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20 Ashton Rise
Woodvale WA 6026
ph. 93096221/0433102277
ABN 92 280 261 048

Newsletter No 17

June 2016

I have seen quite a few scams perpetrated on customers since my last newsletter. One unfortunate customer lost tens of thousands of dollars. The common cause though isn't the computer but the phone so under no account give people ANY password or account information and never give them access to your computer.

I am now offering customers budget PC builds for under $1000 to complement my standard build.

Businesses who wish to share files and do backups from office computers should read the section on Network Storage. Synology have some fine technology now for pairing NAS devices to ensure in event of failure in one, within one minute it will seamlessly switch to the other. This beats being out of business for a day or more while the machine with your business data gets fixed!

This newsletter isn't a major update to the earlier newsletter but I go through each section ensuring that all information is up to date. The newsletter is broken into sections so I suggest you just skim through and read sections of interest to you.

I am posting the newsletters to my website now as this is actually easier all round and then I email customers to let them know it is there to be read.

If anyone wants to give me feedback especially on things that they might want me to add to the newsletter, please let me know. I'm happy to research topics for customers and then share the information with everyone.

Windows 10

Windows 7 and Windows 8/8.1 users have until the end of July to upgrade for free to Windows 10.

I think that Windows 10 is a great product though and I recommend it but I also remind customers that it is never 100% safe to do an upgrade. Microsoft have, however, put in some safeguards such as doing a system check first before offering an upgrade. There is also the rollback facility too so that if you don't like Windows 10 or have an issue you can roll back to the previous Windows 7 or Windows 8.1. You have 30 days to do this.

I view Windows 10 more and more favourably as time goes by. It is a much better engineered product than earlier products and is much easier to fix when it goes wrong.

Software compatibility with Windows 10 can be an issue though and I had to buy a $50 / month subscription to MYOB Accounting as my version 12 months old is NOT compatible with Windows 10. I was expecting this and I needed to upgrade to Windows 10 so I wore this cost. If you are running business software though, it pays to check all compatibility issues first. Most users though with standard software should NOT have any issues.

Preparation for Upgrade to Windows 10

1. Make sure all updates have been installed for your operating system. You do this by checking Windows Updates and review updates to make sure it is up to date.
2. Your computer should be running normally before an upgrade unless you are prepared to risk the upgrade going wrong. If you are lucky of course, it may run much better after the upgrade.
3. Check compatibility for essential software such as MYOB.
4. Please do a backup of important data. This is a general recommendation. Everyone should backup data.
5. Do it at a time when you can deal with issues if they occur.

Scams

A lot of my customers are getting scammed. Please don't accept any phone calls for anyone to **remotely service or access your computers**. I have had customers give bank and credit card

details on the phone to people they think are from Microsoft or Telstra. If you give out details on the phone, the bank may not cover you for losses incurred so be very careful.

When on internet be careful just what you click on, you may be downloading software that takes over your computer! If in doubt, just google the name of the software or website to get feedback on whether it is safe or not.

Please note that most antivirus software checks websites and places a green tick next to them if they are OK. This is good insurance against dodgy websites.

Please never open email attachments or reply to them unless you are SURE.

Scams to get you to supply login details, birthdates (for identity fraud) or other personal information is a NO GO area unless you are 100% sure of who you are dealing with. If in doubt get their phone number, check it against the organisation on the internet before responding. You will also find fraudulent emails from Telstra, Banks, FedEx, Australia Post and others. Some of these are nasty, and will destroy valuable data using crypto locker software then blackmailing you to get access again to your data.

Remember that most of the time, if crooks get your credit card or bank details, it is because you gave it to them.

Current security software and backups of your data are also recommended to protect your files and photos from scammers.

Protection for your Children Online

I've rewritten this section as I think most people find the whole thing too much trouble. I do understand. I think these days trying to control everything is really not that easy and many children have tablets, Macs, phones as well as computers. It is very difficult to block all of them all the time.

The best and easiest solution is to control it from the router.

Asus Routers, most of them have simple time scheduling. This helps control children's internet viewing times and you can set it for each device. He or she can have an iPhone, iMac, Android tablet and all of them can be controlled. The interface allows you to give blocks of time on a 24 hours seven day per week calendar and you can have multiple blocks of time each day.

The top of the line Asus AC87U router also gives you the option of filtering the type of web content under the following headings:

Adult – sexy, violence or illegal.

Instant Messaging and Communication.

P2P and File Transfer.

Streaming and Entertainment.

You could block all of these and prevent your child from accessing adult matter, Facebook, chat rooms, prevent them from downloading videos in bulk and wasting time on entertainment content. They would still have access to most of what they would need.

Netgear take a different approach and use OpenDNS a network company that is involved in traffic monitoring and filtering. You create an account with OpenDNS then the router uses this as a DNS Server i.e. when you request say a news page www.cnn.com or any other URL, it goes through OpenDNS and allows it if not blocked else a message appears saying it is blocked. The rules though apply to EVERYONE on the network unless you have a Bypass account.

The advantage of the Netgear approach is it is available on most of their modems and it is easy enough to set up.

The router based controls though only protect your child while inside the home on your home network.

Software based solutions are harder to implement. You have to set up your account on the internet then install the software on each device you want to protect. It used to be easy when there were just computers but now there are phones, laptops and tablets in addition to desktops.

There is no perfect solution. I would suggest giving it some serious thought though as children often have warped ideas about sex from internet but also can be bullied via the internet on social media. Internet is a massive potential time waster that can impinge their physical and mental health as well as their school performance. I think even businesses

could benefit from filtering time and productivity wasting use of the internet.

Skylake

This is newly arrived Intel chipset is likely to be the current chipset/CPU for the next two years and is very good.

The upgrade adds to the cost of a desktop system as the chipset on the motherboard has the added complexity of voltage control, previously on the CPU. This has added significantly to the cost of the systems, as this increases the price of the system boards.

I always use the latest Intel chipset, this time around Skylake, as there are many refinements and improvements and Skylake is a significant improvement. The improvements are especially noticeable on laptops where battery life has been improved considerably. They are also faster at the same time as being more energy efficient.

If you are shopping for systems remember that Skylake processors are 6xxx series. e.g. i3-6100 or i5-6400 (processors I use for my system builds).

I have had excellent feedback so far on my Skylake desktop systems I build for customers.

When to Upgrade?

Customers often ask me how long systems last. Truly there are no real guidelines and a system could potentially last for 10 or more years with few issues (the average is 6 years for a desktop and 3 years for a laptop). I do say though that if you run a business, it does pay to plan an upgrade once the computer is written-off in tax. You must be careful, however, to make sure that any business critical software does work with the new operating system and that it can be upgraded. MYOB and QuickBooks come to mind, as well as people losing track of Microsoft Office disks.

Laptops generally don't last as long as components that can fail are not accessible without stripping the laptop down and parts are expensive and have to be ordered specially. Any significant problems with a laptop generally require replacement of the laptop.

