Expert IT Solutions Newsletter

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Welcome to the final issue of our newsletter for the year. This time we look at the benefits of learning to code and the Internet of Things (IoT).

Looking back over 2015 from an IT point of view, lots of things have happened. The main themes I see are that cloud is here to stay, with many big numbers to back up the inevitable move for both small and large business to "outsource" at least parts of their infrastructure to experts. Hand in hand with cloud is mobility, more and more businesses are looking to adopt smartphones and tablets to make their business more effective. Another theme is security, with large breaches and data disclosures both overseas and here in Australia. It'll be very interesting to see what 2016 brings us.

I wish you and your family a safe and Joyous Christmas and a healthy and prosperous 2016.

"Everybody in this country should learn how to program a computer... because it teaches you how to think."

– Steve Jobs

Digital literacy and coding –new skills for a new world

There is a growing number of leaders in the educational space naming digital skills and coding as essentials for the new world. Digital skills generally mean being able to use technology productively and I don't think anyone reading this would disagree that many, if not most jobs today (and certainly in 5-10 years) will require basic IT skills. So making sure that your children, if they're still in school, gain skills such as word processing, touch typing (although that one might be made obsolete by Siri and Cortana), spreadsheet, image, video and sound editing, web page editing and so forth.

But there's also a growing body of evidence that learning to code is another essential skill. Initiatives such as Hour of Code deliver easy, introductory lessons for kids to learn the benefits of coding. The idea isn't that everyone will be a programmer in the future but rather that the ability to understand the basics of computer science and why computers work the way they do will be a benefit in almost any field of work.

Here's a good article with the catch phrase, "program or be programmed" by Douglas Rushkoff. And if your kids are into Disney's Frozen, here's a short introduction to coding with Anna and Elsa.

Internet of Things (IoT)

You may have seen this term in mainstream media. It's been around for a few years old but it's certainly been the big buzzword this year. The idea is that as sensors have become small enough and cheap enough and that Wi-Fi and 3G / 4G networks are ubiquitous that you can monitor things that previously was too expensive or too difficult to do.

Practical examples include ThyssenKrupp Elevators switching from sending out a service technician to an elevator, finding out what parts where needed, perhaps having to go back and pick them up, come out again and finally servicing an elevator, to having sensors identifying what is needed. They also gather data to figure out which part is likely to fail in a particular type of elevator, based on historic sensor data.

Or Coca Cola equipping vending machines with sensors, not only to report on stock levels so that they van coming to fill it up has the right types of drinks but also which types sell best based on ambient temperature and weather conditions.

Closer to home the bicycle racing industry, can now equip each rider with an app on their smart phone, tracking their performance and uploading this to a public web page. Instead of spectators having to wait for the riders to pass a certain point and commentators having to guess how each rider is fairing, detailed data is available to everyone.

Or the building firm Laing O'Rourke trialling hard hats with sensors that detects the wearers heart rate, temperature, ambient temperature and GPS location. All the data from each helmet is fed to an onsite computer and then sent to the cloud for further analysis. Should a worker have an issue with heat stress for instance, the helmet warns him, as well as the foreman.

The final example I'll mention is Microsoft Research's Premonition project where they're attempting to build autonomous drones that can deploy and retrieve automated mosquito traps across large

geographical environments. Once captured, the mosquitos are killed and gene sequenced, followed by automated analysis, tracking which animals the mosquitoes have bit, along with any new strains of infectious diseases. This means that dangerous diseases could be identified before they turn into epidemics.

I've been experimenting with different IoT technologies, if you think your business could benefit from some form of this, contact me.

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