

Chartech



INFORMATION
TECHNOLOGY
FACULTY

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**THE FUTURE
OF MONEY**
DISCUSSING
BITCOIN

**A WIDER
RECOGNITION**
OUR TWENTY
PRINCIPLES

**IN THE HANDS
OF YOUR BOARD**
IT CORPORATE
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incoming
Skype call

Calendar reminder:
webinar at 14.00



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New Year's resolutions



**INFORMATION
TECHNOLOGY
FACULTY**

Did you make any New Year's resolutions and more importantly, almost a month in, have you managed to stick to any of them?



A quick scan of the internet shows a large selection of the most popular resolutions, but with similar entries throughout. Common commitments include 'lose weight', 'get more organised', 'save more/spend less' - others seem to be more focused, such as 'socialise more in real life rather than on Facebook' - how many readers suffer from that, I wonder?

Although many pundits think that New Year's resolutions are a waste of time, I think they provide an opportunity at least once a year to step back to consider existing and new ways of working. However, if they are to work, resolutions do need an element of mental retraining and a plan is an important component of success.

I wonder if I might suggest three late additions to your work list of resolutions. Initially, can I propose that you have a plan in place for cyber (or review the plan if you already have one)? Over the past two years, this subject is one that has increasingly occupied the news headlines as well as faculty time. We have worked with government, security specialists and volunteers to create resources for you, including free online training. All our guidance can be found in the cyber resource centre at icaew.com/cyber

Second, how about getting more efficient in using Excel? As can be seen in the faculty news opposite, 65% of Excel Community members state that they have no formal training in Excel and are self-taught. The Excel Community provides free online training (as well as tips, hints and further in-depth analysis in many areas). As a starter, how about taking an Excel IQ test to see how you compare against your peers and your expectations? And, in line with Kevin Salter's advice on page 15, how about ditching at least one spreadsheet in 2015!

Finally, and looking at the cover article on technology in practices, 2015 could provide the opportunity to consider your brand and value proposition in the light of new technology and new competitors. It is interesting to see how the two highlighted practices make use of new technology, particularly social media. All four practices in the article have a strong focus on improving efficiency and looking at new ways of doing things.

Now it could be that you are doing all of these things already, in which case I applaud you. For those who are not (and I include myself in that number), we will continue to provide help, advice and guidance to keep you on track with your resolutions as we progress through the year.

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From the faculty



YOUR FACULTY NEEDS YOU!

As has been outlined in *Chartech* previously, the IT Faculty is extremely fortunate to have an experienced and committed group of volunteers who work with faculty staff to create and maintain services for members as well as helping to raise the profile of the faculty and ICAEW generally. With the establishment of the Excel Community Advisory Committee in 2013, the number of volunteers who regularly provide input and advice is now over 50. With the help and support of these volunteers, the IT Faculty has almost doubled in size over the past four years.

The committee that provides the overarching governance and strategic input is the Main Committee, made up of a mix of 18 elected and co-opted members. Around one third of the committee stands for election every three years to ensure the committee has the opportunity to refresh and update its membership. This year there will be an election for four seats. The formal notices are included below. If you are interested in finding out more about what is involved, please contact richard.anning@icaew.com. If you would like to attend the AGM (you can dial in if coming into London is inconvenient), please do let us know.

NOTICE OF FACULTY AGM

The annual general meeting of the Information Technology Faculty will be on **14 May 2015**, commencing at **13:00**, at Chartered Accountants' Hall, Moorgate Place, London EC2R 6EA. If you would like to attend, please contact Scott Carnegie on **+44 (0)20 7920 8834** or email scott.carnegie@icaew.com.

NOTICE OF FACULTY ELECTIONS

Elections will be held in 2015 for four seats on the IT Faculty Committee. Nominations for these elections must be received by the head of faculty by noon on 9 March 2015. **Polling day is 5 May 2015.**

The summary of procedures for faculty elections and nomination forms can be obtained from Scott Carnegie.

NEWS FROM THE EXCEL COMMUNITY

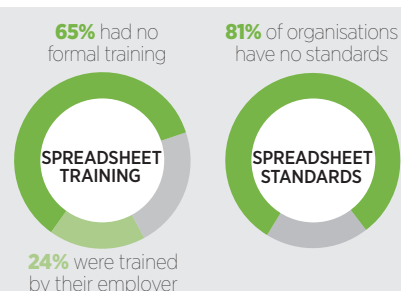
After the last Excel Community Advisory Committee meeting, there are two items of news to pass on to IT Faculty members as a result of committee discussions.

The first is to point out results from the polls that have been running on the Excel Community and IT Counts websites for the past few months. Neither could be relied upon as "evidence in a court of law" but they are interesting in outlining the direction members have taken in the polls.

The IT Counts poll asks: "Does your organisation have a set of common standards for creating and managing spreadsheets?" Interestingly, 81% of the 200 plus respondents said that their organisation does not, so some principles of good practice could be useful.

The second poll, running on the Excel Community and completed by over 900 members, asks how and where respondents learned to use a spreadsheet properly. The largest response group (65%) was "no formal training – self-taught" followed by "with my employer" (24%). The other categories were all in low single-digit percentages. The good news for IT Faculty members is that a full online Excel training course is available to members as part of their membership.

The other item of interest from the committee meeting was a desire to see some more provocative posts in the community. Simon Hurst duly responded with a question asking: "Which feature or function would you ban in Excel?" A number of members replied, with most looking to ban merged cells, but other items in the firing line included workbook links, precision as displayed, 3D pies and serif fonts. Join the discussion at bit.ly/1xQWFE8



EVENTS



FINANCIAL MODELLING COURSES

Following on from his sold-out financial modelling course in 2014, John Tennent has increased the topics in his financial modelling syllabus. This year, the course is covering three different themes that will be delivered through individual one-day courses. Attend two or three of these courses and receive a discount on the overall price.

INVESTMENT APPRAISAL, VALUATION AND BUSINESS CASES (INTERMEDIATE)

Dates: 6 February and 25 September

The aim of this course is to enable you to apply best practice Excel techniques to produce a robust business model for the evaluation of investment opportunities. Specifically, the course will enable you to:

- enhance your understanding of Excel functions, features and short cuts for wider business application;
- develop a dynamic model structure for evaluating the financial potential of investments;
- apply techniques to generate assumption profiles for forecasting revenues, costs, assets, working capital and financing;
- create a highly flexible scenario sheet to explore alternative assumptions; and
- employ a range of valuation techniques to determine investment viability.

FP&A, SYSTEM DATA AND STRATEGIC PLANNING (INTERMEDIATE)

Dates: 23 March and 19 October

Attend this course to apply best practice Excel techniques to extract information from databases and produce monthly management accounts and rolling strategic plans. The course will enable you to:

- use downloaded data from accounting systems to create

management information;

- apply Excel functions to cleanse and convert data into usable formats;
- build data bridges to consolidate data and transfer results to management reporting tools;
- use and control linked sheets;
- originate dynamic management reports; and
- enhance reports with both graphical interpretation and traffic light alerts including a waterfall chart to link budgets to actual results.

OPTION ANALYSIS AND DECISION SUPPORT (ADVANCED)

Dates: 24 April and 6 November

The aim of this course is to enable you to apply best practice Excel and Visual Basic techniques to produce an enhanced business model with Monte Carlo analysis and dependency rankings of assumptions. Specifically, the course will enable you to:

- refresh the content of module 1 in building a dynamic model with assumption profiles and a highly flexible scenario sheet;
- learn practical macro and visual basic programming techniques;
- to complete a Monte Carlo evaluation with 10,000 scenarios;
- summarise Monte Carlo results with expected outturns and probability statistics; and
- create an assumption dependency ranking and present the findings in a tornado diagram.

Prices start from £400 plus VAT.

For more information and to book your place on these financial modelling courses, as well as the other IT Faculty events and webinars, visit icaew.com/events

FACULTY RESEARCH

Over the coming weeks the faculty will be launching a second wave of research into faculty services. We would be grateful if you could participate in the research to help us improve and expand the services we offer to faculty members; many thanks to those that gave feedback in the first wave launched in December. We will be reviewing the results with the faculty committee and feeding back to members later in the year.