An SSD upgrade will yield very pleasing results especially on a laptop. A boot time of 15 seconds is typical with Windows 8.1/10 and they rarely bog down when you are busy. An SSD is also not sensitive to mechanical damage. Dropping a laptop, even a few inches will leave an SSD undisturbed but will ruin a mechanical Hard Disk Drive.

Windows Vista is quite old now and is near retirement time although the operating system will still be supported until April 11th, 2017.

I have had a few issues recently with Windows Vista computers and I am starting to recommend that customers replace them, rather than fixing them.

Windows 7 is supported until January 14, 2020.

Windows 10 is supported until January 10th, 2023.

It is of course relatively easy to upgrade the insides of a desktop and all components are potentially upgradeable. If you are interested in a desktop upgrade, I need to know the age and condition of your system. An upgrade is often possible but it depends on the age, component quality and condition of your system. I will not generally upgrade systems that are not of good quality or more than six years old.

Desktop Systems versus Laptop and Tablet Systems

It is worth discussing this separately as opposed to burying it inside another section as I have done in my earlier newsletters.

Powerful electronics are now found in phones and tablets but really the process of offering more powerful electronics in smaller packages has been going on for many years now.

Desktop computers still run the most powerful processors and give users the most flexibility for future expansion. They run the most powerful processors as they have the room in the case for heat dissipation. You may for instance have had the experience of a red-hot laptop where the processor runs so hot you cannot place it on your lap! This is due to manufacturers attempting to put as much computing power as possible into a small form factor such as a laptop.

Another thing to note is an i7/i5/i3 processor in a laptop is not as powerful as a desktop, even though the designation looks the same. Very few laptops sport quad core processors whereas all i7 and i5

processors in desktops are now quad core. The difference in performance is BIG.

Desktop computers, in addition to being more powerful, also have room for expansion and replacement. Want a faster drive? Just replace it. Want more drives? Just add them. Want to play games then add a graphics card. If you need more RAM, just add it. Want to use two or even three screens? Just plug them in. If it dies, it can be fixed!

A warranty is great but getting it fixed but does take 1 – 2 weeks with the unit being couriered to Sydney or Melbourne for repair. If you need your computer for your business, then this can mean having to buy a new system rather than wait for repair. It pays to think, not only of whether your computer can be fixed, but also how long it is likely to take to fix. Another issue is that the company takes no responsibility for your data. I often get the job of backing up their data before they send it off for repair.

The important thing with a desktop is to buy a generic one such as what I supply. It sounds self-serving I know but it means that all the parts are 'off the shelf'. This means any qualified technician can source and fit the parts, very quickly if not the same day that the breakdown occurs.

The long-term costs of desktops are also favourable as parts can be replaced rather than the entire unit being replaced.

Desktops typically are replaced on average at the six years while laptops last three years. This is a survey result. If you consider the costs of transferring and upgrading on top of the system cost itself then a desktop is a good option, provided you don't need the portability of a laptop.

I should also point out that both laptop and desktop systems are getting more expensive due to the falling Australian Dollar. This makes the long term cost of ownership even more important.

Avoid the tendency too to go for the cheapest systems especially with laptops. The reason is the lowest cost systems often compromise performance in a number of areas.

Custom Built Systems

I supply desktop systems. If you have a business or don't want to risk downtime, then a desktop can be repaired using off the shelf components. Laptops and AIO units, even when in warranty, mean you will be without your computer for possibly several weeks while it is being repaired.

Basic Systems

I've decided to build a basic system for the first time…EVER! It is a compact but handsome case which will look good anywhere and can be used in both vertical and horizontal orientation. It is suitable for both home and business users.

A basic system doesn't mean it is less reliable. I am using a more compact case and AMD processors (which aren't as fast as Intel). You will also get fewer USB ports (on the back) and not as many connections for sound and monitors. Most customers however probably won't notice as the standard connections are all present. The system uses a 300W 80PLUS Gold Power Supply Unit which is a capable and power efficient unit.

The systems come with 8G of RAM which is plenty and an AMD A6 Dual Core processor which will be fine for general use. All systems come standard with a DVD Drive, Card Reader and Windows 10 Home. The case itself is quite small and it may be that some people actually prefer this!

The hard drive is a standard 1TB drive, not as fast nearly as an SSD in my standard systems but $80 extra will get you the 250GB SSD if you wish.

The cost is $980 including GST based on pick up from Woodvale. Any data transfer from your old system, software, security and email setup is additional and not included in the price. The warranty is the standard one year on hardware only but any warranty issues for the Basic systems will require you to return it to me for repair (not on-site).

Standard Systems

All my Standard Systems include 2.5 hours' installation time and are high quality systems. These systems are suitable for home or business use. I use the best quality components including 80PLUS Silver rated power supplies and Intel CPUs (much faster and more energy efficient than AMD but more expensive).

I concentrate on the basics and get them right. I use 8GB RAM even though it is bordering on being too much but I know 8GB will run pretty well anything. I have 16GB in my system but even I have never seen it use more than 6.5GB of memory usage. Graphics cards are a waste of time for most people unless you want to play games in which case I suggest spending at least $500 on a good graphics card. A cheap graphics card is useless for gaming. The graphics built-in to the motherboard are plenty fast enough.

An SSD (Solid State Drive) will do more to improve your system performance overall than a higher spec CPU, improving boot up performance many times and making the system very responsive even while very busy.

The standard systems I sell are perfect for most customers whether their needs are modest or whether they want to edit photos and video.

The systems I build according to priorities that I think are most important for customers:

- Quiet
- Power Efficient
- Reliable
- Fast
- Upgradeable

I think all these things are important.

Most computers have CHEAP power supplies that are not only likely to be less reliable, but are also noisier (with smaller fans running at higher RPM) and produce more heat (which is power wasted). I use high quality power supplies. These units are robust, have plenty of connections and are highly power efficient with 80PLUS Silver or Gold power efficiency rating 80PLUS Ratings Wiki. They have large diameter fans for quiet running. A system running at say 120W will lose about 40W in heat on many systems. One of these power supplies will lose about 10W! It is a considerable power saving over time and, as a bonus, your system runs much cooler which will increase the life of the system.

Cases are something that people don't think much about. The truth is it is mostly air inside but a slightly bigger case gives room for future expansion. You may want extra drives or a graphics card, for example. A standard desktop PC can also be repaired the same day using off the shelf components, an important consideration for many businesses and even home users.

I am now using the highly respected Fractal Define R5 case for my new system builds. The case also has easily removable filters for cleaning at the top and front. Soundproofing is also built into the unit with the result it is dead quiet. Soundproofing is definitely nice to have. It only takes one annoying fan to be…well…annoying. As computers get older of course, some noise may creep in. I am VERY impressed with this case. The case dimensions are 232W x 523D x 464H. There is a front door, which is soundproofed but opens to reveal the card reader and DVD.

I'm also offering the compact build option which uses the Cooler Master Elite 130 Case. This case lacks the soundproofing and filters in the bigger case. It also has no room for an internal card reader. I supply an external card reader instead for these systems. They use a much smaller system board but there are still six USB ports on the back and three on the front of the case. The case is 240W x 377D x 205H so quite small. The DVD burner is installed in the front of the case (this is a system picture off a website so it isn't shown). I find customers still want DVD burners even though it has become the fashion not to install them.

