



communiqué - sample

This is a series of topical tips written by various specialists at cmx. These are collected together, checked and edited by Glyn Cheeseman PhD, MCSE and then e-mail out to everyone on our e-mail list.

They don't go out every day or every week so you won't get annoyed or think its spam. When there is enough to make up a group that you can scan easily and read in a few minutes then we know it's ready to go.

Here is a sample layout of a few topics so you can get the idea of what we send out. If you decide to subscribe then go to our web site, it's free and you can easily subscribe.

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Deletion, Deletion, Deletion and Undeleting	Is deleting a file and emptying my recycle bin enough?
Why has our PC slowed?	My Windows computer is slower than it used to be and it's only just over a year old, why's that and how do I fix it?
Microsoft bugs & problems	I have heard that Microsoft is so full of problems that they never bother to fix them all, why don't they fix my problem?
What is a server anyway?	The term "server" is used a lot in many contexts but is it really just a computer and is it all that special.
Goldcare changes	The term "server" is used a lot in many contexts but is really just a computer, and quite often a computer that isn't all that special.
Horror & funnies	Our look at computer horror stories and things that amuse us

Deletion, deletion, deletion & undeleting

There are three ways that files can be deleted. Each has a different chance of being recovered. "What you need depends on your level of paranoia and the sensitivity of the data that you are deleting."

- Recycle Bin. When you delete a file in Windows Explorer or in some other applications, the file is not actually deleted at all, but rather simply moved to the Recycle Bin.
- Permanent delete. When you empty the Recycle Bin or delete a file in the Windows command prompt, or when most programs delete a file, the file is just removed from the list of files on the system. The area that the file's data previously occupied is marked as unused, but it is not completely erased.
- Secure delete. operates like permanent delete but it takes the extra step of overwriting the area previously occupied by the file's data. Because of this, secure delete is often more time-consuming. Secure delete also requires additional tools that are not part of Windows.

Recovery, recovery and recovery

Each of the three methods of deleting files have a corresponding approach to recovering what's been deleted. Some are easy, some aren't and require special tools, luck, and timing.

- Files that have been deleted by being moved to the Recycle Bin can be undeleted simply by moving them back. As you might imagine, that's exactly why the Recycle Bin exists. People were accidentally deleting files that they didn't mean to and the Recycle Bin acts as a safety net.

- Files that have been permanently deleted can sometimes be recovered by using undelete or recovery utilities. Because a so-called "permanent" delete doesn't actually overwrite the file's data, it is possible for software tools to rediscover or reconstruct the file from what's been left behind. This type of recovery requires both luck and timing as the data previously occupied by the deleted file is marked as available free space on disk. That means that files subsequently written to the disk could cause the deleted file's data to actually be overwritten. As Windows is constantly writing to the [hard disk](#), the sooner that a recovery is attempted, then the higher are the chances of its complete success.
- Files that have been securely deleted can typically not be recovered. There can be exceptions, though. For example if the secure delete overwrites the data only once, there are advanced (and expensive) [data recovery](#) techniques that can use the residual magnetic field of previously stored data to attempt to recover it. That sounds complex because it is; as I said, it's both difficult and pricey.

For most average users, the combination of the Recycle Bin and permanent delete is almost always sufficient. We use a special tool to fully erase the hard drive just recycling a machine and therefore you have the vast majority of concerns covered.

If you have legitimate concerns, or are just feeling paranoid, a reasonable approach is to run a secure delete utility periodically to wipe the free space on your hard drive. This ensures that deleted files which have not yet been overwritten by other files cannot easily be recovered.

And finally, one approach that completely defeats even magnetic media data recovery technique is to encrypt your entire hard drive and thus all of the data on it. While the encrypted data could technically be recovered, it is of little value without also having the encryption key or being able to crack the encryption algorithm.

Of course another method we use it to shed the data electronically and then drill a 12 mm hole through the disk!

Why don't Microsoft fix this horrible bug?

"I've got this problem, It's horrible - forums are full of people who are experiencing this bug and no one has an answer. It's been there for years and Microsoft continues to just ignore us. Obviously, Bill's too busy trying to make more money by forcing us to upgrade and doesn't have time for bugs that impact lots of people. WHY WON'T THEY FIX THIS HORRIBLE BUG?"

As you can probably guess, that's a composite question, someone is always convinced that they're dealing with the worst bug ever and *Bill Gates himself - is ignoring them.*

Typically, there's no satisfying anyone who has landed in this position. However, for those who are interested, I'd like to go over some of the things that factor into the process and why your Bug might not get fixed. and why Bill Gates is not only ignoring you, but why he probably has no idea that you or problem even exist.

This isn't about making excuses for Microsoft. They make mistakes and miss important things from time to time, sometimes, they just get it wrong. This applies equally well if you replace Microsoft with Apple, Mozilla, Google, Intuit, or any of a hundred others.

