



The Essential
Computer Guide
in Plain English

Did you Know...?

The First Computers in Ireland

The first computer in Ireland was acquired by a state-owned sugar factory in Thurles in 1958. The machine, an *ICT 1201*, read in data from punch cards and used the same medium for data output.

Ireland's first minicomputer, a *Digital Equipment PDP 8*, went into service at the air-traffic control centre in Shannon Airport in the mid 1960's.

The first networked computer system in Ireland arrived in the late 1960's when *Aer Lingus* introduced an IBM-based passenger reservations system. The "network" connected a mainframe computer with remote terminals. At the time, the mathematical processes behind it were described "world class".

How does a modern computer compare to one of the first computers that helped send Man to the Moon?



Figure 1 - This is Apollo Guidance Computer dating back from the early 1960's. It helped send Man to the moon.



Figure 2 - A modern Dell Desktop Computer (2009).

| | Processor | RAM |
|-----------------------------------|--------------------|------------|
| Apollo Guidance Computer | 1 Mega Hertz | 1 Kilobyte |
| Dell Desktop Office Computer 2009 | 2.3 Giga Hertz x 2 | 2 Gigabyte |

Translation: "The Dell (figure 2) has 2 million times the RAM as the Apollo Guidance Computer and has 4600 times the processing speed"

Today's household toaster would now be more powerful than the Apollo Guidance Computer!

Terrorist Attacks planned in internet chat-rooms?

Recently, U.S law enforcement officials and other experts disclosed details of how extremists hide maps and photographs of terrorist targets in sports chat- rooms and on pornographic bulletin boards. Instructions for terrorist activities are also posted on these sites, which officials have declined to name. Increasingly, terrorist organisations are using computerised files, emails, and encryption to support their operations. The messages are scrambled using free encryption programs such as *True Crypt*. This is still an issue that intelligence agencies and military communities are struggling to deal with.

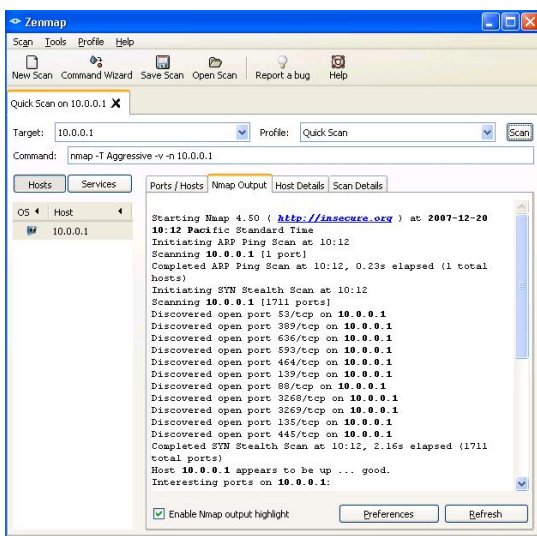
How a 17year-old caused world-wide chaos...

In 2004, the *Sasser Worm* wreaked havoc across the world. It hit all of the UK's 19 Coastguard stations. It resulted in the Taiwanese National Post Office reverting back to pen and paper and caused one of Finland's largest banks to close all of it's branches for a day. The worm was created by a 17 year old, Sven Jaschan from the small village of Waffensen, Germany. He was given a 21 month suspended sentence, but was immediately offered employment by the *Securepoint* software company.



How one basic computer component can bring a whole airport to a standstill...

In July 2008, flight operations at Dublin Airport were crippled because of an intermittent fault with a network card in one of the Air Traffic control's computer systems. (A network card is a basic component found inside almost every modern computer system.)



NMap – An essential tool in the hacker's toolkit.

“Want to see, what a hacker sees when trying to access your computer network?”

Do you want to see what Hackers see when trying to Access Your Computer?

Do you want to see, what a hacker sees when trying to access your computer network? Try downloading a free tool called *Nmap* (<http://nmap.org/download.html>). This tool has been featured in-use by hackers in films such as *Matrix Reloaded*, *Bourne Ultimatum*, *Die Hard 4*, and *Game of Death*.

Is there anything I can do to make my computers running Windows XP go faster?