If you have a good quality case and power supply, it makes it an easy and sensible proposition to upgrade the system at some point in the future rather than throwing the lot out and buying a new one.

I use a Samsung 250G SSD as the standard drive for my builds. These are much faster than a mechanical HDD and all data is stored electronically for lightning fast access and boot times. I am also starting to use M.2 SSD mounted directly on the motherboard, which are amazingly small weighing only a few grams.

The systems use Asus or Gigabyte motherboards, which are high-spec motherboards with a wealth of connections on them and are of high quality. I am a fan of Intel CPUs and I fit i5 processors to my systems. The i5 CPUs are very powerful with Quad core processors running at 3.3 GHz. This is a MUCH FASTER CPU than any laptop is capable of running, whether i3, i5 or i7.

I have also recently moved to using Corsair Vengeance RAM, which is a very high quality memory. I mad this move due to a few issues with the standard memory I had been using. This does increase the price of my systems but is a necessary move to give my customers the most reliable systems that I can.

My systems also have DVD Burners and card readers built in (except the compact system where an external card reader is supplied).

The systems include data transfer, basic setup AND 2.5 hours on site at your home or business to set up printers, show you how to use the system (especially important with Windows 10) and to do anything else that you may require.

The prices are $1690 for the standard system with the 250G SSD option. These prices include GST. The compact system is $1630. This is for the Intel i5 option, $100 can be saved by going for the i3 – 6100 Dual Core 3.7GHz option which is still VERY FAST.

I recommend adding $110 for a 1TB backup drive, installed inside the case. This makes backups easy and stress free. If you have an external drive, you want to use then fine. Backups are essential to prevent data loss and subsequent heartache.

The warranty is 12 months and covers hardware issues but not software issues. The warranty isn't officially 'on-site' but much of the time I find myself coming out anyway as customers are often not comfortable plugging and unplugging things. Fortunately, the systems are reliable but like any system consisting of a number of components, failures occasionally occur and that is what a warranty is for. I will generally fix things right away if your case is urgent, but normally just a few days if not. I think it is a good service and not one you will get anywhere else.

The nicest thing about a custom-built system is you can have anything you want and I will make sure

that what you get will be exactly what you want and need. The systems will also be reliable and made from the best components I can find, refined over a period of years.

Setting up New Computers or Devices

A significant part of my business is setting up new computers; transferring data, installing printers, wireless, and setting up accounts, antivirus and other programs.

In my opinion, people undervalue getting a new computer set up properly in the first place. It can save you a lot of trouble and I make sure that all questions are answered, and it is set up just the way you want it.

I suggest that if you want a new system setup by me…

1. Write down all user names and passwords that I may need.
2. Locate critical software such as Microsoft Office and Security Software (may be just a user name and password for an online account).
3. Make sure you know what email addresses you are using and are 100% sure which email program you are using.
4. Any critical business software such as MYOB or Quicken make sure you have all licensing information to hand and have checked compatibility with the new operating system.
5. Prioritise what you want done.

Please note too that printers and webcams are sometimes either not compatible at all or only partly compatible with new operating systems.

Servicing Required?

A typical computer service lasts 1 to 1.5 hours as a call out but computers can also be brought to me for servicing. People ask me if a regular proactive service is a good idea. The answer is it is a good idea if you can afford it but it isn't like a car where a failure to service regularly can result in expensive damage. I do find though that especially if a computer is used a lot and you have children on it then yes, regular servicing is a good idea.

Potentially Unwanted Programs (PUP) can accumulate on your computer that can eventually slow it right down and should be removed.

Many of these programs can also be downright malicious and these are termed ***Malware*** although the term also includes viruses. These programs may change your home page, cause pop up ads to annoy you and redirect your web searches. In some cases, of course, the malware can steal data or damage your operating system, rendering it inoperable.

It is important of course to check that your security is up to date.

I run special cleaners and scanners to check for and remove these programs during servicing.

I also check that important programs are up to date, that your security is up to date and working and that all windows updates have been done.

I check all backups are working but honestly 75% or more of non-business customers do not do backups. It means unfortunately, in 10 years or so time, most people will lose files and pictures by one means or another, it takes just one event. Business customers are more careful and they need to be.

Dust build-up can cause the CPU to overheat. The critical area is the heat sink, which sits on top of the CPU. When dust builds up here, often the symptom will be the fan operating at high speed trying to keep the CPU cool. If your PC fan is noisy then this is a very likely cause. Occasionally the heat build-up will result in the system shutting itself down to prevent damage. Laptops also suffer from dust build-up but it is not practical to strip and clean those as one can a desktop.

The frequency of cleaning required is variable though, if you have your computer in a high traffic and dusty environment, it can get dirty quickly. On the other hand, I have seen computers over five years old with little dust build up.

Memory shortage in modern computers is becoming less common, as the base memory is normally 4GB, although I still do see it. Windows Vista, Windows 7/8 32 bit will run fine with 2GB of RAM although 4GB is better. Windows 7 64 bit really does need more than 2GB but interestingly Windows 8.1/10 64 bit will run OK with 2GB RAM, this is due to the more advanced memory management in Windows 8.1/10. Nevertheless, 4G is still the minimum recommended amount of memory for smooth operation.

Service Charges and Call out Jobs

It is important for call out jobs that you are prepared. If I am sorting an Internet issue, please ensure that you have your internet connection tested by your ISP before possibly wasting your money. You will also need to ensure that you know what your user name and password is otherwise you can waste quite a lot of time.

If you, the person who has experienced and understands the problem, is not available, make sure you leave a detailed description of what the problem is. It helps to write down the problem or problems that you are experiencing and to prioritise the list.

Please note too that the older and slower your computer is the longer the job will be, ditto internet connections. Slow internet connections are painful, both to the customer and myself, but are often just part and parcel of the current ADSL services here in Australia. If you want lightning fast internet get Telstra cable. Use this tool to check availability:

http://register.bigpond.com/check-availability.do

This will also check for ADSL and NBN availability in your area.

Backups

Backups are essential to not only protect your data, but also to help prevent downtime and cost as your software is reinstalled.

Look at it this way, if you lose everything on your system would you be upset? If the answer is 'yes', then you should be doing backups.

I will also say that 80% of all the documents, photos etc. on the planet stored in people's computers whether they be a desktop or a laptop won't exist in 10 years' time. Over 20 years I would guess that figure will increase to over 90%. The reason is people just assume that their photos and valuable documents, videos etc. will always be safe but they aren't. They can be lost through carelessness, theft, fire, viruses or equipment failure. Backups are essential if you have a business but still very important if you have documents and photos of a personal nature that you don't wish to lose.