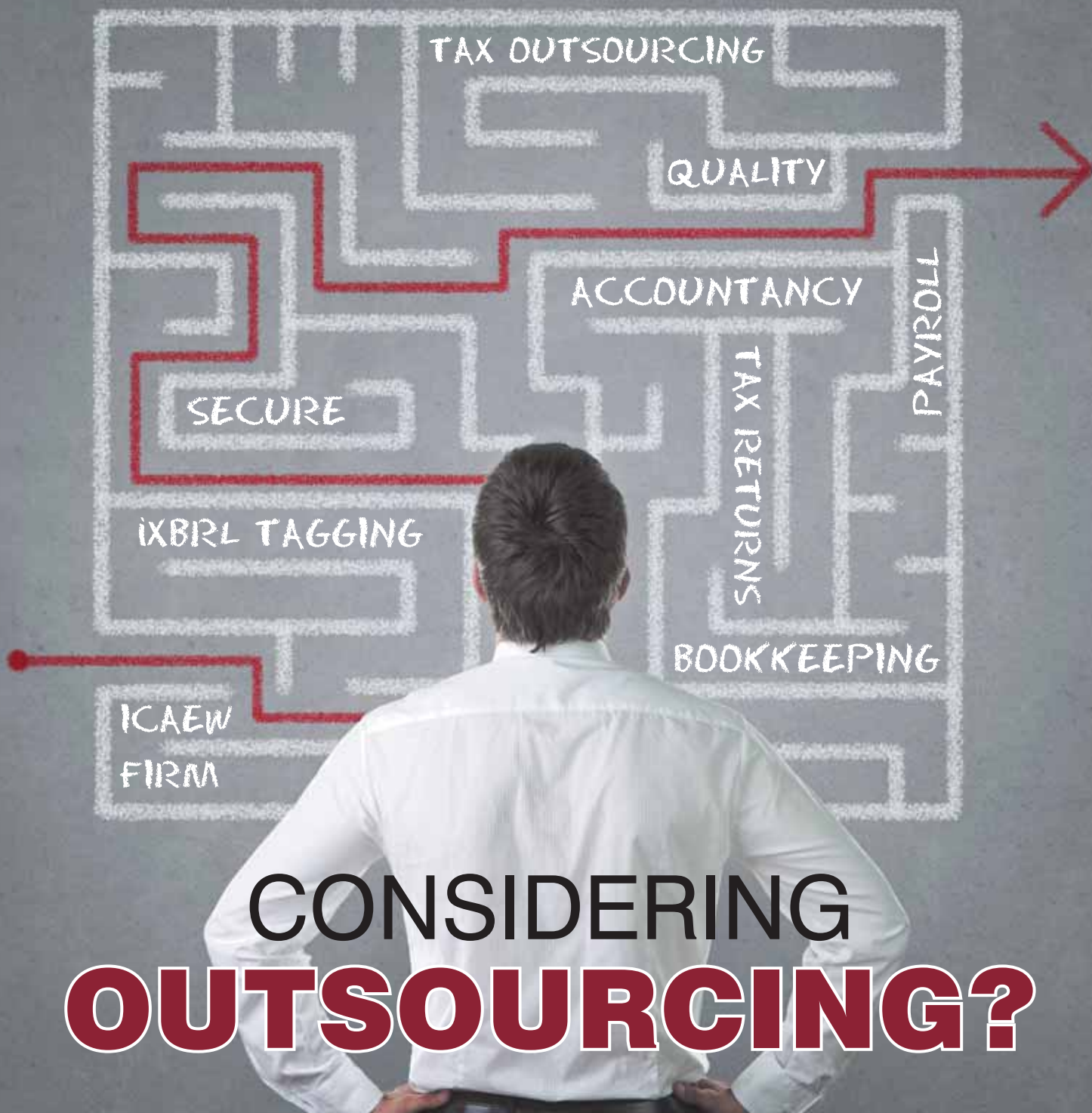
VAT MOSS GET THE FACTS

The VAT rules for supplies of electronic services changed on 1 January 2015, affecting business to customer suppliers within the EU. This includes the following sectors: telecommunications services; broadcasting services; and e-services.

Under the new rules, UK businesses supplying electronic services to non-business customers in another EU country needs to charge and account for VAT according to local rules.

To ease this process, business can use the Mini One Stop Shop (MOSS), provided by HMRC.

The ICAEW Tax Faculty has put together a resource centre where readers can find useful links to all the information they need about VAT MOSS. Visit icaew.com/vatmoss



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Byte size



By Sandra Vogel
Freelance IT writer
sandra@svogel.com

FACEBOOK NOW SAFE FOR WORK



Facebook is reported to be working on a version of its social networking website specifically for

use at work. The idea is to provide a one-stop service for connecting with colleagues, information sharing and collaborative working. Perhaps the service might even take the place of some email and other electronic communications services, such as instant messaging. Reports in *The Financial Times* suggested that 'Facebook at Work' would "allow users to chat with colleagues, connect with professional contacts and collaborate over documents".

At the time of writing there's been no formal comment on this from Facebook, but the idea does make logical sense in terms of growing the company, the technical issues of keeping work and personal accounts separate should be easily dealt with, and the 1.3 billion monthly active users globally mean it would be starting from a strong base.

GOVERNMENT SPONSORS FREE WI-FI



The government has announced a programme that will result in 1,000 public buildings across the UK offering free public Wi-Fi by March. The initiative is part of the government's SuperConnected Cities programme, which is aimed at transforming the digital capability of UK cities.

Expect to see free Wi-Fi appear in libraries, museums, civic centres, transport hubs, sport complexes

and other buildings in participating cities. The SuperConnected cities across the UK are:

- **England:** Birmingham, Bristol, Brighton and Hove, Cambridge, Coventry, Derby, Leeds and Bradford (jointly), London, Manchester, Newcastle, Oxford, Portsmouth, Salford, York;
- **Scotland:** Aberdeen, Edinburgh, Perth;
- **Wales:** Cardiff; and
- **Northern Ireland:** Belfast, Derry/Londonderry.

4G upload speeds are

7x

faster than 3G

4G has a connection speed of

0.78

seconds

The average 4G latency is

55.0

milliseconds

UK MOBILE BROADBAND SPEEDS INVESTIGATED

Ofcom has published its first research into consumers' experience of 4G and 3G mobile broadband. It is the first time the UK's telecommunications regulator has looked at this since the 4G spectrum auction in 2013.

The research used smartphones to carry out 210,000 tests of 4G and 3G both indoors and outdoors in five UK cities around the UK: Birmingham, Edinburgh, Glasgow, London and Manchester. Four metrics were looked at, each with its own significance for the user of services:

Download speeds

Faster download speed is most important if people want to access large amounts of data from a site, such as downloading video to watch later. The study found average download speeds of 15.1Mbit/s on 4G and 6.1Mbit/s on 3G. Operator performance was variable with EE and O2 being faster than the average on 4G, Vodafone and Three slower.

Upload speed

Faster upload speeds are important for people to share photos and videos with others using social media. The

research found that 4G mobile upload speeds were more than seven times faster than 3G (12.4Mbit/s compared to 1.6Mbit/s). EE and O2 had above average 4G upload speeds. Three had the fastest 3G upload speed.

Web browsing speed

For many, browsing the web while out and about is a key activity, and faster speeds mean people feel more willing to do it. The research found it takes less than a second for a basic web page to load on a smartphone using a 4G mobile connection (0.78 seconds on average across all networks). This compares with 1.06 seconds on average across all networks using 3G.

Latency

This is the time data takes to travel to and from third-party servers. Lower latency means a more responsive service, which is important for video calls, live data streaming and web browsing with multiple tabs open. Average 4G latency across all networks was 55.0 milliseconds (ms), compared with 66.7 ms on 3G.

The full report is at bit.ly/1xiVHRK

Which? CAMPAIGNS TO CURB BROADBAND SPEED ADVERTISING

Which? has started a campaign for better guidelines on providers that quote broadband speed in their advertising. At present providers are able to quote 'up to' speeds where those speeds are guaranteed to apply to just 10% of their customers.

