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Online data storage

Backups are only safe if they're stored in a completely separate location. And you can't get much more separate than online storage solutions

We explained the importance of backing up your data a few issues back (*DP* 18), and the various ways and means of doing this. We also made the point that backups need to be stored at a physically separate location.

Why? First of all, keeping duplicate files on the same hard disk will only protect you against human errors (accidentally overwriting an important file) and random file corruption (rare). If your hard disk fails, you lose both your main files and your backup.

A second hard disk offers another layer of security, in that if the main hard disk fails, your backups are safe. However, this is no protection against theft. Once your computer's gone, so are your backups.

You can store backups on CDs or DVDs, and this might secure you against computer theft. But then if your office burns down or gets flooded, these are gone too. The only fully safe solution is to back up your files on media you can take home with you. And this means you have to get into a weekly or even a daily routine of copying files onto a removable media you can put in your briefcase. Add to this the hassle of manually configuring and activating backup processes (true, some can be automated), and it's no surprise that some photographers just never get around to backing up their data. Online backups could be the answer. They're not free, but they are amazingly simple and, once they're set up, you may never have to lift a finger again. Here's how it works…

Start up

Anyone with an internet connection will be aware they also get some free web space with their account for setting up their own websites. The principle of web space isn't confined to internet service providers, though. Many companies offer online data storage as a service in itself, rather than as an add-on to an internet account.

All online storage is provided by servers – computers permanently connected to the internet – equipped with large quantities of storage space and equipped with software for handling traffic from a large number of online users. These are the same types of computers which host the web pages you visit when you surf the internet, but here they're set up solely for providing remote storage.

The principle is very simple. The files you specify are uploaded, via your internet connection, to these remote storage sites. There they stay, so that if you need them again at any time in the future, you can recover them (the amount you can store, and for how long, will vary according to the service – we'll come onto this shortly).

This means that your backups are about as physically far removed from your computer as it's possible to get. Your computer could be stolen, your office destroyed and your house burgled (not that we want to dwell on these things) and your backups would still be safe.

Depositit in action

A look at how Depositit works as an online backup storage system

System requirements

The Depositit software is PC-only (see our .Mac box for a Mac alternative), but the hardware requirements are modest: Pentium 75 or faster, Windows 95, 98, ME, XP, NT or 2000, 16Mb RAM, 23Mb hard disk space

Depositit workflow

The Depositit demo (available from the Depositit website) demonstrates the principles of online backup. Marked files are compressed and then transferred from your computer to three geographically separate servers for utmost security. The data is encrypted as it leaves your computer and remains encrypted on the remote servers.
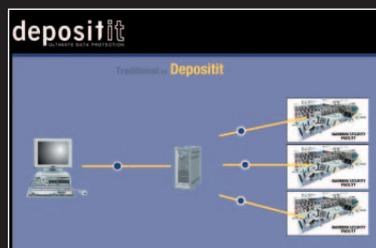
Comparison
By downloading the demo you will quickly see that the security of online backup compared to normal hard drive backup is far superior.
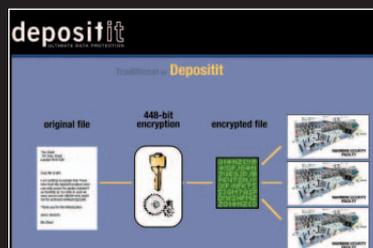
Securing Data
By using Secure System Layers as an encryption system, your backup of photos and important text data is completely protected.

Installing & using the software

1 Register
You download Depositit from the company's website, after filling in a series of registration forms, choosing the amount of storage you want and entering your credit card details. The download is a little under 13Mb, which is painless for broadband users.

There are restrictions and disadvantages to online storage, but on balance many will find it both effective and amazingly easy. So much so, that once the system is set up, you'll hardly know it's running.

We're featuring one particular online backup service here, called Depositit (www.depositit.com). There are others, but this is one of the easiest to set up and use. Do shop around though, and find the best deal that suits you.

First of all, be aware that all online storage companies charge a fee (usually annually) based on the amount of storage you require. For example, Depositit's Light User account offers 500Mb for £60 per year. You might not be accustomed to paying for online services, but it's a modest enough fee for the extra security and peace of mind, especially when you consider how much you're paying out annually for income protection insurance, business insurance and other business services.

And while 500Mb might not sound a lot, it's enough for a couple of hundred JPEG images, and all the correspondence, accounts data, contacts lists and other crucial administrative data you're ever likely to produce. See our 'What to back up' box for suggested candidates.

Now as we explained in our earlier feature, backup systems are unlikely to be used if they're tedious and time-consuming to operate. This is where online storage systems get clever. Like many other companies, Depositit offers its own backup software along with the subscription. You download this from the website, install it and use it to do two things:

1) Mark up the files and folders you want to archive
2) Schedule automatic backups

And that's it. The software produces what are called 'incremental' backups. Instead of copying all the files and folders up to the remote server every single time, it scans them instead to look for new or modified files. Only these new or modified files are copied up to the server.