Backups are of two types, disk/partition images and, files and folders backup. The image will be a snapshot of your entire disk including all operating system files and programs, as well as most likely your data (although this could reside on another drive). An image restore will have you back as your computer was at the time of the last backup, as though nothing had happened. A files and folder backup won't backup operating system files or programs but will save your data (provided you put it into your user profile, that is desktop, documents, music, pictures etc.).

Data loss can result from drive failure but malware, fire and theft are other possible causes. One backup therefore should be in a data safe or another physical location. The more valuable the data is; the more steps should be taken to protect it.

A backup can be a simple copy and paste or may use software such as Windows 7 backup or file history built into Windows 8.1 and Windows 10. Software programs that you pay for such as Acronis True Image, which I use on my computer, will give a more comprehensive range of backup options but takes more effort to setup and understand. You may also find that when you purchase an external hard drive that it MAY come with backup software. I generally suggest though that for simple setups that backup built into the Windows operating system, File History is used, it is simple, reliable and free.

Windows 7 backup is built into the system and can be accessed simply by typing 'backup your computer' into the search box and following the prompts.

Windows 10 uses 'File History' and this is activated by simply using Search to find it and then turn it on.

Obviously in both cases you will need a suitable location on which to do the backup, either a second drive inside a desktop or an external drive or a network storage location such as on a NAS.

Any critical business software should be backed up in more than one location. A MYOB company file for instance can be backed up onto a USB memory stick in addition to any other backups you do. MYOB also offers the ability to store your company file online. This works very well and means you can access the company file from say your desktop at home, at work and even from your laptop. It is also much safer online. The company file will then keep

synchronised between all your devices. I find this very handy and use it myself.

Network Attached Storage (NAS) is also very useful and I have set this up for a number of business customers. This is a separate server that contains a number of hard drives and functions as a file server so that your data can be accessed from any number of computers. The data is protected on the NAS so if a drive in the NAS fails, you not only won't lose data but you can continue to access your data.

The NAS is ideal for a small business where you require access to common files from a number of computers. The NAS can easily be accessed externally over the internet although the speed of your upload/download connection at each end can be an issue.

I recommend the Synology NAS. These are more expensive than some but the software provided is of a high quality and updates are available for the life of the device.

OneDrive is the Microsoft cloud based storage and users get 15GB free, all you need is to set up a Microsoft account. I recommend setting up a new account rather than using an existing email account as this will give you another email account and avoid confusion with your existing one.

If you have an Office 365 subscription you get 1TB or 1000GB of storage!

OneDrive is a great storage solution for data but it is limited by the upload/download speed of your internet. I use it a lot for storing my MYOB files as MYOB is on my portable Microsoft Surface Pro 3, something that could be easily stolen or damaged so I make sure the critical stuff is always backed up.

I also use a Synology NAS to do backups in addition to my other backups.

If you use Windows Server then other products for backup such as Shadow Protect are recommended and these are business level products, priced accordingly.

Spam

Spam is a fact of life and can't be prevented entirely.

I would use 'unsubscribe' only for companies you recognise.

Marking spam as junk and blocking the sender is another thing you can do. This won't stop it coming in but will redirect it to junk where you can then periodically get rid of it. If you have most of your spam going into the junk folder, even if you can't actually stop it coming in will help keep your mail folder much smaller.

Remember to empty your junk and deleted items folder regularly. I sometimes see customers who have stored thousands of email in the deleted items folder.

Microsoft Outlook has different settings for spam filtering so make use of this filter to reduce clutter in your Inbox.

Remember any filter requires that you check your junk folder for any legitimate emails that have got through.

Private Cloud versus Public Cloud

Public cloud is remote storage in the public domain but protected of course by password and maintained by the provider:

OneDrive	hosted by Microsoft
DropBox	hosted by Dropbox
Google Drive	hosted by Google
iCloud	hosted by Apple

I think people are often concerned by privacy issues when storing data remotely. In my opinion though the risks are overrated and people often don't rate the risks of loss when the data is under their own control. Data can be lost by fire, theft of equipment, malware and viruses and hackers. For the most part these risks are much higher if the data is maintained in your home or business. Big companies have professional backup and disaster recovery services in place that your business premises or home is unlikely to be able to replicate in effectiveness.

OneDrive I like, as it integrates well with a range of devices and, of course, the PC and if you have Office365, you get 1000GB of storage included which is great.

Private Cloud is where you make your local storage for files and applications from a Windows Server, PC or NAS (Network Attached Storage), available remotely while on the move using a laptop, tablet or phone.

This usually requires just some simple port forwarding changes on your router. A NAS is built with this private cloud in mind so it is very easy to configure them to provide remote access to files, photos and videos.

I use a NAS now to access my files, photos and videos on my phone and tablet. I also use OneDrive for sharing photos with other people.

The advantage of Private Cloud is that you can have a huge amount of storage, limited only by the cost of storage. The performance is also surprisingly good although this depends on the upload speed of your internet.

OneDrive

OneDrive is the file storage Microsoft offers customers that is located on the Cloud. It is very safe and secure and 15G is offered for storage. It is free to anyone who cares to create a Microsoft account even if they do not own a Windows Computer. OneDrive runs on Android tablets, Android phones, the iPad, iPhone, the OS X Mac such as the iMac and MacBook Air and of course all windows devices.

OneDrive enables you to share files such as documents, photos and videos between all devices that you have with OneDrive on it. If you own an iPad for instance you can share all your photos on the iPad to OneDrive and can also share photos on your computer with the iPad so it goes both ways.

If you download OneDrive to other devices, Microsoft often give you extra storage for FREE. I have used it on iPads and it give you an extra 15G storage to give a total of 30G. If you purchase Office365 you get 1TB per user of OneDrive storage which is pretty well unlimited.

OneDrive is only one of the online services that Microsoft offers along with People (contacts), Calendar, Outlook.com (for email) and online Word, Excel and PowerPoint.

A business version of OneDrive exists too and this has many more features for controlling access to different files and folders as well as other features. It means too that you can have your personal OneDrive and OneDrive for Business on the same computer without them interfering with each other. This is very important these days as often people use one computer such as a laptop for everything so the distinction between business and personal becomes blurred.

I use OneDrive for backing up MYOB on my Microsoft Surface Pro 3 and a variety of documents, newsletters, pictures and videos.

OneDrive makes it very easy to share anything you want with other people simply by emailing a link to the folder or file you want them to have access to.

NAS (Network Attached Storage) Devices

The three options for businesses and homes to share files locally (as opposed to cloud products such as OneDrive and Dropbox) are:

1. Linux based NAS.
2. A standard PC running Windows 7 or Windows 10.
3. Windows Server running on a PC.

The Windows Server option is for businesses who need to run databases and shared windows applications on the Server. If you have a number of employees, some in an office and others on the road, the Server along with a dedicated high speed internet service is fantastic. It is expensive to set up properly and out of the realms of home and small business users.

Another option is to simply use a standard PC to share data on your network to your users and to run backups from the PC for both users and for the PC itself. This is relatively simple and has the advantage that the components are easy to replace so potential downtime is in the order of 1 – 2 days with the help of a technician.

