

From the Managing Director

Well, the end of the financial year is upon us already. If you were planning to make any last minute technology purchases please make sure you get in touch with us as soon as possible. Our dance card for June is looking pretty full, but we still may be able to help out a few of you.

In other news we have started our Voice Over IP (VOIP) trial this month, and will let you know what we have found in next month's newsletter. In the meantime those of you that have called the office recently may have noticed some changes.

Until next month,
Clem.

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From the Editor

Issue two in the new series of newsletters sees the start of a two part article. To instil fear in your hearts as is the typical IT sales approach, we start with the bad news, catastrophic failure. This part is about what can go wrong, and how it can affect you. Part two will be how we can help you prevent, and recover from any unfortunate mishaps that may occur. In true soap opera style, you'll need to wait for next month's edition for the conclusion.

We've also got some more web marketing tips as promised, this time about domain names, and we profile another client – VFM Maintenance.

If there's an IT related topic you'd like to see discussed in the newsletter, feel free to let us know. Feel free to e-mail me (steven@colmancomm.com) with any suggestions or feedback.

Until next month,
Steven Craddock

HelpDesk Hints:

- Please don't wait until you see us to log a problem
- Log all queries and requests through the helpdesk;
 - E-mail: helpdesk@colmancomm.com
 - Phone (02) 6287 3036
- You will be given a **Task Number**, please record it for future reference

VOIP? What the?

For those of you not familiar with the acronym, Voice Over IP (Internet Protocol) is a way of using your computers and internet connection to make phone calls. For certain types of businesses, particularly with multiple offices, this can lead to significant savings. It does require some extra hardware and service providers. More details will be in our assessment next newsletter.

Saving Money with IT

When it comes to saving money with IT there are two major schools of thought. The first says "Save money by spending less on IT". The second says "Save Money by spending on IT to make something else cheaper". There is something to take from each point of view but in the long term, for most organisations, only one approach will work.

One of the main reasons businesses spend on IT because it saves us money on something more expensive. Normally this is labour.

Technology makes us more efficient – it has a cost, but at the end of the production cycle the cost of producing a unit of "output", whether that be a cubic metre of concrete, a printed circuit board, or insurance policy, is less than it was before we "invested" in IT. Often it is necessary to make a lot of units of output before the technology investment is paid. We sometimes call this concept "Return on Investment" – a point where the cost of investing in technology is recouped through the savings on the units of output.

As we got about our work it often surprises us how people see the value proposition of IT. Even though everyone knows the old business axiom "time is money" we do see people making business decisions more from an employee perspective rather than a business operator. What do we mean?

An employee typically works to the understanding that they have a relatively fixed amount of income. Within this constraint the only income maximisation strategy they have is to minimise expenses. Because they don't pay for their time they may see sacrificing their own time to save money as a reasonable trade off (and it is within the constraints of their model).

A business operator is going to look at the problem differently. For starters they don't accept that their income is fixed. If they can produce more units of output, then theoretically they can generate more income. Secondly they are going to put a realistic cost against labour. They are only going to be interested in sacrificing time to save money if the time being sacrificed costs less than the money being saved.

Now – we know that most business operators understand that in theory. How do we apply it to practice?

Here are five suggestions:

Invest to Save Time

In terms of technology a lot of the general tools your business might need to help it save time are already there. Spreadsheets and word processors are old hat, emails been with us for some time, Instant Messaging and Video Conferencing are becoming commonplace. What we are seeing emerge much more strongly now is business specific applications, and improvements to business specific applications.

Consider how your business works and look at how automation might improve it. As we said – much of the general purpose stuff is now done, but there is no doubt that there is now a lot of activity in the SME space with business examining and improving their own business specific practices through investing in IT.

Be Careful of investing in Gimmicks

It is very easy to confuse investing for efficiency with investing in gimmicks. For example, when you move 1,000,000 pieces of cargo each day having a PDA with each driver so that items can be checked out as they are delivered is an obvious labour saving and accuracy improving device. When you have three waiters using PDAs to take coffee orders it's a really marginal proposition – yes you save the walk back to the kitchen, but unlike scanning a barcode (for the courier driver) taping in a coffee order takes a few clicks, and exceptions are a nightmare.

There's nothing wrong with gimmicks, but recognise them for what they are – marketing tools not business efficiency improvements.