Our first recommendation would be to add more RAM (memory). You should have at least a minimum of 256MB, but 1GB is optimal. In Windows XP, you can check how much RAM your system has by going to *Control Panel, System* and looking in the *General* tab. The more memory you have, the easier it will be for Windows to find space for all those drivers and programs during boot time.

One of the biggest contributors to a slow boot-up time is the long list of programs configured to load when you first turn on your computer. Not only do they take time to load but they also eat your computer's memory and processor cycles. To stop so many programs, loading up at start-up, go to *Start > Run*, and in the box type "*msconfig*". A configuration box will then appear. Select the "start-up" tab, and uncheck any programs which you don't use anymore.

"...make my computer go faster"

Do a scan for viruses and malware with a quality anti-virus / anti-malware application.

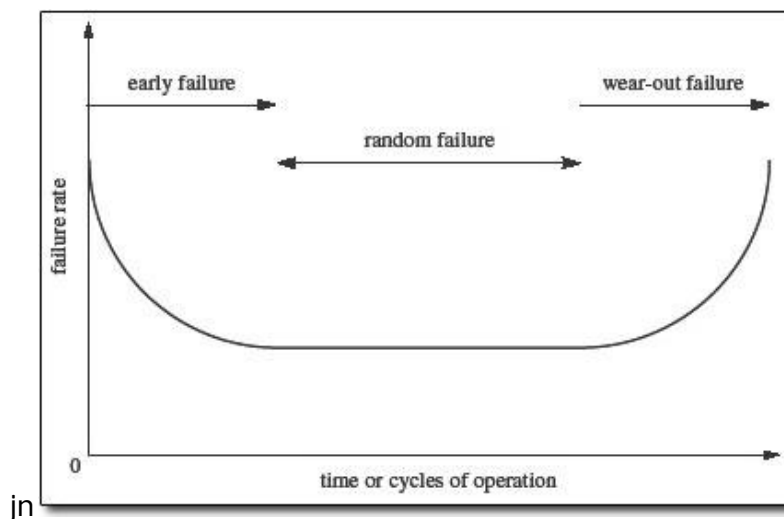
Look out for programs on your systems that are using above average processor cycles. By pressing *Ctrl+Alt+Del* keys simultaneously, you should be able to access the Task Manger to give you a better idea of what is eating into your processor power.

Finally, don't "daisy-chain" your network. Daisy chaining happens when you have a number of data-switches on your network. Too many switches can make the data flow between servers and computers very slow, as the data tends to get caught in "bottle-necks". (Think Red Cow Roundabout at 6 pm on a Monday evening). Data bottle-necks tend to slow down the whole network and are frustrating to all users.

There are more advanced techniques that you can employ that are too detailed to describe in this short booklet.

Why the Most Common Anti-Virus Solutions Don't Work

Symantec and *McAfee* can be found on a substantial number of small business and residential computers. A common response we hear is "they are the most popular so they must be the best, right?" No, this is a wrong assumption. *Symantec* and *McAfee* anti-virus products are popular because they are simply well known brands. They have become well known brands because of their close alliances they have built up computer manufacturers and with retail outlets. Therefore, if you buy a new computer in the morning, it will probably have one of these two brands of anti-virus software pre-installed on the system. Are they any good? From our experience, the performance of these two products throughout the years can only be described as "fair". They tend to slow your computer down as they tend to have a lot of built-in "bells and whistles", and when they go corrupt, they can wreak havoc. Thirdly, what most people don't know is that virus creators specifically use these two very popular programs to test the viruses they write. Our advice: there are much more effective and robust solutions out there than these two products.



Failure of Hard Disk drives follow the "bathtub curve".

Why So Many Brand New Computers Suffer Hard Drive Failure

Many a computer user has contacted us shocked to discover that their six-month old computer has had catastrophic drive failure. "It's only a new computer how can the hard drive fail?" The harsh reality is that the probability of a hard drive failing follows the "bathtub distribution curve". This means that for the first 24-months of the hard drive's life – the probability of hard drive failure is very high. After this period, failure rates plateau. Then after about 7-8 years, the failure rate shoots up again. So the lesson here is, even if you have a relatively new computer, you still have to back-up.