Sometimes it's just not a bug

- If there are thousands of people experiencing the same problem, that might be tiny compared to all of the users that are not.
- Sometimes, it's intended behaviour.
- It may annoy you but that doesn't mean that it's wrong or accidental and it doesn't mean it's a bug it may be a decision that appeals to the majority of users - a majority of which you, unfortunately, are not a part.
- Microsoft really does do research to determine the best way for things to work - lots of research, typically referred to as usability studies. They update and refine their products based in large part on the feedback that they get from real people using the proposed changes long before those ever see the light of day - and indeed, based on that feedback, many such changes never make it into the product.
- There's no pleasing everyone.
- If 900 people really like a proposed user interface and 100 don't, you can bet that Microsoft will normally choose that which pleases the most. (Actually, they'll try to get it to be more like 990/10 first, but that's somewhat beside the point here.) If you're one of the 100 ... well, when it comes to that feature, you're out of luck.

Sometimes it's just not that important

There are bugs in Windows that I'm certain are well over a decade old and will never be fixed, Because the number of people impacted by the bug or the severity of the bug's impact is so small as to not be important enough to fix when compared with making other progress on the product.

So, let's say that you've actually found 1,000 people who have experienced what you believe is a bug, the number of Windows installations was expected to exceed [1 billion machines in 2008](#), you have 0.0001% of Windows users experiencing your problem. Now even the fact that 1000 is actually a teeny, tiny fraction of Windows users isn't enough to get the bug ignored - it's just one factor.

Sometimes it's not Microsoft's bug

One of Windows' most compelling features is its ability to be used by a diverse range of hardware, add ons and software some of which does not even exist yet! So if there is a problem it will be in a line of code, Neither you nor I really care about where the line is, but Microsoft didn't write, and isn't necessarily responsible for every bit of software used by Windows to run your machine.

What that means is that many of the bugs that users perceive of as being in Windows aren't in Windows at all. Those bugs are in the software that's been added to Windows by other vendors. Microsoft can absolutely pass along reports of issues with third-party software, but they don't control how, when or even if those bugs get resolved. They, like you, are at the mercy of those third party software authors.

Fixing bugs is risky, and expensive

Fixing a bug - even a simple one - is neither simple or cheap because of the incredible, unimaginable complexity of the systems that we take for granted these days, the consequences of even the smallest fix are often difficult to completely predict. It's not at all uncommon for a bug fix here to break something else "over there".

Even the smallest fix needs to be tested thoroughly, all of Windows needs to be run through a complete testing cycle to make sure that nothing was broken by the fix. Imagine testing every single feature in Windows and then for every different edition of Windows (Home, Pro, Ultimate, whatever) and again for every edition in every language.

Now imagine trying to do all of that quickly, the upshot is that the cost of even the simplest of fixes is surprisingly high; thus, the decision to fix a specific bug is not a simple one.

And yet, all software has bugs

There are untold thousands upon thousands of bugs that are fixed and never make it into the released product, yet, some make it through regardless of the testing. That is the nature of software development. There's absolutely no such thing as bug-free software. It's also the nature of the incredible complexity of systems, it's sometimes amazing that it works at all.

Despite the testing there is pressure to release a new product, every software release is a compromise. We can guarantee you that there are engineers who are pleading for just a few more days to fix a few more bugs, and that there are marketing and sales people who are complaining that every day longer is resulting in massive market share or revenue loss.

Where does that leave you?

We're not trying to paint a bleak picture where bugs never get fixed - they do, just not all of them. Don't get overly frustrated if no fix is forthcoming. And don't immediately jump to the conclusion that it's being totally ignored - that's highly unlikely. Instead, focus on finding workarounds or ways to avoid the problem. There is always a difference between a solution and an answer, but if it works then it works.

Oh, and about Bill...

Bill hasn't worked at Microsoft since 2008, and he wasn't writing code and he wasn't examining and approving or rejecting individual bug fixes in products or making specific product design decisions.

In other words, he was never personally responsible for whatever feature it is that you don't like or the bug that you've encountered. So your anger at him is wasted, unless you happen to object to what he's doing with his charitable philanthropic foundation.

Why has our PC slowed?

There are several possibilities. We'll try to list a few here, along with some advice on what steps to take.

An assumption here is that your entire machine has slowed down, not just one or two applications. For example if Internet Explorer has slowed down while the rest of your software runs fine then the steps outlined below probably aren't going to help.

If the slowdown is sudden and severe the first thing that comes to mind these days is a virus. Thankfully, assuming your machine is still usable it's easy, go to our web site and click on HELP! and then check with an online scanner you can download from our web site and scan your machine immediately.

Along those same lines scanning for spyware is a good idea, too. Spyware isn't considered a virus so it typically isn't caught by anti-virus programs. Regardless, some spyware can adversely affect your system performance besides possibly violating your privacy.