Research from Which? has found that only nine out of 10 people are aware of this and a quarter of people would choose a different deal if they had better information about broadband speed. It has called for advertised broadband speed to more closely match the experience of the majority of customers rather than just 10%. To see how fast your broadband is, try the Which? speed checker at bit.ly/1uKuTss

THE INTERNET OF THINGS EXPANDS

INTERNET OF THINGS UNITS (MILLION)
INSTALLED BASE BY CATEGORY

Automotive growth:
182.7

2014
2015

Consumer growth:
630.4

Generic business growth:
144.5

Vertical business growth:
317.4

Total growth:
1130.6

SOURCE: GARTNER (NOVEMBER 2014)

The Internet of Things is experiencing a huge growth curve, but this is just the start. Analyst Gartner says there will be 4.9 billion connected 'things' in 2015, up 30% from the figure for 2014, rising to 25 billion by 2020.

The Internet of Things is the term used to describe objects that share information with other objects without any human intervention. It has potential applications across a huge spectrum, and is currently experiencing massive growth in the health sector – all those fitness wristbands that send information about your daily activity to a website is just one example.

While consumer applications will drive the number of connected things, the enterprise will account for most revenue. Gartner predicts that the automotive sector will see the greatest growth in 2015.

Gartner adds the Internet of Things is a powerful force for the transformation of business, a disruptive influence that could represent an opportunity or a huge threat depending on how business approaches it.

Basic ingredients

Less really can be more when it comes to creating an impressive management pack that counts for practice leaders. **Ros Campbell** takes a look at the key components you will require



Reporting is a valuable asset, just like the unassuming office manager who helps you to run an effective business by presenting you with KPIs to view and understand your performance.

But over the years, in the accountancy practices I visit, I have seen key employees struggle against deadlines to create an impressive management reporting pack.

The sheer quantity of reports provides comfort. However, experience shows that only a few key figures or diagrams are seized upon by the practice leaders and used in a proactive manner.

IS YOUR REPORT NECESSARY?

Examine the three fundamental reporting layers:

1. functional data about input and output, such as timesheets, job stages, invoices;
2. day-to-day analysis around clients, jobs and staff profitability; and
3. the last layer is where more detailed analysis can be extracted, for example job turnaround.

YOU ONLY GET OUT WHAT YOU PUT IN

The old saying is very true: reporting will only ever be as good as the information entered. Interestingly, you may be investing unnecessary time entering more information than is required. For example, extra stages in a process that are never looked at.

Ask yourself: do we need this data? Will anyone actually use this data to improve our business?

DAY-TO-DAY INFORMATION

In the course of doing business, you'll

be recording and storing valuable information. It's worth ensuring the team knows you appreciate their investment of time in entering this data.

You can use it, for example, to:

- drive non-chargeable time down – if work in progress is real, it should be money in the bank;
- reveal the effectiveness of your team; and
- show the genuine profitability of the business.

Ask yourself: are we fully exploiting our data? How can we use it to improve our efficiency and profitability?

MANAGE STRENGTHS AND WEAKNESSES

Use your reports to help build on strengths and work on weaknesses. Both are important and represent an opportunity; for example:

- readily available reports can uncover the effective groups across the practice, helping to promote healthy competition and empower the whole team;
- they can identify the secrets of success – it could be as simple as having concise, simple workflows that focus the team on delivery; and
- they can pinpoint a lack of understanding that could be easily addressed by effective training or 'how to' guides.

Ask yourself: how can we use effective monitoring to improve productivity without impairing quality?

ROLL OUT BEST PRACTICE

Use your practice reports to understand what works best and

emulate this across the business. An analysis of different aspects, such as turnaround time and profitability reporting (by client, employee, team and job), should be available in your software. Use it to increase your return on investment.

Ask yourself: what processes are working well or not so well? How can we spread best practice?

DON'T BE AFRAID TO EXPLORE

You may have been using your software for years and be unaware of the new features that have the potential to help you. Take some time to explore these and don't be afraid to contact your supplier for help. A short refresher course can pay dividends in making good the system knowledge that may be lost as staff move on.

Ask yourself: is everyone in the practice up to speed on the latest developments in our practice technology?

AND FINALLY...

It's worth taking a few hours to review your reporting (or ask for external help to do this).

If you can use one report rather than three, find a report that you didn't know existed, or discover that you can report on a 'murky' area of your business, you'll quickly recoup your investment. ■

Consultant **Ros Campbell** has more than 20 years' experience in the accountancy profession, both at London firm Saffery Champness and as product manager for IRIS Software Group's practice management solutions.
alcamassociates.co.uk



Four corners

Embedding IT governance into your organisation can't be done overnight, but with an understanding of the building blocks, the benefits will be much easier for your board to see, says **Alan Calder**

The corporate governance of IT is about four things: transparency, IT risk management, accountability and IT performance optimisation. Embedding an IT governance culture in an organisation is a change project requiring time, senior management commitment and a clear strategy. There are four areas on which the IT governance practitioner should focus in an effort to embed effective IT governance: board structure, communication and staff awareness, internal control framework plus performance measurement.

BOARD STRUCTURE

Appointing the CIO to the board who reports to the CEO is the clearest possible signal to the business as a whole that IT is fundamental to business performance. The CIO does need to be capable of bridging technology and business (so a business qualification is a must) and should be accountable for delivering IT performance. The board should be supported by a board IT governance committee, and IT performance should be a standard part of every board agenda.

The IT strategy, presented in clear business terms, should be approved by the board as part of its overall approval of the organisation's business strategy, and the CIO should have the budget and resources that enable the strategy to be delivered.

COMMUNICATION AND STAFF AWARENESS

Assuming that the organisation already has an open-communication culture, the contribution of the IT

operation to the performance of the business should form part of all that internal communications activity. Messaging should be concentrated on the key areas of contribution: improving competitiveness, staff productivity, reducing risk and improving compliance. Performance dips and delivery issues should be openly discussed.

All staff should receive appropriate IT-related training. At its simplest level, this should include training on how to use the IT systems and how to comply with the requirements of any IT acceptable use agreement. The acceptable use agreement should introduce the user to the organisation's requirements around IT risk management and compliance, and is a key component of embedding an IT governance culture.

INTERNAL CONTROL FRAMEWORK

An organisation's internal control framework should be driven by its risk assessment; IT-related risks should be explicitly included on the board risk register. The internal control framework should include controls that, in line with the organisation's risk appetite, mitigate IT risks in areas including project management, continuity, compliance, service delivery, access control and cyber security, as well as in more traditional areas such as procurement, segregation of duties, monitoring and control.

Job descriptions should include specific IT responsibilities, and individual performance objectives should, where appropriate, include contribution to achieving corporate IT-related goals.

Any disciplinary policy should include sanctions for breach of IT procedures, and pre-recruitment screening should include IT-related matters.

PERFORMANCE MEASUREMENT

The IT balanced scorecard is an ideal tool for measuring the performance of the IT department. It has four dimensions: enterprise contribution, user orientation, operational excellence and future orientation. These are the four areas in which any high-performing IT department ought to be contributing to the overall success of the enterprise. While the IT balanced scorecard works better in an organisation that already uses a balanced scorecard to measure performance, any organisation can deploy and derive increased value from using one.

THE ROLE OF FRAMEWORKS

IT governance best practice standards and frameworks - such as ISO/IEC 38500, COBIT5, ITIL and ISO/IEC 27001 can provide useful structure for any organisation that is implementing IT governance. In reality, the key decisions for any organisation are those that trigger and enforce the core culture change that is essential to any successful implementation.