The Linux NAS and I use exclusively Synology as I am familiar with these, are an interesting choice and are getting more popular year on year for both business and home users. The latest NAS from Synology are using Intel Celeron quad core processors which are very powerful and will even transcode 4K video which is pretty amazing. They have more than enough power for most any task.

These NAS can range from $500 upwards (price of disks included). An advantage of anything Linux

based is generally reliability and much less risk of hacking or malware. Windows is a huge target for hackers and it is a complex operating system too. The NAS have a well- deserved reputation for being bullet-proof reliable.

I recently put in place a dual NAS active/passive server setup for a business. This is called the Synology High Availability Cluster. One NAS will take over if the other unit experiences a fault so the risk of downtime, any at all, is a low possibility event. Each NAS is RAID protected so a disk failure will mean business as usual and the drive is replaced when convenient.

The number of disks required is determined mainly by storage requirements. These days a 2 Bay NAS with two 4TB NAS drives will give a total storage of 4TB which is adequate for most homes and businesses. If more storage is needed you can go for 4 or even 8 Bay NAS devices which can give huge amounts of storage. This would give storage of 12TB and 24TB respectively. It does this while providing RAID 5 or RAID 6 (for 8 drives) protection for your data so a simple drive failure won't destroy your data.

There are a multitude of other functions that a NAS can provide:

1. Backups of other computers
2. Private Cloud (making Documents, Photos and Music available to your laptop, tablet or phone while travelling)
3. Music, Photo and Video streaming to Apple TV and similar on your local network.
4. A download station for files (safer than using your computer)
5. Set up your own Web Server
6. Email Server

The NAS itself does require backup, either to another NAS or an external HDD plugged into the USB Port.

If you are interested, then please contact me for further information.

Windows Servers

A normal Windows PC can function as a file server and destination for backups. This can be a good option if you have a spare computer in the home or office.

Windows Server normally means using Windows Server software and a sophisticated RAID setup and the power to enable multiple users to access the server simultaneously. These are very specialised and tailored to the needs of individual customers.

Windows Servers are serious business machines executing many functions including allowing access to a remoted desktop while not in the office, running applications from the server, as well as file sharing and backup. SQL Server databases are hosted by the Server.

A visit to your business will be necessary to determine your needs.

Buying Recommendations

General

You need to consider whether a computer is going to be your primary device for working on or is just a secondary device to take with you on holiday or work or just down to the café. A desktop or AIO is best for serious work. The size also means that thieves unlikely to take them if you do get broken into. Laptops can be attached to a desktop screen but you also need to provide power, keyboard and mouse and use it in 'clam shell mode'.

If your device is portable then size, weight and battery life are all considerations as is price. If you want to use a device in brighter light, then low screen reflectivity and brightness are both important considerations.

Desktops

If you are going to buy a desktop, then either get a generic system that can be repaired by any qualified technician using off the shelf parts or get an on-site warranty (such as one supplied by Dell). The problem with buying name brands such as HP and Asus, Dell, Acer etc. is that the parts are not necessarily off the shelf components greatly complicating getting the desktop repaired, once out of warranty.

A desktop may or may not include extras such as screen, keyboard/mouse and webcam.

All in Ones (AIO)

An all in one is quite tempting as they offer touch screens, look tidy and come complete with all accessories. They work well enough and are good where the computer is visible and public and the

customer wants it to be tidy with as few cords as possible.

They are just another computer but typically have a mixture of laptop type components that cannot be easily replaced, or fixed, except by the manufacturer. If you buy one of these just make sure you are covered by a good on-site warranty.

Touch screens on an AIO, adds quite a lot to what you are paying. I find though, in practice, that touch screens do not get used that much, if you have to reach across too far. Touch screens are ideal though on laptops where the screen is right next to the keyboard.

The main advantage of an AIO is it looks better on a desk in the living room with fewer cables while providing many of the benefits of a desktop. Extras such as cameras, keyboard and mouse are all supplied.

Tablets

I personally enjoy an iPad but my use is just email and web browsing. It is my preference for a tablet but Android has a lot to offer as well. Windows hasn't quite caught on purely for use as a table but offers the advantage of complete compatibility with a Windows desktop or Windows Phone.

Android tablets vary hugely in price but there is plenty to choose from. There are a huge range of applications available for Android devices, as there is with iOS too.

Laptops

People often ask me about brands. Dell give the best on-site warranties and I do recommend purchasing their on-site warranty. I enjoy my Apple MacBook Air but I find people either love Apple or hate them. It is certainly a learning curve though if you have never used their operating system before. Apple provide excellent warranties (but not 'on-site') and I recommend paying for the extended Apple warranties if you buy a laptop and plan to keep it for several years.

Asus has a good reputation also as does Toshiba. Sony and HP, Compaq and Lenovo.

The most important factor IMHO is the screen. I would pay extra to get an IPS screen, which gives better viewing angles.

I should point out that there is a blurring of the line between what is a tablet and what is a laptop these days. A Microsoft Surface Pro 4 is technically a tablet but with a keyboard, it really is a laptop. I never use it as a tablet or rarely. I use the Surface Pro 3 and it is a good work or study laptop but is not cheap, especially with the AUD taking a dive.

If you can afford not only an IPS screen but also an SSD (electronic data storage) or PCIe then that is great and electronic storage is much, much faster and more durable.

I think at the bottom end of the market in laptops be very careful that it is fast enough. A customer might say that performance is not important but when you get a very slow laptop, you may just change your mind. I would recommend Intel i3/i/5/i7 processors although they are more expensive than the AMD equivalents.

Please read a few reviews on the laptop before purchasing.

A laptop in the range of $700 to $1000 is the price range for an average but good laptop.

Hybrids

A hybrid device is simply one that functions as a tablet with a keyboard attached (and powered by the main device) but becomes a tablet as it has a touch screen without the keyboard.

Notable such devices include the Microsoft Surface, Asus Transformer, and Lenovo tablets. Most manufacturers have these products.

I suggest you go to Harvey Norman and speak to the sales people (read reviews too).

Screens

I would for desktop use, recommend 24-inch screens. These are 1920 x 1080 and have become a standard for the desktop. If you want top quality then purchase an IPS screen, which will give brighter images and better contrast, colour reproduction and viewing angles. Expensive IPS screens often offer higher resolutions also.

I would say though that just a bog standard 24 inch 1920 x 1080 screen is very nice and are quite cheap. I use either Asus or Samsung screens but also Dell (for more expensive screens).

I have supplied some Dell IPS screens, which for the 24-inch version are 1920 x 1200 and, 2550 x

1440 for the 27-inch version. These are superb screens with amazing view angles and excellent colour.

The Dell screens are also very robust and height adjustable with low screen reflectivity.

Laptop screens are obviously much smaller but bear in mind that you can always output a laptop image to a big desktop screen and run the laptop in 'clamshell' mode. The IPS screen again offers many advantages in laptops but are more expensive.

With both desktop and more especially laptop screens, you want to get screens with low reflectivity. Glossy screens should be avoided. They look great in the shop but in any bright light, they can be very hard to see.