This is an important point, because even if you've got a broadband connection, your upload speeds will be restricted to around 32K per second (with broadband, the upload speed is half the maximum download speed of 64K per second, depending on

What to back up

Online backup systems don't currently offer the capacity to cope with entire high-resolution image libraries, but there are plenty of other files that photographers should be backing up in the meantime.

Correspondence
Letters can form parts of formal agreements, offer important evidence in disputes and contain essential details about commissions, client requirements and more. There are many letters (and emails) you simply can't afford to lose.

Image databases/catalogues
You might not be able to back up all your images online (there's life in CDs yet), but image catalogues and databases can be just as crucial. It can take months to catalogue images with keywords and notes, and you can't afford to lose that kind of information. If you run a personal photo library, you also need to keep (and protect) information about which images have been used in which publications and supplied to which clients.

Work in progress
An entire back-catalogue of images will be too big to archive online, but current projects won't be. How would you feel if a fortnight's work went down the drain just because you didn't back it up? Especially if your client's hammering on the door. Exactly.

Accounts
You do backup your accounts, don't you? How long would it take you to draw up the current year's transactions all over again, always assuming you had the paperwork to do it? Accounts packages generally produce modest-sized files that will transfer in a matter of moments.

Client/contacts lists
How long has it taken you to build up your list of clients and contacts? Could you find out their phone numbers, addresses and notes all over again if you had to? How long would it take?

Shaun Turner, Footwerk Pacific

DP: What do you use online backup for?
ST: We produce internet and intranet software and, amongst other things, we need to store pictures of computers and other hardware for web pages. We use it for backing up image files.

DP: So why use an online backup service?
ST: We were using CDs, and they are fine, but Depositit suggested we try this. The important thing is the security, and the fact it's copied into different locations. We use this as part of our disaster recover strategy.

DP: How does it compare to other backup systems you have used?
ST: We have used tape backup systems, but with tape backups, you're never quite sure it's worked. It might report that it had finished, but maybe a light comes on at the end – there was always that nagging doubt.

DP: Typically, what kind of files do you back up, and when?
ST: Some files average 1-2Mb, some are typical small web graphics. We've got images which are 4-5Mb; they're backed up and it's job done – we don't have to worry about it. We schedule one or two backups during the day, core project files we're working on at the time, and main files once a day. That's what I like about it – it's almost fire and forget, and you get emails if things go wrong and emails if it's worked. You don't have to go hunting to find out what happened.

DP: What about data transfer speeds, especially with those 4-5Mb files. Is this a nuisance?
ST: I use a 512K broadband connection. I find the speed perfectly acceptable during working hours to be honest.

DP: How about the storage space, is that enough?
ST: We probably use about 600Mb – not massive, but it's going up and up and up. Every time you do a backup the email tells you how much space you've got left.

DP: Will you upgrade to a higher capacity if you do run out of space?
**ST:** For sure.

For more information on Footwerk Pacific visit the website **www.footwerkpacific.com**.

The Depositit software is extremely simple to use and, once configured, can be left to its own devices
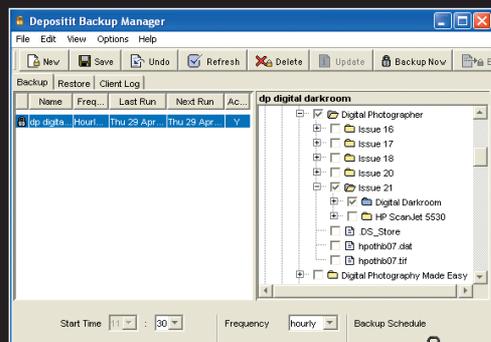
2 Ease of use
The software (Depositit Backup Manager) is extremely easy to use. All it involves is creating a backup 'definition' (you can have more than one), then use the Windows Explorer-style display to locate and tag the files and folders you want to back up.
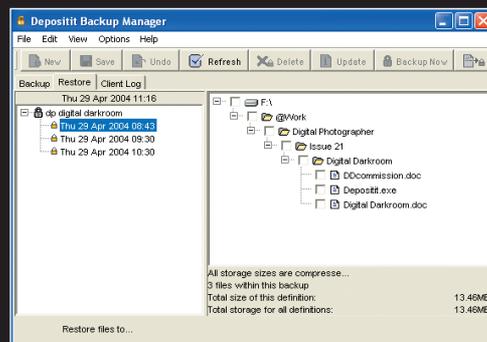
3 Restoring backups
Click the Restore tab, enter your password, then choose the backup date/time from the list on the left that you want to access. You can restore all the files, or use the explorer display on the right to pick specific files or folders only. Easy!

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the service you subscribe to and the amount of traffic – other users – online at the same time). The first backup you perform is likely to take some time because you're transferring all the marked files and folders. Subsequent backups will be a lot quicker because the software will only be transferring new or changed items.

The Depositit software is particularly unobtrusive. Once you've scheduled your backups, you don't even need to leave the software running. It automatically launches the backup process at the specified intervals, running invisibly in the background as it copies your files across. Indeed, the only indication that anything's happening at all is the data transfer icon in your PC's system tray.

But what about security? Security takes two forms: the safety of the data in terms of the danger of it being lost or deleted, and the privacy of your data – how well it's protected against unauthorised access.