The overall objective is for IT governance to become as embedded in the organisation as any fundamental component of the management system. ■

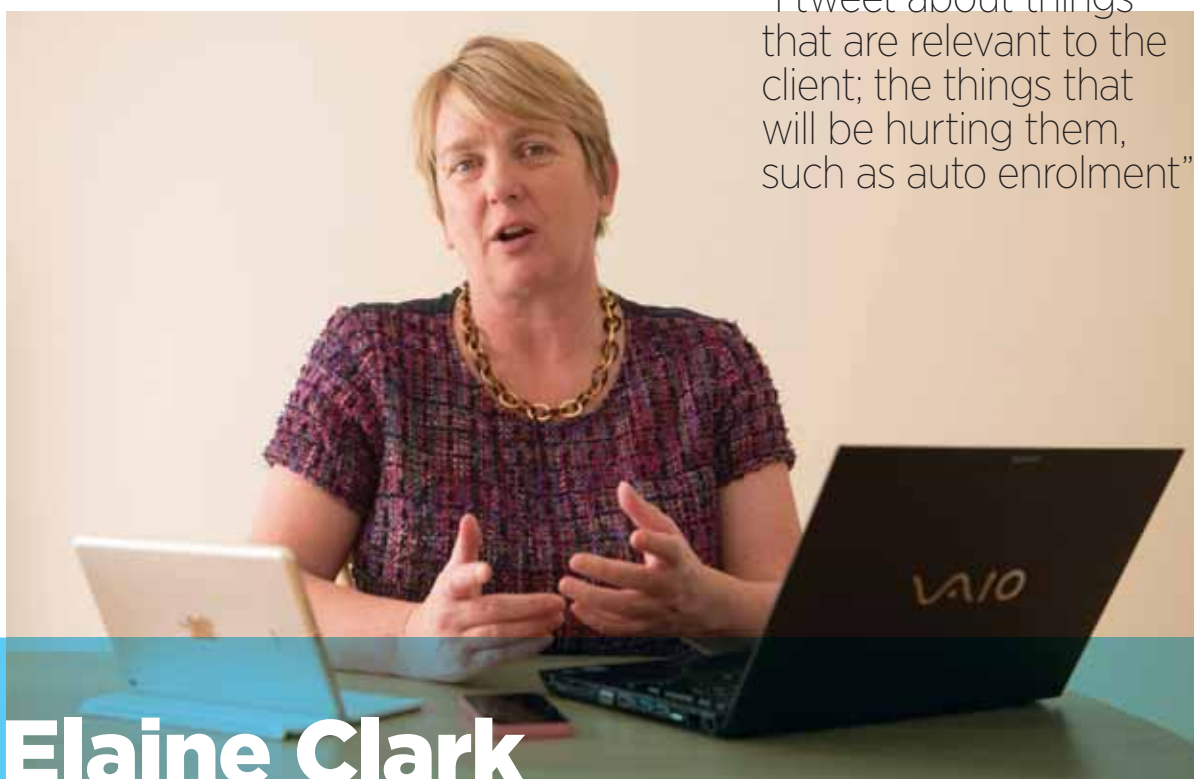
Alan Calder is the CEO of IT Governance

TECH CENTRAL: **ACCOUNTING FOR THE FUTURE**

How do accountancy practices use technology and what difference does it make to the firms that put technology at the centre of the business?

Chartech speaks to two leaders in online accounting about a different way of dealing with clients and staff. We also catch up with two firms five years after they gave us their top tips and find out how they have continued to innovate for a more efficient business





Elaine Clark Managing Director, Cheap Accounting

Technology has always been at the centre of Elaine Clark's practice. From communicating with clients through email and Skype to an active presence on social media, the business model is firmly based online. In December, Clark picked up the Online Accounting Award at the British Accountancy Awards 2014.

"It is all about technology because we only operate online. We don't meet any of our clients so have to use technology without the face-to-face meetings," she says.

Technology doesn't just show in the relationship with clients. Operating a franchising model, Clark uses different channels to keep in touch with franchisees. Skype comes in handy for discussions about current topics or problems.

"I use Skype to have coaching courses with franchisees; from time to time things occur and it is useful to discuss with the others and discover how they are dealing with something or what they think about new regulations, such as auto enrolment," she explains.

This approach to technology clearly inspires the people who work with Clark and some have come up with useful ways to deal with clients. One franchisee holds online

webinars when she signs a new client to explain how the online accounting software works.

Social media has been essential in getting the Cheap Accounting name out there. Clark is active on several channels, in particular on Twitter. She calls social media the lynchpin of the practice.

"The clients see our personality through the use of social media and the blog. They see that we know and understand the market place they are operating in. We try to explain things in a language they understand," she explains.

Her Twitter strategy is to be vocal and opinionated. "I tweet about things that are relevant to the client; the things that will be hurting them, such as auto enrolment," she says. "I try to be on the side of small businesses and give an opinion on things rather than just stating the facts."

"It is so boring when someone just tweets 'buy from us, we are the best accountants' without providing anything useful to the client. It is not about selling. Clients realise you do know what you are talking about and so you become their trusted adviser."

Operating online and putting technology at the centre of the business has meant Clark can keep overheads low. It has helped her stand out from other more established practices. "We can stand by our prices; we operate differently, we are a franchise and we have a number of small practitioners who either work at home or in a small team of people. We drive the cost down with the business process, which means we are not passing high overheads on to a client," says Clark.

But, she warns, social media is no silver bullet. "It is very important to remember that tech is a tool you use to deliver something and you need to make sure you know what you are delivering," Clark explains.



“A lot of our clients are busy people. They don’t always want to have a formal meeting”

Paul Bulpitt Co-founder, The Wow Company

Branding his practice as “Accountants for the Facebook generation” Paul Bulpitt sent out a message of the kind of business he expected the online accounting practice to attract. Having launched 11 years ago to offer “an alternative to the traditional accountant”, Wow has always put technology centre stage, especially so in recent years.

“Technology has advanced so much and it has accelerated the role it plays in our business,” he says.

According to Bulpitt, his colleagues say they don’t use that much technology. “It is just so ingrained in how we work and run the business,” he says. “Technology is an enabler and a facilitator; something to make our lives and our clients’ lives easier, no more no less.”

As Xero’s Partner of the Year 2013, it comes as no surprise that Bulpitt is effusive about the accounting software that Wow uses for the business as well as for 98% of its clients. “We may have been using it for so long that we take it for granted, but when we talk to businesses that don’t use it, we just can’t imagine why anyone wouldn’t use it,” he says.

Clients’ initial contact with Wow happens through Skype or Google Hangouts; very little contact, if any, happens face-to-face. “I am sure there are some people who want traditional accounting, where they can walk down the high street and sit down with their accountant once a month or

once a quarter. That is fine, but it is not what we do,” explains Bulpitt. “A lot of our clients are busy people. They don’t always want to have a formal meeting, they just want to have five minutes here or 10 minutes there to talk about an issue when they are available.”

The more recent arrival of apps on the technology scene means it is possible to make the business operate even more efficiently. “We are always looking for where the pain points are – is there a way we can do something better, or is there some technology that can help solve a problem?” he says. Take communication in the office as an example. “We used to have a lot of round robin emails just passing messages – say someone had put cake in the kitchen or someone had taken the wrong parking space. Some emails you have to respond to, but others you really don’t,” he explains. Then he found a collaboration tool called Yammer – a bit like an internal Facebook or Twitter. Now if someone has put a cake in the kitchen, they just post it on Yammer; there is also a place to post news and discussions when people are out and about too.

Recent years have seen the level of competition increase. “For a while, the fact we used Xero was a differentiator, but that was maybe four or five years ago. There were so few other accountants using and promoting Xero, or even cloud accounting,” he says. “Since then, it has become a lot more mainstream and our differentiator is that the technology just enables us to give a better service to customers.”

So 11 years in, what has the focus on technology meant for the success of the practice? “It’s all about scalability,” says Bulpitt. “For the past four years we have grown at 30% a year. If we didn’t have the technology in place, I don’t think we would have been able to scale at that rate.”

BILL MORTON

CATCHING UP FIVE YEARS ON

In 2010, the faculty spoke to three innovative practices about technology. They spoke of document management systems, cloud applications and new devices. While some of their tips might seem obvious in 2015, one equally applicable today is how important it is to ensure staff understand any technology changes in the practice. So educating and informing staff and clients is a large part of implementing change. Five years on, what has it meant for these practices to be tech savvy?



