycle Bin. Polite programmes often install themselves with their own Uninstaller. Otherwise the operating system may be able to uninstall it. Or, you could buy a third party Uninstaller. Beware when these programmes ask you if it's okay to delete DWEEBL.DLL (or similar) - if it doesn't know, how are you supposed to? I usually say "no" and accept a little more fungus on my hard drive.

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