First, Depositit duplicates your backups on three geographically separate machines. The likelihood of all three failing is so remote as to be discounted altogether.

Secondly, Depositit uses SSL (Secure Sockets Layers) for data transfer to and from your computer and its own servers. This is a standard system, used worldwide, for secure data transfer, and can even detect attempts at tampering en route. Once the data is transferred, it's stored on the servers using 448-bit encryption of a type called Blowfish. This is used extensively by banking and telecommunications industries, and even the military. It's considered to be one of the most sophisticated encryption systems there is.

Human error
Backups aren't there just to protect you from mechanical failure, theft or natural disasters. They can even protect you against human error. For example, if you regularly duplicate your important files onto a removable drive and take it home with you each night, that doesn't prevent you inadvertently overwriting an important file, deleting a file you actually need or saving over an important file with another of the same name. Duplicate copies will simply duplicate the error.

Depositit, though, stores backup 'cycles'. In other words, it stores previous backups, up to a number you specify in the program options. As long as you've set it to store enough 'cycles', you can backtrack until you find the file, or the version of the file, that you need.

The number of cycles you can store will be governed by the amount of space you have available. This is one of the practicalities you should keep in mind when using an online service like this.

Practicalities
First, there's the amount of storage space available. Depositit's Light User account, as we've already mentioned offers 500Mb of storage, which actually goes a little further than you might imagine, though, because the software installed on your computer will compress the data before transferring it. This not only allows you to store more (the amount of compression will depend on the file types), it makes data transfers quicker.

This is another thing to take into account. With a maximum upload speed of 32K per second, and maybe

Service details
Depositit's annual charges are based on a sliding scale of storage capacity required. There are many different options and you can upgrade from one to the next as required. Here's an abridged version of the current scale of charges, just to give you an idea (these prices include VAT). You might find it interesting to compare the cost-per-megabyte figures with the storage media costs we looked at in our previous backup feature. Remember, though, that you pay online charges annually, and they're not one-off purchases.

Storage Cost / Cost per megabyte: 250Mb (Light User) – £71 / 28p *2Gb (Standard)* – £141 / 7.1p *10Gb* – £282 / 2.8p *20Gb* – £423 / 2.1p *40Gb* – £705 / 1.8p

Incidentally, you will find the Light User and Standard accounts quoted on the Depositit website as offering 500Mb and 4Gb storage respectively double the amounts in our table. That's because the data is compressed for storage and it's standard practice in this sector to estimate the uncompressed data which you might be able to store. Depositit quotes a 2x compression factor, which is actually quite conservative compared to some rivals which use a 4x or even 5x estimated factor. When shopping around, then, make sure you know whether the figure quoted is estimated uncompressed data or real server space. This is especially important if you plan on backing up JPEG files because these barely compress at all.

a lot less with a 'narrowband' connection or heavy internet traffic, big files are going to take a long time to transfer. Having said that, if you're using a broadband connection, it's always on and the fact that the backup operates as a near-invisible background process means that you're not really aware of the time taken.

Finally, if you do find yourself running out of storage space, it's easy enough to upgrade your account using Depositit and other services. It means paying more, but generally speaking, the cost per megabyte will fall with increasing capacities. The 'Service details' box (see above) shows Depositit's current storage charges.

Conclusions
Most of us have a bit of a mental block about paying for online services. It's bad enough that we have to pay our service provider for access and our phone company for the line rental, and we're all used to the internet being 'free'.

At the same time, we all pay out regularly for other financial, insurance and business services, so it's only a small intellectual step to accepting a charge for an online service like this. Compared to the cost of alternative backup systems, it's comparatively inexpensive, extremely simply to install and administer, and, if we were being frank, just about as secure as it can get.

The only real issues are current data transfer speeds and storage capacities and charges. This will be a limiting factor to photographers who want to backup their entire image library online. With improvements in technology, though, it may be that online backup systems will soon prove an integral part of every photographer's computer system.

.Mac for Apple users
Apple Mac users might feel left out in the cold by the online industry's support for PCs above Macs, but Apple has provided its own dedicated solution.

The subscription-based .Mac service was initially met with a frosty reception amongst the Mac community in the UK because it was charging for services when, according to popular culture, the internet should be free.

However, with more and more commercial services now appearing (Depositit is just one example), .Mac is now beginning to look ahead of its time.

A standard annual subscription currently costs around £69 in the UK (the exact price depends on prevailing UK/US exchange rates) and that includes, amongst other things (like automated online photo galleries), 100Mb of online iDisk storage. This can be used for backups using the supplied Backup application, which is every bit as easy to use as Depositit. Your iDisk can also be used for all kinds of data storage, and can be accessed for file transfers via PCs as well as Macs.

The 100Mb storage is limited by Depositit standards, but you can upgrade to higher capacities, though the charges look expensive by comparison. The .Mac services are nevertheless integrated exceptionally well with the Mac OS and its applications. To find out more about .Mac services and benefits, visit **www.mac.com**

■ *The .Mac website provides essential information on utilities that are available to Mac users*

■ *The backup of files is essentially the same as it is on the PC, with the option to add to your backup capabilities*