CHARTECH 167
AUGUST/SEPTEMBER
2010

GOODMAN JONES LLP

Technology continues to play a key role for Goodman Jones. "It has become essential; even firms now that think of themselves as very traditional are using technology," explains partner Philip Woodgate.

"We were using document management systems five years ago, not all firms were then. There are probably still a lot of firms out there that don't use document management systems, but as time goes by, there are fewer and fewer."

He points out that embracing technology is vital. "In what has been a pretty tough period, improving processes, efficiencies and cloud technology helps you. It automates, updates and it helps with integration," he says.

There may have been a slight change in the criteria for new technology he implements. "We are now looking for things that will work well. We have all got less time, the clients are less forgiving and their expectations are much

higher," he explains. "You won't be able to deal with that without some very good technology around you."

Pushed on the specific changes, he points to integration. "When we started using Twinfield in 2006 or 2007 it was a private company, now it is part of the CCH group. Now Twinfield integrates with the statutory accounts package."

The emergence of apps is another. "The uptake in smartphones as an interface has been a game changer. Whether it is using an app to upload documents, or viewing cloud-based financials on their smartphone, technology has made a real difference. "Core products and apps mean you can tailor your approach with clients," adds Woodgate.

But no matter how much technology is available and how advanced it is the key, he says, is to ensure staff embrace changes. "We have all this technology, which is great, but if you have people who are finding it hard to adapt to new ways, then you could have a bigger challenge than the technology in itself," he says.

FACULTY VIEW

In the four and a half years since I visited the initial three practices, technology has continued to provide practices with new capabilities. Back then, the iPad was brand new, the cloud still needed demystifying and Facebook was a private company. It is interesting to see how some of the newer practices now operate; cloud is a given, social media is a way of life and there is a relentless focus on efficiency; why visit a client when you can Skype them? The names of the two firms chosen (as leaders in their field), Wow and Cheap Accounting, in themselves

make a statement about the evolving nature of the accounting sector.

Richard Anning,
head of the IT Faculty



GLOVER STANBURY & CO

Frequently asked questions at Glover Stanbury & Co are "Why do we do things the way we do and could we do it differently?" and "Is there any technology to do that job?"

"Everything we can apply technology to, we do, with a view to gaining as much efficiency as possible. We are always tweaking things," says partner Kevin Salter.

When *Chartech* spoke to Salter five years ago, document management systems had been implemented in the business and were described as "transformational". The office has been paperless for eight years; it makes processes smoother within the practice and the benefits to clients are marked. "The document management system means we don't have to go hunting for files and call clients back," he says.

He also points to the ability to set up recurring costs booked to a client; things such as monthly charges for online accounting fees can be set up to be fully automated. It certainly ticks the efficiency box. "Where we used to have to key them in 100 lines at a time, they are now all done automatically, so we just have to address any changes for the month. This month, I had to change two, while 98 were posted automatically," adds Salter.

Outside the practice, Salter acts as an IT consultant for other accountants and what often comes out of a systems review is ditching the spreadsheets. "There are lots of tools out there that will do the job of a spreadsheet. Some might use a spreadsheet to monitor 200 companies' filing dates, such as annual accounts and returns, but there is a free bit of software that links to Companies House and does that job," says Salter.

It's back to those questions: "I often ask 'why are you doing it?' and the answer is 'because that is the way we have always done it'. Don't do things just for the sake of doing it."

Since 2009, Bitcoin has gained ground as an innovative, if unregulated, form of payment. **Kirstin Gillon** reports on the discussions from the IT Faculty lecture, which focused on bitcoin. Is it the future of money?

A FUTURE CURRENCY



Bitcoin has been the subject of a lot of debate in recent months. On the positive side, there has been growing interest from governments and regulators in how it could support innovation in financial services. But it also continues to be dogged with controversy, from price volatility to criminal use in online black markets such as the Silk Road website. So, what are we to make of bitcoin – is it the future of money?

This was the subject of this year's IT Faculty lecture, given by Dave Birch, an expert on digital currencies, with a short response from Michael Parsons FCA, a bitcoin entrepreneur.

WHAT IS IT?

Bitcoin is a virtual currency – you can use bitcoins to pay for goods and services, and the number of companies accepting bitcoins for payments has been increasing steadily. It operates peer-to-peer and uses cryptography to validate that transactions are correct. As a result, it is a totally decentralised way of organising payments that avoids central intermediaries – you can simply send bitcoins to another user direct rather than using the payment services of a third party

such as a bank or a credit card company.

The process of validating the transactions is carried out by users, or miners, who compete to complete the cryptography process first and then add their new block of transactions to the central ledger. The winner is rewarded with some new bitcoins as a way of incentivising users to undertake the mining process, which takes a lot of computing power.

The blockchain is the ledger that records all validated transactions and it is totally public. It is particularly important as it has solved a problem that has dogged previous attempts for virtual currencies, namely the double spending of digital assets. The public nature of the blockchain and the cryptographic mining process make double spending impossible.

The blockchain is essentially anonymous – although the transactions are all public, they are not associated with specific individuals. This anonymity is seen by many as one of the great benefits of using bitcoin. But of course this means that bitcoin has also become notorious because criminals have made high-proliferate use of it.

A HISTORICAL PERSPECTIVE

Dave started his lecture by putting our current monetary system into perspective. Money issued by states is a relatively recent phenomenon and is not inevitable – it is very likely that currency will look different in the future. He provided a number of different visions of this – currencies at city level or the

monetisation of other asset categories, such as credit profiles, for example, meaning that we use different currencies in different contexts.

To illustrate how concepts of money have changed, he drew on a story about the stones of the Yap islands in the South Pacific. The Yap people decided to use limestone available on nearby islands as a way of marking payments and transactions. As a rare and finite resource, it was a store of value for them. However, some stones were too big to move, or could fall off the boats between islands and sink into the sea.

Money issued by states is a relatively recent phenomenon and is not inevitable – it is likely that currency will look different in the future

This wasn't a problem though. The stones didn't have to physically change hands to become owned by someone else. The community just remembered which stone belonged to which individual at any point in time. Therefore, he described money as essentially a memory.

Bitcoin can be seen as similar. Nothing physically changes hands, but the blockchain provides a way of recording ownership of each bitcoin so that everyone knows who owns what.

BITCOIN AS A CURRENCY

So, why would we use bitcoins? Cost is often cited as a big driver - bitcoin has very low transaction costs compared with those of third parties such as banks or credit card companies. The peer-to-peer approach also provides opportunities for those living in developing countries or those without bank accounts to gain new access to financial services.

However, Dave was sceptical of these benefits. He argued that transaction charges would go up for bitcoins at some point, and even then shaving a few percent off transaction costs was hardly radical change.

He went on to argue that bitcoin wasn't particularly attractive as a currency or payment mechanism. Although user numbers have increased, the number of transactions is actually falling. It takes eight minutes to validate a transaction and the exchange rate is extremely volatile, making it a poor store of long-term value.

THE BLOCKCHAIN IS THE INNOVATION

However, he argued that we should be getting excited about the blockchain. This is the real innovation that will have a lasting impact on the way we do things.

In particular, he highlighted the programmable nature of the blockchain, which provides the ability to embed conditions into transactions, such as when they are to be executed. This opened the way to more sophisticated transactions and trading using blockchain technology, such as smart contracts or trading securities.

The blockchain would also enable other kinds of value-based currency. Dave cited energy as an example of this - we could earn and save

The full lecture is on the IT Counts blog page, along with links to Dave Birch's slides and an introduction to Bitcoin by Michael Parsons. It can be found at bit.ly/1xTnV7b

A short video and a recording of the event, are available at bit.ly/1xTnV7b

Accountants should certainly understand these new trends and what they could mean for businesses for the future

kilowatts of power to use in future. This would potentially be a lot more useful to us than saving money.

IMPACT ON THE PROFESSION

How disruptive will the blockchain be? It was argued by some in the audience that bitcoin and the blockchain pose a direct challenge to the business model of banks as it bypasses them entirely and provides a much cheaper model. And what would be the impact on auditors if all financial transactions are made public and validated through cryptography?

Dave didn't claim to be able to see into the future, but he strongly suspected that accountants and bankers would continue to find things to do. After all, both

professions date from long before our current monetary systems.