If in doubt read reviews online of the product, you are about to purchase or speak to someone at Harvey Norman. I am also happy to help you if you wish to phone.

You will also find 4K screens coming onto the market. These start from about $500 and have four times the resolution of your standard 1920 x 1080 screens. I would suggest looking at your computer closely to see whether it is compatible with a 4K display before investing in a 4K display.

Microsoft Online Services

I am writing this from the point of view of small businesses and home users.

I should point out in order to access these services you will need a Microsoft Account. It is dead easy though to sign up.

https://signup.live.com.

I suggest you create an outlook.com email account i.e. chris.mith@outlook.com, rather than using your existing email account, just to avoid confusion. You will need to enter a phone number, which I suggest is your mobile number (no leading zero). They will also ask for an alternate email address, which is important in the case of forgetting your password. This Microsoft account is also your email account and is a great service.

Microsoft offer a wide range of services for not only small businesses and home users but for large corporations also. In fact, they almost have no competition in many areas.

People would be surprised to know that OneDrive gives them not only 5G of free storage but if they have the Office 365 subscription for $89 per year, that storage is unlimited. OneDrive is included with Windows 10 but on Windows Vista or Windows 7, must be downloaded (free). You can also download and use OneDrive on Android, iPad and iPhone and it works well. I use OneDrive on my Android phone and my iPad. My wife uses OneDrive on her iPhone.

You can also store People (contacts), Calendars on line as well as accessing your email on line.

You may be interested to know also that you can use Outlook.com to get mail for all your email addresses not just your outlook.com or hotmail.com). Gmail, Bigpond email can be setup on the Microsoft email server. If you have Windows 8 then you will find that the built in Mail program will store each of these emails in a separate folder and you can specify on the computer how long you want the emails kept for.

A Windows Phone, can be set up so that each email account is a separate icon on the screen, which is very effective.

Any IMAP account such as Gmail, Hotmail, outlook.com (and others) allows you to log onto any computer anywhere in the world and access your email. The google and Microsoft email accounts will also access and synchronise, contacts, calendars and cloud storage.

You will find too that all these online services are available online very easily if you use www.msn.com as your homepage. The online Word and Excel is available even if you don't have it loaded on your computer. Google have something similar so if you use google services such as Google Drive and Google applications then you can use www.google.com as your home page to easily access these services.

OneDrive for Business is available with Office for Business subscriptions and Microsoft allow you to have separate personal and business OneDrive accounts and that can be very handy. Microsoft have put a lot of thought into this and it is the best thought out solution I have found so far.

Office 365

Office 365 is $89 for Personal and $119 for Home covering five users. I think smaller home based businesses may find this suitable.

The subscription, gives you, all the Microsoft Office products plus ***1000GB OneDrive storage***.

You can download Office for iPad, iPhones or Android phones, which some people may find useful.

Each user can have their own Microsoft account and you simply send them the link in order to download and use the product. This means five employees or members of the family can use get Office. The subscription is controlled and accessed through your Microsoft account. You can deactivate and reassign each of the five users you are allowed at any time. You can also get Office for Mac if you are an Apple Mac user.

The other advantage of subscription software is you will always get the latest product without extra cost.

If that is not enough they give you 60 minutes of free Skype call per month with the subscription. Microsoft now own Skype so if you have Windows 8/10, when you sign in with your Microsoft Account, you sign in automatically to Skype also.

Office subscriptions for Business offer much more including Hosted Exchange email, for your domain based email and even online conferencing. The business version of OneDrive is more fully featured and includes SharePoint features for sharing and collaborating on documents.

Microsoft Office Alternatives

Office 365 comes with everything including Outlook, Access and Publisher and there are versions for your Mac as well. You can activate/deactivate up to five different computers, which is very good for many families.

http://office.microsoft.com/en-au/.

The Office 365 subscription comes with other benefits also and I have covered them in a separate section on Office 365.

If you want a single copy though of Office 2016 (which really is what Office 365 is) with a disk, then please remember that it isn't transferable to a new computer. Office 2016 is locked up as tight as a Chemist Shop in Armadale in order to prevent any more than ONE copy ever being used and then only on ONE computer.

Always remember to keep the activation key safe for these products.

Open Office a free alternative, can be downloaded from the link below:

http://www.openoffice.org/download/index.html.

I have a few customers who are quite happy with this for word processing and basic spreadsheets.

Outlook is a dependency many people have and it almost forces you to buy the latest Microsoft Office just to get Outlook. Outlook is a great product and most business people require it in their work. MYOB, for instance, uses Outlook to email invoices and hence is indispensable. There are other products out there though such as Thunderbird and Windows Live Mail which are free.

I have found a product that enables you to archive emails in a standard EML format then import them into another email program such as Thunderbird or Windows Live Mail (WLM). This is the workaround product to be used to get your messages out of Outlook:

http://www.mailstore.com/en/mailstore-home.aspx.

Here is a 'how to' on exporting Contacts from Outlook 2010 to a CSV (comma separated file).

http://office.microsoft.com/en-au/outlook-help/export-contacts-HA101870639.aspx.

It isn't ideal and if you don't have too many contacts it may still be better to manually enter new contacts.

If you have a Microsoft Account, you can get access to Microsoft online services including email, calendar and contacts as well as online versions of Word and Excel. I think for many customers this may be adequate for them.

Increasingly users are going away from email programs that store email on their computers and going to Gmail or Microsoft for email storage.

Viruses and Security

Viruses and malware (a generic term for invaders that aren't viruses) are a HUGE issue for Windows users.

The best steps to prevent invasion and being violated are:

1. Windows 10 does have built-in Windows Defender which is free. It is still a good idea though to buy a paid antivirus, especially if you use your computer for your business. I recommend Norton products as I have used them for years but I don't have anything bad to say about any of the other products commonly used such as Trend, McAfee, Kaspersky and others such as AVG.
2. Watch for opening email attachments that don't come from trusted sources.
3. Don't go onto dodgy websites even if the girls look inviting.
4. NEVER give bank account or credit card details over the phone unless you are 100% certain who they are. PAYPAL is recommended for online payments.

Applications such as Adobe Reader are particularly prone to allowing infection on your computer. They should be kept up to date to minimise the risk. The older the version, the higher the risk so please update.

I recommend Norton products generally as I have been using them myself for years but I have also been using them on customer's computers for years also without issues.

Please remember though whether you choose, Norton, Kaspersky, AVG, Trend or McAfee that it is a constant battle to defend your systems and they do NOT provide 100% protection. You have to take responsibility for not engaging in high risk activities as mentioned earlier. AVG, Avast and others also offer free protection albeit with fewer layers of defence than their paid versions.

Java can also be a security risk and can be downloaded free. If installed, you can uninstall it from the add/remove programs utility in the control panel. Please note though that removing this may mean occasionally you can't run programs that run on the web. I choose just to let Java run on my computer. I think as always it is a balance between risk and utility. It should always be updated (and it will prompt you to do so).