We've got some recommendations for anti-malware (virus and spyware) on our web site as well.)

Another step we take, but its a bit technical, when a machine seems to be slowing down is to fire up task manager on almost any Windows system. These tools can show you if one process is using an inordinate amount of CPU time. If so, you can then investigate why that process is running and what might be causing it to use up so much time.

While we're looking at processes, another good thing to look at is just how many are running and how much memory they're using. It's possible that there are simply too many programs running at once or that one of them is taking an inordinate amount of memory. When the system is running low on memory Windows will use the hard disk for the overflow at the cost of speed. Task manager has a nice view under the "Performance" tab that will show you how much memory is in use, and both taskman and procexp can show you how much memory each process is using. If you're running tight try shutting down some of the processed you don't need.

If your system slowdown has been gradual over several weeks or months it's possible that your hard disk has become fragmented. All recent versions of Windows have defragmenting tools. Under XP, in Windows explorer, right-click on your hard disk drive (normally C:), select Properties, and click on the Tools tab - there you'll find the disk defragmenter. It's a good tool to run periodically though how often will vary depending on your computer usage.

On some systems it's possible that network traffic or "noise" is causing your network adapter to impact your system to weed the actual information you care about. This is particularly true if the machine you are concerned about has Internet connection sharing turned on. A quick test is to unplug the machine from the network and see if anything resolves.

It's also quite possible that you've slowly been asking your computer to do more than before. I know I keep coming up with more things including more software, more tasks to perform, and so on. Memory seems to currently be the single most cost effective investment you can make to improve the speed of your machine. Windows loves more memory.

And finally a word about hardware. Most hardware failures tend to be catastrophic - meaning that when something breaks, things don't slow down, they stop entirely. However hardware slowdowns can still happen. A good example might be a hard disk that is beginning to have trouble. Taking a look in the event log can often be educational. Start -> Run, enter "eventvwr", and then review recent entries in the System event log and the Application event log. Unfortunately even a perfectly healthy system will still have a certain amount of "noise" in the event log. If you can compare current entries with older ones to see if particular components have recently begun reporting problems.

So just what is a "Server" anyway?

The word "server" gets thrown around a lot these days. We hear about web servers, print servers, mail servers, dedicated servers, shared servers and more. Just what does the word "server" mean these days?

While it might now be confusing it's not really that mysterious. Servers are very common. In fact, you're probably using one right now.

At its simplest, a "server" is nothing more than a computer that provides services or resources to other computers. In that sense there's nothing very special about being a server. In fact, if your machine is has file sharing enabled and others are able to copy files to and from your machine then your machine is a file server.

Things get confusing because the general term "server" is often used to mean a machine optimised for a particular purpose.

For example your machine may be a file server but is it a good file server? Is it optimised to provide fast access to lots of files to hundreds or thousands of other computers? Probably not. But there most certainly are machines that are optimised to be extraordinarily efficient at exactly that. They may even look and operate just like your own computer but perhaps have high speed network connections, extremely fast hard disks, multiple processors and more, all to make them good at what they do. And the things that don't matter like video or sound hardware might be bare bones, if present at all.

They may be called "file servers", but really they're just computers with a specialty.

So your ISP's mail server is just a computer optimised to handle e-mail. That might mean it has lots of disk space for all the spam. It could mean that it has redundant components to reduce the possibility of lost e-mail as a result of catastrophic failure. It almost certainly means it has an efficient connection to the Internet.

A print server? It's just a computer optimised for printing. It probably has lots of disk space for spooled print files. Printing is a somewhat slow operation so maybe the disks themselves need not be as fast as a file server's. If it serves up multiple printers then it needs enough parallel printer ports, USB connections, or what have you to actually communicate with each printer.

Web servers? Since web access is really just a form of file access, web servers might look a lot like file servers. Large fast hard disks, good network connections, and so on.

What about "dedicated" or "shared"? It's commonly used these days when discussing Web Hosting. You can host your web site on a machine shared with many others or on a machine dedicated to just you. It depends on your needs. But the same terms apply elsewhere; for example I have an older PC that I use as a print server - it's shared because it's accessible to all the other machines on my network.

The server that really needs to be special is a SQL server or Exchange mailserver. These need powerful processors, large fast RAM and large fast hard disks. A simple server might only cost £1000, but a dedicated SQL server could cost £5,000-£15,000 that's because they are designed to be fast at what they do but if you don't need one then you don't have to worry.

So what's a "server"? In a sense there's really no such thing as just a "server". There's always some type of resource that's being served which is either explicit or implied. A server is just a computer that's been selected and probably optimised to perform a specific task in service to others and it's that task that makes all the difference. The worst case is using a server to perform a task where it has not been optimised, it can be slow and unreliable which may cost you more than if you had spent the extra in the first place.

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