Understand How You Will Realise Your Return On Investment

Whether it is by saving someone half an hour of wasted time every day with a new computer system, or allowing your business to serve twice as many customers with the same amount of staff have a sense of how you are going to realise a return on investment when you spend on technology.

Having this sense of when you break even will also help you sort the chaff from the wheat with respect to gimmicks. If you can't construct a model where the investment pays for itself in 3 years or less chances are you aren't looking at a good efficiency improvement.

Get Some Advice

Speak to some technical people you can trust before you make a purchasing decision about a complex business specific IT system.

How will the proposed system integrate with your other software? What will be the ongoing cost of owning and maintaining the system? How does the vendor's maintenance cycle fit in with your other software vendors? What is the reputation of the software outside what their sales people have told you? All of these are questions which you should seek some trusted technical input on before making a decision.

Stay on Target

Make a decision and stick with it long enough to give it a chance to work. New systems take time to bed in, for people to adjust their habits and for the system to boost productivity. Often you won't see a benefit in the first six months. However you should see a benefit within 18 months.

Don't chop and change too soon – stick to your guns and give your decision a chance to shine through.

Semi-Useful Tech Tips

When is deleted really deleted? Most of you will know that a deleted file can usually be pulled back from your Recycle Bin. The exception is really large files, which are too big to fit, like lengthy video files. But did you know that even if you've emptied the Recycle Bin, there's still a chance that you can get the file back? It's not a strategy that you should rely on, but specialised recovery software can often retrieve files by scouring your hard drive, but you need to be quick, as the space on the drive can be re-used, then the file is lost for good.

Catastrophic failure.

Many modern businesses rely on their IT infrastructure more than they may realise. It's also an unfortunate fact that many businesses only realise how much they rely on their IT infrastructure when it's not longer in a state to be relied on at all.

What are the chances?

Better than you might think. We'd be hard pressed to name a client who hasn't suffered some fault which left them without critical services for some time and around one in three has suffered an incident which caused serious disruption to their business for an extended period. We typically see one such failure every few months. There are a greater number prevented, or caught in the nick of time. We also see Internet Service Providers with faults leaving our clients offline for days at a time. No e-mail, no access to their providers' web sites.

What are the consequences?

The consequences vary significantly. Sometimes it is just the cost of staff being unable to access systems (sometimes for days). Other times there is data loss, which is often a far more serious outcome.

Usually it is the clients with the longest period of stable, reliable operation which are hit the hardest. The longer systems have been running as they should, the more the technology has been built into the business process to the extent that, for a large part, the business cannot really function without the computers.

What can go wrong?

Hardware Failure - One common scenario is hardware failure. The most common type of hardware failure is the failure of a hard drive, but there are others. Hard drives are particularly vulnerable because, unlike most other computer components, they have moving parts. Very small, very fragile and very fast moving parts. When a hard disk fails, it is not uncommon to lose all the information on that hard disk.

Most hard drives have a "Mean Time Before Failure" provided by their manufacturer. This is an estimate of how long on average you can expect that drive to last before it dies. In short – the longer the drive is in service the more likely it is to fail. .

However, failure can occur at any stage in a component's life. The risk of failure obviously increases with age, as with most things, but this shouldn't be relied on as some hardware fails very early on in life, and some never even makes it out of the factory.

The risks associated with hard drive failure are reasonably well understood, and sometimes we use additional devices (such as RAID) to allow a number of hard drives to carry copies of the same information. This is good in so far as we now have some protection if a hard drive fails. We have learnt through our own experience that the RAID controller is now the new single point of failure.

And there are dozens of other hardware components which can cause failure. Memory can have one bad cell which only causes problems when it is tickled in particular way, components can be taken out by static build ups, power supplies can fail (2nd most likely unit to fail), fans can stop causing CPUs to cook etc.

Software Failure

Anywhere that software is routinely loaded on to machines, but most commonly in Windows environments where lots of changes are made on servers there is always the chance that a software change can make a machine stop working immediately, and that the machine cannot be rebooted (ie it won't start until the operating system is reinstalled etc).

Age is one of the significant driving factors in the risk level, but rate of change is also significant. There is a reason systems administrators are always nervous about loading software onto servers. They know that to some extent they are playing Russian Roulette with their servers when they load new software, or let others do the same.