Windows 10 has built-in Windows Defender. Windows 10 also has a locked boot sector (if installed properly). The protected boot sector makes root kit virus infection, impossible. There is also a feature called SmartScreen which is activated via the control panel. I don't believe, personally, that these will be as effective as paid antivirus. Opinions are split on this though and some people say it is enough, especially if you are careful what you click on.

I wold recommend using CCleaner for cleaning and Malwarebytes for checked web browsers, especially if you want to use the free protection.

https://www.piriform.com/ccleaner/download.

http://www.malwarebytes.org/mwb-download/confirm/.

Multimedia Entertainment

The TV, the bigger the better is still in vogue and probably always will be. I know people who like watching movies by themselves on their iPad or computer but most of us enjoy sharing our viewing with others.

The TV of 2016 is an internet connected device with access to a wide range of services and products such as Netflix on the internet and even from local computers.

The first issue is how to connect these devices to the internet. Wireless is the easiest and may work well for you. The best connection is always by cable. If you can, yes, cable Ethernet throughout your house or business. New houses often have Ethernet cabled throughout saving a lot of trouble. Failing that the next best thing is an Ethernet Powerline adapter that shares Ethernet over your electrical wiring. You should just make sure that you follow the instructions and don't put it on a surge protector.

The final bit of equipment is called a Switch which is usually four ports for four Ethernet cables. This enables us to use an Apple TV, Foxtel IQ, Our LG TV and our LG Blu-ray as internet connected devices. I use this in conjunction with an Ethernet power line adapter.

Phones

I thought while my mind was on this topic I would write a new article on it.

A phone is often a very personal choice. The tech heads will experiment and know a lot about their phone, how it works and how to get the best out of it. At the other end there are people who are tech phobic, who just don't want their phone to attack them, steal their data or scare them in any way. Of course some are in-between these two groups.

I'm the tech head and I sold my iPhone 5 two and a bit years ago to go with the Nokia 1520, a Windows Phone. I was very happy with this and I still use it sometimes and keep it as a backup phone. I then got bored, wanted the best camera so went with the Samsung S6 which I sold after two weeks as the battery life was appalling. The Nokia 1520 on the other hand could go three days without charging. I then got the Samsung Note 5 which I actually really liked, amazing screen, pen and wireless charging. I then got annoyed with google intruding and wanting me to use google calendars and contacts in their default applications and with google voice. I then purchased, second hand, but brand new in box, an iPhone 6S Plus. I was so impressed that the Note 5 was sold the same week and I haven't looked back. It is very refined and lets me use calendars that I want to use and Siri has made using the phone easier and is better than google voice. As a bonus the battery can last two days, a bit less than the Nokia 1520 but longer than the two Android phones I used.

The iPhone and Windows Phone both get timely updates although Windows 10 mobile has been slow to be deployed. iPhone is best here as updates are available immediately on your phone. Android operating system upgrades can take six months or maybe never to get to your phone. If you look at ten different Android phones, you may find many different versions of Android running whereas an iPhone will always have the latest version unless the phone has run out of storage space for the upgrade.

Android is popular but I find that the Samsung phones I had using Samsung keyboard and launcher are substandard, not terrible but the standard google launcher and google keyboard is much better. It is a shame that the first thing you need to do is customise the phone but some people love doing this. Other people unfortunately don't even realise that there are better options. The iPhone is fantastically well optimised with keyboards and the like and it makes texting a breeze. Android has some good keyboards but the best ones are something you need to hunt for and try out for yourself. This is the thing with Android, if you spend time customising it, you do get a product that suits you and is much better than the out of the box experience.

Windows Phone is underappreciated but at this point is struggling. This probably makes no difference though if you are a business user and just want internet, email and a few apps. If you want a choice of top phones with top cameras, leading edge technology then it misses out. This may change but if you are after a budget or business phone right now, Windows Phones are a great choice. You log in with your Microsoft account on your PC and phone and voila, a lot of stuff will be set up for you and it will make life easy. This is the big advantage Windows Phones have as Microsoft owns the desktop, still, so it has a few nice things it can do for you to bring your desktop, laptop and phones closer together. I may yet go for Windows Phone myself for my next phone.

The downside with the iPhone and Apple is their predatory business practices and the use of storage as a revenue earner. They hook you on iCloud and then want you to store the same on your phone and you set up albums with your photos on your iPad. You will then find 32G isn't enough then 64G then finally 128G seems like a great idea, each iteration requires a new phone with the storage flogged at a premium over the base (and useless 16G) option. iCloud is $14.99 per month for 1TB. This is a lot of storage. I nominate this figure though as with Microsoft OneDrive 1TB is included in your Office 365 Personal subscription for $9 per month. This includes the complete Office Suite, Outlook, Word, Excel, OneNote, Publisher and Access. You also get 60 minutes of Skype call time free. This covers one computer. If you want Office 365 Home, it covers 5 computers and costs $12 per month. The annual prices are $89 and $119 respectively. You get the picture. I find OneDrive is great for sharing photos between any device whatever it happens to be Android, iPhone, Windows Phone, a PC or a Mac, it is all the same and OneDrive runs well on all of them.

The upside for the iPhone is that all this money gets poured back into the products and operating system and the customer service. The phones operate amazingly well out of the box and a huge amount of money and effort has been put into making the operating system efficient on power and performance and easy to use. If you need to get something fixed, provided it is within warranty, it is relatively quick and painless. The phones are also robust and will work for years unless you drop them. Resale value is very high so it makes it easy and economical to sell products second hand and buy the latest ones.

The choice is yours and all the expensive phones these days are just great. The cheaper ones though you have to be careful with. The Windows Phones are the best IMHO if you are on a budget as they are very smooth and efficient in operation due to the close integration between hardware and software as is the case with Apple iPhone. The warranty service is also very good.

Phone Networks

I'm not an expert on all networks but one interesting thing is that companies such as Vodafone who are all over the world, are exploiting this advantage to give you unlimited calls to 10 top destinations such as the US, Canada, NZ, UK and some other countries. They also give 120 minutes a month calls to an even longer list of countries. Roaming is $5 per day to a wide range of countries and it cost NOTHING to roam in NZ.

The quality of the major networks is quite close in cities but diverges in the country with Telstra still the hands down winner in rural areas.

It pays to do some research before changing your provider. Vodafone have a network happiness guarantee:

http://www.vodafone.com.au/aboutvodafone/network

It is a good idea and probably something all networks should provide.

I've also been recommending people don't lock themselves into a contract and just buy the phone. This is a good tactic if you want to get a cheaper phone and save money. I think with more expensive phones; it may be better just to go with a contract for 24 months. Again it pays to do some calculations yourself.

Modems and Routers

These days most people have ADSL or if you are lucky you have Telstra Cable or NBN.

If you use Telstra cable or NBN then they supply the modem that you use but you can still plug in a router if you want more choice over wireless.

The basic modems I supply are TP-Link W8960 or similar and these while very basic, work very well and I have had good levels of reliability using these. They have Wireless N and only 100Mbps cabled performance but are more than adequate for most people.

If you need more functions though, there are other options.