However, there are some interesting developments, and accountants should certainly understand these new trends, and what they could mean for the future.

So is bitcoin the future of money? Dave was not convinced and saw a proliferation of currencies as a more likely scenario. Furthermore, he saw bitcoin itself as only the first iteration of

technology - something better will ultimately be developed to replace it. However, he did see the blockchain as an important innovation that would enable disruption and change in all kinds of sectors. ■

Getting recognised

The faculty's *Twenty Principles for Good Spreadsheet Practice* has spearheaded a movement by companies to become 'recognised'.

Paul Booth provides an update on progress and the benefits the principles can bring

At the end of our Twenty Principles launch event back in June (see *Chartech* July/August 2014, pages 12-13) it was announced that the FAST Standard had been formally recognised as compliant with the Twenty Principles. But what does that mean?

THE TWENTY PRINCIPLES - BACKGROUND

We know there's lots of scope for things to go wrong with spreadsheets. And 'things going wrong' can include anything from high-profile, costly failures down to the trivial time-wasting inefficiencies that affect many small businesses day to day. It's hard to tell, but we suspect the cumulative impact of the latter could be just as serious, if not more so, than the big failures. If there's one piece of software that just about every accountant uses, it's the spreadsheet - so there was no doubt that some IT Faculty guidance was in order.

We soon realised that there would be little point in writing yet another set of standards: there are plenty of them already in existence, and they do the job pretty well. But existing standards tend to focus on detailed design issues, which are important, but are far from being the whole story. The real need was for a set of top-level principles that, in addition to design issues, deal with the following fundamental questions:

- Is a spreadsheet the most appropriate tool for this job?
- Have the designers and the users been trained to use it?
- Have risks been addressed?
- What controls are in place?

WHAT IS RECOGNITION?

This is why the Faculty's Excel Community Advisory Committee developed the *Twenty Principles for Good Spreadsheet Practice*. It was not intended to replace existing standards, but it was not long before providers of such standards began to queue up to ask for some kind of formal confirmation that their products were compliant with the ICAEW Twenty Principles. So we agreed to pilot a recognition scheme with one standard

on the basis of rolling it out to others. Five members of the committee agreed to form the recognition panel; they would designate one person from among them to carry out the formal evaluation of each application. From our point of view, the purpose of the recognition exercise is to achieve more public exposure for the Twenty Principles and to help get them more widely adopted.

The recognition scheme was designed with standards in mind, but it soon became apparent that it could easily encompass other spreadsheet-based products, such as templates and training. So it turned out that the second product (or group of products) to be recognised was a template system.

None of the products recognised so far has had an easy ride. In each case, we have asked for improvements before granting recognition - and the suppliers of the products have been very willing to make improvements in order to achieve recognition.

FAST MODELLING STANDARD

The FAST Modelling Standard was developed over many years as a shared modelling language. The acronym stands for Flexible, Appropriate, Structured & Transparent. It encompasses key characteristics, its owners say, that a good spreadsheet should demonstrate. The standard encourages good spreadsheet design through adopting common principles and uniform practices. The aim is to ensure transparency and efficient implementation, as well as ease of navigation and maintenance of spreadsheets.

The standard is owned by the FAST Standard Organisation (FSO), a not-for-profit that was set up in 2011 for the purpose of protecting, promoting and further developing the standard, under the guidance of a Moderation Board, made up of modelling professionals from Grant Thornton, Mazars, Rebel, FIF9 and Financial Mechanics.

As a result of the recognition process, FSO agreed to add a paragraph to its introduction (The FAST Philosophy) emphasising that, when building and deploying its models, modellers should consider



back-up, version control and testing (see Principles 17 and 18). For more information visit fast-standard.org/the-standard

FINROBOT (BASE MODEL, TOPLINE MODEL, CASE BUILDER MODEL AND MANUFACTURING MODEL)

FinRobot is an automated assembler of financial models in Microsoft Excel. It allows users to choose one of four core modelling templates most appropriate for their purpose, then to set online parameters to customise the chosen template, and finally download the working financial model in Excel, which can then be further modified offline if required.

FinRobot was founded by Andrei Dikouchine, a lecturer in advanced financial modelling at the London Business School and practitioner in corporate finance.

As a result of the recognition process, FinRobot agreed to protect calculation cells in their standard models, to avoid accidental overwriting by users (see Principle 20). They also made a minor change to the way in which error checks are implemented so they are more transparent to the user (Principles 13 and 16). For more information visit finrobot.com/en/models

BEST PRACTICE SPREADSHEET MODELLING STANDARDS

The Best Practice Spreadsheet Modelling Standards have a long history; and since 2003 a Spreadsheet Standards Review Board (SSRB) has been responsible for overseeing the development and maintenance of the standards, which have been through six major upgrades since the original release. The standards aim, according to the SSRB, to provide universally-applicable and definitive principles against which the quality of spreadsheet models can be assessed and more efficiently developed and maintained. BPM provide a brief summary of 'standards' (required for best practice) and 'conventions' (recommended) and a separate publication setting out more detailed commentary and examples.

As a result of the recognition process, the SSRB has agreed to add an additional recommendation, to avoid repeated calculations (Principle 15); and a paragraph emphasising the importance of backup. At the time of writing (December 2014), the recognition panel has agreed in principle that the Best Practice Spreadsheet Modelling Standards be recognised, subject to these changes.

Formal recognition is expected to follow early in 2015. For more information visit ssrb.org/standards

The IT Faculty welcomes further applications from owners of standards and other spreadsheet-based products.



Paul Booth is technical & development manager in the IT Faculty

In Range

Range Names in depth – part 3

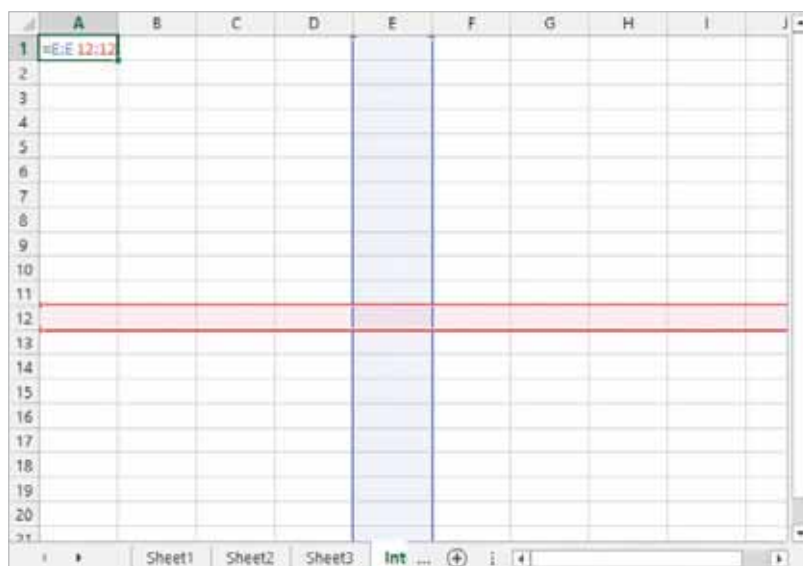
In the final part of our series, **Simon Hurst** looks at the benefits of implicit intersections and situations when using a range name is the only practical solution

IMPLICIT INTERSECTION

When a range name refers to more than one cell, it is possible to use an implicit intersection based on the cell that refers to the range name and the range. To explain this, we'll start with an explicit intersection. In Excel, an intersection is the area of overlap between two ranges. There is an intersection 'operator'. In the same way that '+' is the addition operator and '-' the subtraction operator, a space is the intersection operator (which explains, if you've ever wondered, why sheet names containing a space have to be surrounded by apostrophes when included in a formula).