The Human Factor

There's an old adage; "To err is human, to really foul things up requires a computer." Perhaps it might be fairer to say that computers can be amplifiers for human mistakes. A classic example is the deletion of the wrong file, folder, e-mail, database record or other resource. Accidents happen, and a good computer will let you make such accidents happen even faster. Aside from the accidental human factor, there is also the malicious. Disgruntled staff or competitors may in extreme cases vandalise or otherwise disrupt your operations. Such events are fairly rare, but their consequences can be dire. We see far fewer of these instances than we do simple hardware failure, but their consequences generally require more effort to repair, and in some cases ensure no other nasty surprises were missed.

Case Study: Merck Manual; Just one example

http://www.theregister.co.uk/2008/01/09/logic_bomb_bofh_jailed/

What should we do to minimise the likelihood?

First of all you need to identify the risks. Many risks are well known and understood, and have standard countermeasures. Power failures and surges can be lessened by installing UPS units. The impact of hard drive failures may be mitigated by redundant disk setups (although there is no strategy for faulty redundant controller cards). The likelihood of other hardware failures can be lessened by buying premium equipment, ensuring equipment is installed properly in a suitable environment and replacing equipment after a suitable service life. Human failure can be minimised by training staff, monitoring services, careful vetting of new hires and so on. But all these measures reduce the risk, it's simply not possible to remove the risk all together. Things can still go wrong. And this is only considering known risks. The unexpected can still thwart even the most diligent preparations.

What should we do to minimise the impact?

So considering your infrastructure is still vulnerable, and you are likely to face a catastrophic failure at some stage in the future, how do you minimise the impact? That leads to the topic of our next article, Disaster Recovery, in next month's newsletter.

Client Profile – VFM Maintenance

VFM Maintenance have been a client of ours for about a year and a half now. Rob and Melissa run the show, although they may have differing opinions of who runs it more, as is the tradition among husband and wife team run businesses. They're a little different to a regular client base in a couple of ways, and they provided us with the kind of challenge we like.

Our initial engagement there was a “two pronged” effort. The first was to provide some new hardware and network support. The second part was some custom software development. VFM provide household maintenance services across Canberra and the local NSW region. As you may guess we didn't exactly pick up spanners to lend a hand, our efforts were focussed on the “back office” of the business where Melissa and the admin team handles the administration of their jobs. What makes VFM attractive to their clients is that they can handle just about anything. Plumbing, gas fitting, fence repairs; pretty much anything a house needs to keep in good condition. They do this by coordinating a large team of specialist sub-contractors for each trade. Naturally, to keep a large team gainfully employed, you need a large supply of work, which means (unfortunately for Melissa) a large supply of paperwork. So we set about building a system to track and reduce all of that paper going through the office. The existing process saw Melissa and the other admin staff printing out work requests, faxing them off to tradesmen, filing them in folders and so on. The fun part was when a client rang to check on the status of a job, which often meant rummaging through reams of printouts, while the client was on hold, to find out the status of the job or any notes the tradesman left.

Fortunately, things were at a pretty good starting point to build from. The work requests followed a standard format, and were usually received by e-mail. The tasks performed were all in a nice standardised list, like a maintenance menu. The procedure they followed was actually quite regimented. All we had to do was automate it to improve its efficiency. The system we built could accept an e-mailed work request, read the attached PDF and from it work out the details like job number, address and so on, then store those details with the document in a database. At any later date, the admin team could do a search by address, job number or a selection of other fields, and find all matching work requests. The status of the jobs was available instantly and any notes after completion would be stored along side it. No more printing and rummaging through folders to find work requests. What's more, the original PDF could be faxed directly to a subcontractor from the system with a few clicks of the mouse.

The end result is a small time saving in each task, but given the impressive number of jobs they manage in a day, it all adds up. The end result is more an ability to handle more jobs, with more confidence and less stress than the old way.

Web Marketing Tips - AU, What are you doing in my domain?

When picking a domain for your business or web site, don't forget your .au options. .au domain names are Australian. They're a little more expensive than .com domains and are more tightly regulated. You typically need a business name or trademark registered to prove a legitimate claim to register a .au domain. While this adds to the cost and hassle of registering a domain, it helps ensure that domains aren't “squatted” or taken up by companies not really using the domain, or with no legitimate claim to it, but still holding it to ransom. You have a better chance of reserving a legitimate .au domain thanks to these regulations, but can always use the lesser known .biz, .info or less strictly regulated domains if you choose. Of course, we're happy to assist you.

Next Issue:

- Message From the MD
- More on Voice Over IP Telephony (VOIP)
- Another Client Profile
- Disaster Recovery