Wireless AC is the latest standard and allows faster wireless connections if your wireless devices allow it. The latest high end laptops, phones and tablets will have this, but if in doubt check before investing in a Wireless AC router.

Gigabit internet is another feature that more expensive modems offer. This allows much faster data transfer speeds between devices hooked up by Ethernet cable.

The more expensive modems also have guest account with a separate login. You can restrict these accounts from having access to the rest of your internet and you can change the password any time without affecting your computers.

Businesses and homes where you are sharing files over the local network should have Gigabit internet. Wireless AC is a more marginal call although the same applies, if you want more speed then get a router with Wireless AC.

Wireless is taking over? I don't think so. It is nowhere as fast as a cable connection but in most cases is fast enough. Your main computer should generally be cabled rather than wireless; it is just more reliable.

The other area of interest is in Parental Controls which is another section in itself. The best ones seen so far are in the Asus AC87U router below. These routers are full-fledged computers with dual core processors. They will control access for each device on the network and will also block malware and other nasties before they even get to your computer.

Asus AC87U Router

This router is an indication of the direction that routers are now taking which is a full blown computer, in itself. This router has one dual core 1GHz CPU and one 500MHz CPU inside it.

http://www.7tutorials.com/reviewing-asus-rt-ac87u-wifi-router-batman-would-use

This is a dual band router. A typical ADSL or Telstra Cable modem router does the function of both modem and router and operates on 2.4GHz only with Wireless N.

You can also buy more expensive modem/routers which have dual band, offering both 5GHz and 2.4GHz Wireless in addition to Gigabit wired connections (less expensive ones are 100Mbps).

The 2.4GHz band is inhabited by every router in your neighbourhood but also many other devices run in this band, such as cordless phones and baby monitors so you can sometimes get interference. The 5GHz band in contrast is not used that much and you are much less likely to get interference. In theory 5GHz band doesn't have the distance of the 2.4GHz band but in practice I find sometimes the 5GHz band can be as good or better.

Another option is to just buy the router and plug this into your existing modem/router. This option costs less but obviously it is for those who don't mind setting it up and it is one more thing to go wrong.

This AC87U is dual band but also has a wealth of features on the router itself.

Parental controls are particularly useful and these can be specified by device so you can choose for each device, times allowed for internet and restrict access to social media and adult websites. You will of course need to put a password on the router to prevent access by children, or anyone unauthorised for that matter.

The AC87U also runs Trend Micro which is updates automatically and blocks malicious websites, protects the router and stops one device infecting others on the network.

I would recommend this for customers where you want better malware protection and for the parental controls.

The bonus is Wireless AC on the 5GHz band which is three times the speed of the typical Wireless N. This can make a measurable difference if you have the high speed Telstra cable or if you need to transfer data over the network wirelessly. You can also separate faster devices from slower ones by assigning them to the relevant band. You will need Wireless AC capable devices to run Wireless AC although you can still run Wireless N devices on the 5GHz band.

Do remember though that if you have slow internet, which most people have, there is no magic wand to remedy that.

My high speed Telstra cable runs at 115Mbps down and 2.4Mbps up, compared to the average ADSL at 6Mbps down and 0.24 up.

The AC87U also has QoS which allows you to specify the priorities of traffic on the network so you can for instance specify web browsing as your top priority and next one is file transfer, next gaming etc. This may help especially if your internet is slow anyway.

Finally, this router allows you to set up Guest accounts which you can set so that it has NO access to your network except for internet. You may find this useful in your business. I do and all customer computers are put on my guest network.

An update. I have had this router for some months now and no issues with it although I have needed to reset it a few times but no big deal.

One point to note too is that customers often have quite capable modems already including useful facilities like Guest Login and possibly some parental controls as well. A guest WiFi login is very useful to give visitors who get internet but not access to anything else.

Printers

I don't normally say much about printers. Lasers may still have the edge if you do a lot of printing but not by much. Inkjets can be faster than a laser and actually cheaper to run. In addition, a colour inkjet printer is cheaper to buy if you are talking a multifunction one with scanner, document feeder and fax.

HP has been my favourite brand for some time for inkjets and Brother for my Laser printers. I broke with the past though and bought an Epson WF-

3640 multifunction inkjet. I have to say it is the best printer I have owned. It is faster (10 seconds to print a page from the time you press the print button) than my Brother Laser (about 25 seconds) and costs under $200. It is also NOT a photo printer. I think many people, including myself have bought photo printers, which cost more and are much slower, just to print a photo occasionally (which drains a lot of ink).

This WF-3640 also does full duplex scanning. It means you can put 20 pages (both sides in the document feeder and it will scan both sides and spit them out in a PDF that is also two sided. It can also print them out the same way.

The cost of running an inkjet is similar to a Laser but can actually be CHEAPER. A Laser may last longer if you do a LOT of printing but you also will need to buy drums, belts and waster toner cartridges which are expensive, in addition to the toner. A drum, for instance, is about $250, more than the printer is worth but is required after 20,000 pages (the life of the Epson WF-3640 Inkjet).

I used to be totally in favour of Lasers but the other issue with Colour Lasers are a set of cartridges costs about $600 which is a lot of money to part with all at once versus $145 for a set of cartridges for the inkjet (which is cheaper per page).

I think most small businesses and home offices could get by with just something like the Epson WF-3640. The print quality is similar to a Laser although the Laser might have a small edge in print quality but not much.

If you have an office though where you are doing a lot of printing, then a laser is still the way to go.

I suggest you look at the 'Duty Cycle' for a printer and match the stated copies per months with your requirements. It is false economy to go way over the top with the printer duty cycle as well.

Passwords and Security

The method I use to remember passwords is to store them in a password protected Excel spreadsheet. This means you can vary passwords and don't fall into the trap of making all passwords the same with the result that one leaked password can give people access to everything. I think even writing them down and hiding the bit of paper or on a notepad, somewhere in your bookshelf is safer than having the same password used for everything.

Consider PayPal too for on line transactions as you can use PayPal for a wide variety of online transactions without having to give out your credit card details each time.

The other thing to consider is to keep your security questions written down also as these may be required. You will find that Hotmail and Gmail will sometimes send you reminders to update your security details. It is a good idea to do this as you could one day find you lose access to your own account! It is a good idea to change your passwords occasionally, if you can.

I should also add that there are many free and paid applications to store your passwords for you.

Credit Cards and EFTPOS

I now accept credit cards (3% charge) and EFTPOS (no extra charge) for payment. This makes life simpler for me and it is probably more convenient for customers as well, as the handling of cash is reduced.

Hours of Work

I am available 7 Days and Evenings but obviously outside normal times, I won't always be available. Please try not to call before 8am in the morning or after 8pm at night.

I do charge extra for call out work outside of 9-5 Monday to Friday or on weekends and Public Holidays. Saturday morning, I will do call out jobs at no extra charge by prior arrangement. I do understand people have to work for a living so I do make allowances.

Contact details

Home: 9309 6221

Mobile: 0433 102 277

Email: grant@perthpc.com.au

Website: www.perthpc.com.au