In this example (below) we have used the space to create an intersection between the whole of column E and the whole of row 12:

=E:E 12:12

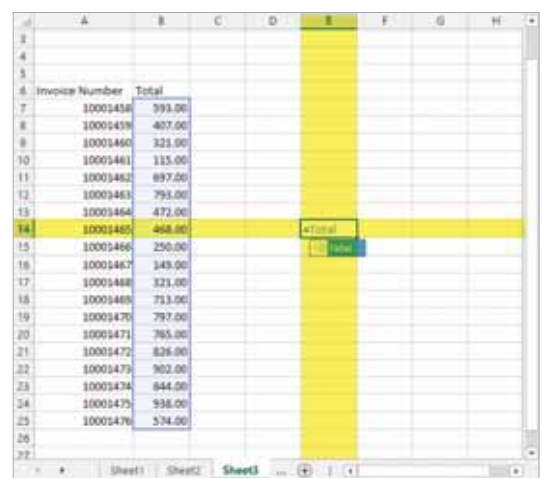


	A	B	C	D	E	F	G	H	I	J
1	=E:E 12:12									
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										

Obviously, =E12 would be a more straightforward way of referring to E12.

If you refer to a named range, Excel will project an implicit range along the whole row and whole column that contains your reference, and if either intersect with your range name, then the intersection will be used.

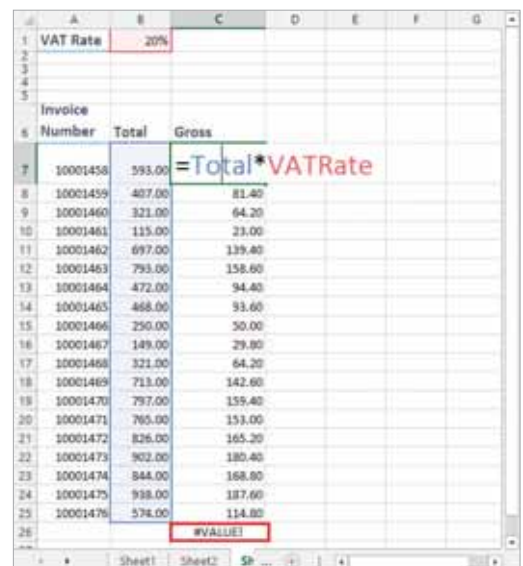
In this example (see right), the range name 'Total' has been allocated to the range B7:B25. If we enter the formula **=Total** in cell E14, Excel will check whether either row 14 or column E intersects with the named range and, if it does, it will return the value at the intersection.



	A	B	C	D	E	F	G	H
6	Invoice Number	Total						
7	10001458	593.00						
8	10001459	407.00						
9	10001460	321.00						
10	10001461	115.00						
11	10001462	697.00						
12	10001463	793.00						
13	10001464	472.00						
14	10001465	468.00						
15	10001466	250.00						
16	10001467	149.00						
17	10001468	321.00						
18	10001469	711.00						
19	10001470	797.00						
20	10001471	765.00						
21	10001472	826.00						
22	10001473	902.00						
23	10001474	944.00						
24	10001475	938.00						
25	10001476	574.00						

In this case, row 14 intersects with Total at cell B14, so the formula will return the value of B14, 468.

In the following example (below), we have used the implicit intersection to do something a bit more practical. We have also allocated the name VAT_Rate to cell B1.



	A	B	C	D	E	F	G
1	VAT Rate	20%					
2							
3							
4							
5							
6	Invoice Number	Total	Gross				
7	10001458	593.00	=Total * VATRate				
8	10001459	407.00	81.40				
9	10001460	321.00	64.20				
10	10001461	115.00	23.00				
11	10001462	697.00	139.40				
12	10001463	793.00	158.60				
13	10001464	472.00	94.40				
14	10001465	468.00	93.60				
15	10001466	250.00	50.00				
16	10001467	149.00	29.80				
17	10001468	321.00	64.20				
18	10001469	711.00	142.20				
19	10001470	797.00	159.40				
20	10001471	765.00	153.00				
21	10001472	826.00	165.20				
22	10001473	902.00	180.40				
23	10001474	944.00	188.80				
24	10001475	938.00	187.60				
25	10001476	574.00	114.80				
26			#VALUE!				

We can use the range name Total in our formulae, and in each row this will return the value at the intersection of the row with the Total range. We have deliberately extended the range to row 26 and we can see that, because there is no intersection between row 26 and the range Total, the formula returns a #VALUE! error.

We can also create a 'real' intersection between two range names. In this example (see below) we have selected cells A1:F4 and used the Formulas ribbon tab, Defined Names group, Create from Selection option that we covered briefly in the first part of the series. This creates the ranges:

- January
- February
- March
- April
- May
- and:
- UK_Sales
- Europe_Sales
- World_Sales

Note how the spaces in the labels are automatically replaced with underscores, as range names are not able to include spaces.

Cells B7 and G7 refer to UK_Sales and we can see how implicit intersection works in B7, but how G7 returns an error because there is no intersection. The range name May refers to F2:F4 and the range name UK_Sales to B2:F2. =May UK_Sales will return the intersection of these two ranges - the value in cell F2. In this case there is no need for any implicit intersection, so the formula will produce the same result, whichever cell it's in.

	A	B	C	D	E	F	G	H	I
1		January	February	March	April	May			
2	UK Sales	100,000	105,000	110,000	115,000	120,000			
3	Europe Sales	50,000	60,000	70,000	80,000	90,000			
4	World Sales	30,000	32,000	34,000	36,000	38,000			
5									
6									
7									
8									
9									
10									
11									

AREAS WHERE A RANGE NAME IS THE ONLY PRACTICAL SOLUTION

There are a few places in Excel where the use of range names is not just easier or more informative, but close to essential.

Data validation list

It is possible to use a range of cells as the source of a list to be used in Excel's Data Validation feature. Often, you will want that list to expand automatically as you add new items to the list source. If your source cells and the cell containing the Data Validation are on the same worksheet, you can set the list up as an Excel Table and it will expand automatically. However, the Data Validation source can't use structured Table references, but can only use normal cell references or range names. If the Data Validation cell and the list/Table are on different worksheets, then the Data Validation source will not automatically expand as items are added to the Table. In order to address this issue, you can give the column of items in the table a range name, and refer to the name from the Data Validation source. The name will automatically expand to include new items added to the Table and so the Data Validation list will also expand.

Chart series source

Chart series source references are normally created automatically when you select a range of cells and then use Insert, Chart to base a chart on the range. You might want the range of cells to change automatically to accommodate new information. If

OTHER OFFICE TIPS

The Excel Community site includes many articles on Excel and other office software. In addition, there is a forum where you can ask and answer questions on a wide range of Excel issues: ion.icaew.com/excelcommunity

The IT Counts site includes articles of more general interest including office software and hardware, IT security, management reporting and cloud computing. It too has a forum: ion.icaew.com/itcountshome

Both IT Counts and the Excel Community are available free to all IT Faculty members as part of their subscription.

Simon's book, *Essential Excel for Accountants (and others)*, is now available as a PDF from tkb.co.uk/towiee.htm

Simon has also included many useful Excel tips in the 'Lunchtime Learning' section of his website: tkb.co.uk/lunchlearn.htm

you intend to use a function, such as OFFSET() to calculate the series range, you would need to allocate the formula directly to a range name (as covered in part 2 of the series), and then set this as the series source. Including a function directly in a chart series source generates an error, but referring to a range name that represents a formula containing a function does work.