5 Simple Reasons How Computer Users Can Get Themselves into Trouble

- 1) Only backing up to one external hard drive, believing external hard drives “don’t fail”. Failure rates of external drives is on average 30-40% higher than internal hard drives.
- 2) Installing poor quality software onto their systems that corrupts the operating systems i.e Windows. Don’t download or buy any “Super-Duper-Computer-Speeder-Upper” programs. Most of them don’t work.
- 3) D.I.Y computer “clean-ups” that “go wrong” is a perennial problem. Deleting files willy-nilly in order to “clean-up” your computer can sometimes end up badly.

“ D.I.Y computer “clean-ups” that go wrong is a perennial problem”

- 4) Not believing that dust can destroy your computer. No matter how clean you keep your office or computer room, a lot of dust gets into computers (this is especially true when the room has wooden floors). The fan in your computer is continually inducting air. Over time, the dust causes overheating and your computer’s processor can burn out.
- 5) Believing your Anti-Virus or Security Suite will protect your system from *all* viruses and other nasties floating around in cyberspace. The fact is, they will not protect you from everything, they are *only a safeguard* in the same way you can still kill yourself in a car that has dual-airbags, side-impact protection system and steel rollbars.

How Can I.T Make My Small Business More Efficient?

- Accounting Applications – You should have a professional accounts package installed on your computer to aid in financial analysis and to speed up mundane tasks such as invoicing. We recommend *Quickbooks*.

Data Backup – You should always have an up-to-date backup on a reliable backup medium. For a small business to recover from catastrophic disk failure or theft of a computer system can take months. When you have a reliable back-up at hand, should the worst happen, you can be up-and-running again in a matter of hours.

- Save Commute Time with Remote Login– How would you like to sit in front of your office computer without ever going to the office? With remote access software and a broadband connection this is now very possible. For example, you can install the remote access software on your office pc, then install it on your laptop. When at home or travelling, you can simply access your office computer as if you were sitting in front of it.
- Network Your Computers – Ideally if you have more than one computer in your office and need to exchange information between them – the computers should be networked. Networked computers save time as you can to “drag n drop” files to another computer in your office in a matter of seconds.
- Ditch that ink-jet printer – If you print in predominantly black and white – it’s time to get rid of your ink-jet printer. Ink-jet printers are slow, relatively unreliable, and expensive to run. Fast and reliable laser printers have drastically come down in price over the last number of years, and on a cost-per-page basis, are much cheaper than inkjet.

Things To Look For When Choosing a Quality I.T Support Provider

Good I.T support is Timely – it is delivered when you need it most. Computer problems are unpredictable and always seem to appear at the most inconvenient times. Running a small business and knowing there is an I.T solutions provider that you can depend on greatly adds to your peace of mind.

Good I.T support Delivers on Promises – Talk is cheap. I.T solutions, no matter how hi-tech they sound, or how eloquently they are talked about, account for little unless they are implemented successfully and meet the client's expectations.

Good I.T support talks *with* the customer not *down to* the customer – Good Communication is based on the technician speaking to the customer in a language they can understand without making them feel brainless!

“Talk is Cheap - Good I.T Support Delivers on Promises”

Good I.T support implements Robust Solutions – “Quick Fix” solutions that only cover up a more serious underlying problem and never get to the root of the real issue are rarely a good idea. A good I.T solution pinpoints the root cause of the problem, stands the test of time and endures the vagaries of the “average computer user”.

Good I.T support never compromises Data Integrity or Security – Your computer's data is irreplaceable and confidential. When I.T solutions are implemented, the safety and confidentiality of your data should always be paramount.

Good I.T support relies on excellent Problem Solving Skills – Troubleshooting a complex I.T problem requires both systematic thinking and the ability to “think outside the box” Being able to distinguish between a *symptom* of a problem and the *actual cause* of a problem is one of the most vital skills a computer technician can ever acquire.

Good I.T Support Meets Budget – Good I.T support always meets budget. Your I.T solutions provider should use their judgement and experience in giving you the most accurate quotation possible.

Good I.T Support is Proactive – Good I.T Support tries to prevent problems before they even start.

Good I.T Support is backed up by Quality After-Service Care / Follow-through – Good technical support should not end the moment the technician leaves your office. Even the best and most fastidiously implemented I.T solutions can have occasional teething problems. Every I.T solution implemented should be followed up until the client is 100% satisfied.

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Phone 1890 571 571 www.itsupportdublin.ie