Sparklines and Camera Pictures

Just as the source of a chart series can only include a function via the use of a range name, the same applies to the source of a sparkline and a camera picture. In this example (see below) we are displaying a PivotTable which could change when it is refreshed or a filter is applied and we want to use the Product ID to automatically display the correct product picture and a product sales sparkline. This requires the use of MATCH() or a lookup function, which we can't use directly in the source of our camera picture or sparkline, but can include via a range name. ■

Source	Target	Comment
=PRODUCTS!\$B\$2:\$B\$10	=PRODUCTS!\$B\$2:\$B\$10	Workbooks...
=PRODUCTS!\$C\$2:\$C\$10	=PRODUCTS!\$C\$2:\$C\$10	Workbooks...
=PRODUCTS!\$D\$2:\$D\$10	=PRODUCTS!\$D\$2:\$D\$10	Workbooks...
=PRODUCTS!\$E\$2:\$E\$10	=PRODUCTS!\$E\$2:\$E\$10	Workbooks...
=PRODUCTS!\$F\$2:\$F\$10	=PRODUCTS!\$F\$2:\$F\$10	Workbooks...
=PRODUCTS!\$G\$2:\$G\$10	=PRODUCTS!\$G\$2:\$G\$10	Workbooks...
=PRODUCTS!\$H\$2:\$H\$10	=PRODUCTS!\$H\$2:\$H\$10	Workbooks...
=PRODUCTS!\$I\$2:\$I\$10	=PRODUCTS!\$I\$2:\$I\$10	Workbooks...
=PRODUCTS!\$J\$2:\$J\$10	=PRODUCTS!\$J\$2:\$J\$10	Workbooks...
=PRODUCTS!\$K\$2:\$K\$10	=PRODUCTS!\$K\$2:\$K\$10	Workbooks...
=PRODUCTS!\$L\$2:\$L\$10	=PRODUCTS!\$L\$2:\$L\$10	Workbooks...
=PRODUCTS!\$M\$2:\$M\$10	=PRODUCTS!\$M\$2:\$M\$10	Workbooks...
=PRODUCTS!\$N\$2:\$N\$10	=PRODUCTS!\$N\$2:\$N\$10	Workbooks...
=PRODUCTS!\$O\$2:\$O\$10	=PRODUCTS!\$O\$2:\$O\$10	Workbooks...
=PRODUCTS!\$P\$2:\$P\$10	=PRODUCTS!\$P\$2:\$P\$10	Workbooks...
=PRODUCTS!\$Q\$2:\$Q\$10	=PRODUCTS!\$Q\$2:\$Q\$10	Workbooks...
=PRODUCTS!\$R\$2:\$R\$10	=PRODUCTS!\$R\$2:\$R\$10	Workbooks...
=PRODUCTS!\$S\$2:\$S\$10	=PRODUCTS!\$S\$2:\$S\$10	Workbooks...
=PRODUCTS!\$T\$2:\$T\$10	=PRODUCTS!\$T\$2:\$T\$10	Workbooks...
=PRODUCTS!\$U\$2:\$U\$10	=PRODUCTS!\$U\$2:\$U\$10	Workbooks...
=PRODUCTS!\$V\$2:\$V\$10	=PRODUCTS!\$V\$2:\$V\$10	Workbooks...
=PRODUCTS!\$W\$2:\$W\$10	=PRODUCTS!\$W\$2:\$W\$10	Workbooks...
=PRODUCTS!\$X\$2:\$X\$10	=PRODUCTS!\$X\$2:\$X\$10	Workbooks...
=PRODUCTS!\$Y\$2:\$Y\$10	=PRODUCTS!\$Y\$2:\$Y\$10	Workbooks...
=PRODUCTS!\$Z\$2:\$Z\$10	=PRODUCTS!\$Z\$2:\$Z\$10	Workbooks...

What not to wear

There's plenty of great wearable tech, says **Leo Waldock**, however, future gadgets could take snooping to the extreme by monitoring not just shopping habits, but your health as well



I am going to make an educated guess and suggest that you did not receive a piece of wearable technology in your Christmas stocking.

How can I be so confident? Well, partly it's because I, a confirmed technophile, have no personal desire to own a Samsung Gear Live or an LG G Watch (although I do like the look of the Motorola Moto 360) but mainly it's because Apple won't be selling its new Watch device until Spring. You can bet the floodgates will open once it goes on sale.

There are other forms of wearable tech with more obvious applications such as the Microsoft Band, Nike FuelBand or Fitbit. These monitor the wearer's pulse rate and allow you to log the amount of exercise you take and also to monitor your sleep patterns. In essence, these act as sensors or peripherals that can communicate with your smartphone to form a PAN.

You may recall the terms WAN (Wide Area Network) and LAN (Local Area Network), and now the latest

category of connectivity is PAN (Personal Area Network) which basically means the stuff you wear and that you keep in your pockets and bag. Short-range communication powered by battery is ideally suited to Bluetooth, unlike longer range links that require Wi-Fi, wired ethernet or fibre optics.

No doubt the thought of a PAN conjures up an image of a geeky cyborg with a smartphone, smart watch, fit band and Google Glass, topped off with an iPad. It's not a pretty sight and is unequivocally male so Intel has come up with a (slightly gaudy) bracelet called MICA (My Intelligent Communication Bracelet) aimed at women.

MICA contains a SIM and is a stand-alone device so in the near future we blokes will not only have to match our witty conversation against the allure of an iPhone, but will also have to contend with sly glances at a piece of jewellery.

While I have no idea what I would do with a smart watch, I quite like the idea of a gizmo that can log my sleep

patterns as it might be informative. This is something that can currently only be done in a medical laboratory, so the idea of handing over £100 and gaining graphs and tables of my hidden behaviour has a certain appeal.

This is all good stuff, but you need to be aware of some potential down sides, and I don't just mean the endless battery charging. The early wearables on the market have limited functions and some have obvious flaws, such as fit bands that aren't sufficiently waterproof to go in the shower. No doubt that will change in the next year or two and these devices will become ubiquitous, which is more than likely to be a double-edged sword.

While I am happy with the idea that police officers will increasingly wear a small camera while they are on duty, I really don't like the idea that my smartphone will know where I am and what I am doing, to an alarming degree. Of course, when I say smartphone I really mean Apple, Google or Microsoft.

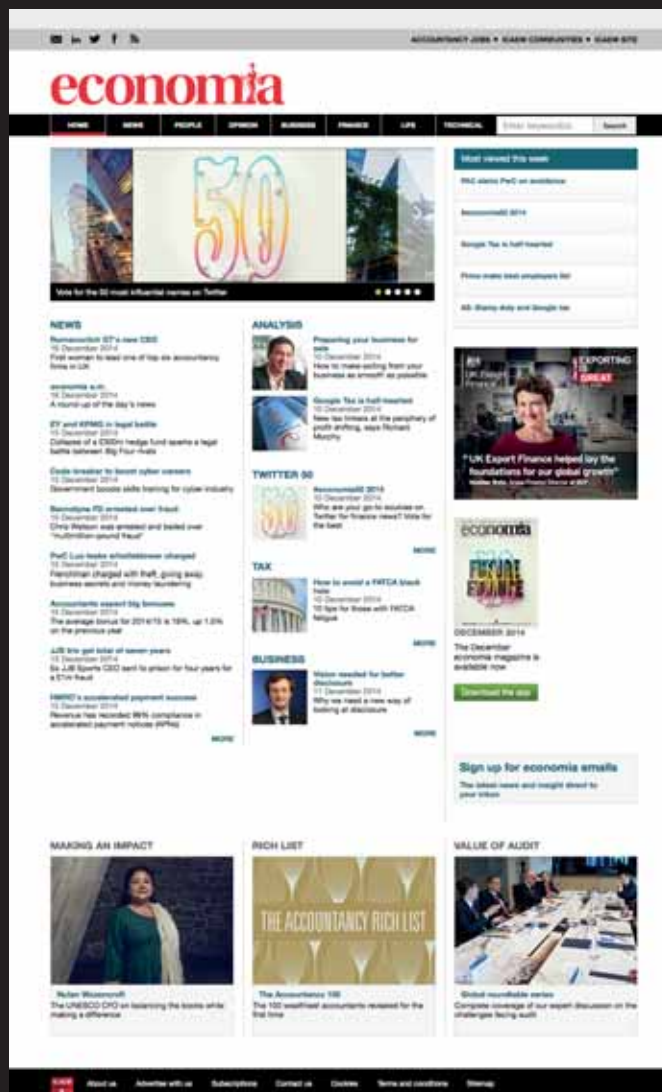
At present when I am shopping on Amazon or swiping a barcode with my phone I can be sure the wretched device is reporting back to the American mothership. It won't be long before my phone not only knows my location and whether I am talking or emailing, but also whether I am awake or asleep, taking exercise or developing an ailment.

I have little doubt an especially smart phone will be able to deduce whether I am limping because my shoes are too tight. Some things are just a step too far - pun intended. ■

Freelance IT writer **Leo Waldock** contributes to the IT Counts blog, ion.icaew.com/itcounts



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