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DATA SECURITY**RSA Europe: Thousands of unprotected virtual servers exposed to the web**

Organisations are failing to sufficiently protect data in virtual environments, leaving them wide open to attack, according to Jason Hart, vice-president cloud solutions at SafeNet. "In the virtual world, the basic security principles of confidentiality, integrity and accountability are widely ignored," he told delegates at RSA Conference Europe 2012.

MOBILE HARDWARE**CIOs to ditch BlackBerry for iPhone**

CIOs will increasingly select work mobiles from manufacturers other than Research in Motion (RIM) over the next five years, according to research by Virgin Media Business. The study showed just 10% of the 500 CIOs surveyed believed RIM's BlackBerry handsets would still be the dominant force in the corporate environment by 2017, with 37% claiming Apple would become the business phone of choice.

INTERNET INFRASTRUCTURE**Government confirms £35m funding for '5G centre'**

The government is funding a new project for the University of Surrey to develop the next generation of mobile broadband systems. The money will come from the UK Research Partnership Investment Fund, which chancellor George Osborne revealed would receive an extra £200m of cash during his conference speech last week.

BUSINESS APPLICATIONS**Shell plans to cut training costs and duration with 'semantic' search**

Energy group Royal Dutch Shell aims to cut the training time for engineers by rolling out technology to automatically identify and deliver the information they need from databases, blogs and social media. The project is expected to save the energy company hundreds of millions of pounds a year in training costs and cut training time from nine to eight years.

IT EDUCATION**Job prospects look up for IT graduates**

Job prospects for IT graduates have improved for the first time since the start of the recession. A report from the Higher Education Careers Services Unit (HECSU) showed IT graduates were more likely to be employed six months after leaving university than those who studied other subjects.



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BUSINESS APPLICATIONS**Payment errors could undermine advantages of Sepa system**

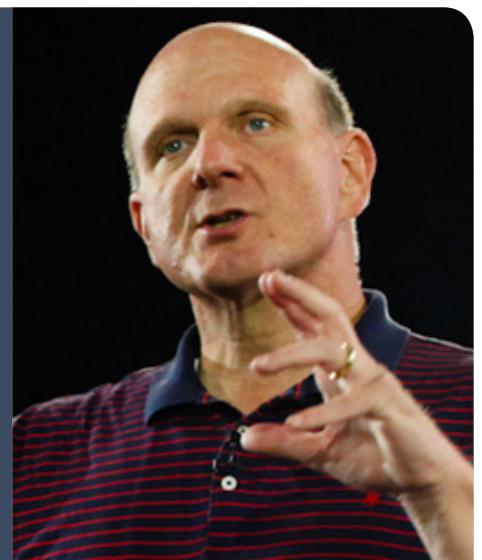
Research from Experian has revealed that European businesses could lose billions of Euros as a result of errors that will slow payments when the Single European Payments Area (Sepa) system comes fully into force in 2014. Sepa aims to make all electronic payments in the Eurozone the same as making domestic payments.

MICROSOFT CEO: 'WE ARE A DEVICES AND SERVICES COMPANY'

Microsoft chief executive Steve Ballmer has told shareholders that the firm is a software firm no longer – but instead, a "devices and services company".

In his annual letter to investors, Ballmer said there is a "fundamental shift" underway in Microsoft, which is embodied in the forthcoming release of Windows 8.

"Over time, the full value of our software will be seen and felt in how people use devices and services. This is a significant shift, both in what we do and how we see ourselves – as a devices and services company," he said.



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INTERNET INFRASTRUCTURE**Greater ambition required for UK fibre broadband strategy**

The FTTH (fibre-to-the-home) Council of Europe blamed the tradition of one large incumbent provider and lack of ambition from the government for the UK lagging behind in fibre broadband when it launched its rankings of those investing the most into FTTH, which brings fibre broadband connectivity straight into homes and businesses, providing much faster speeds for users.

CLOUD COMPUTING SERVICES**Lamborghini slashes web costs with Amazon Web Services**

Supercar maker Automobili Lamborghini has migrated its legacy servers onto Amazon Web Services (AWS), halving running costs. The car company has replaced an outdated website and infrastructure with AWS. The new website was built in less than one month.

GREEN DATACENTRES**Global census shows datacentre power demand grew 63% in 2012**

Datacentre energy requirements have grown massively in the past 12 months, suggesting that rising energy costs and stricter regulations are not helping to limit datacentre power use and cut carbon emissions. Between 2011 and 2012, power requirements grew by 63% globally to 38 gigawatts, up from 24 gigawatts in 2011, the *DatacenterDynamics 2012 Global Census* on datacentre trends revealed.

IT EDUCATION**Sheffield Hallam University unveils computer workshops for schoolchildren**

Sheffield Hallam University is running a series of computer programming and robotics workshops to teach local schoolchildren and their teachers computer science skills. Sheffield Hallam University's department of computing and teacher education is running the interactive teaching programme and workshops.

ACCESS THE LATEST
IT NEWS VIA RSS FEED**HEALTHCARE IT****Government launches £100m technology pot for nurses**

The government is providing £100m in technology for nurses and midwives in a move designed to free up time to spend with patients. Organisations will be issued guidelines on how to make bids for the funding, which could include technologies such as digital pens and mobile devices.

CYBER SECURITY**Cyber crime costs UK organisations upwards of £2m a year, study finds**

Cyber crime costs UK organisations an average of £2.1m a year each, according to the 2012 *Cost of Cyber Crime* study by the Ponemon Institute. The study revealed that cyber attacks have become common and the cost of attacks on UK organisations ranges between £400,000 and £7.7m. The group of UK organisations polled experienced 41 successful attacks – or 1.1 each – a week. ■

PC MARKET SHARE BY SUPPLIER, Q3 2012

Supplier	Q3 2012 shipments	Q3 2012 market share	Q3 growth 2012/2011
Lenovo	13,767,976	15.7%	9.8%
HP	13,550,761	15.5%	-16.4%
Dell	9,216,638	10.5%	-13.7%
Acer Group	8,633,267	9.9%	-10.2%
Asus	6,380,690	7.3%	11.8%
Others	35,954,748	41.1%	-11.6%
Total	87,504,080	100%	-8.3%

Source: Gartner

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Companies struggle to comply with complicated licensing regulations

SAP and Oracle users call for changes to opaque rules that are costing some millions in penalties. Brian McKenna and Archana Venkatraman report

Companies, including large multinationals that virtualise Oracle databases using VMware products, are finding it challenging to remain compliant with Oracle's complex licensing policies which is costing them millions in penalties.

"An increasing number of global customers are failing to remain compliant amid growing virtualisation, largely because of Oracle's non-transparent and complicated licensing policy," said Judica Krikke, solicitor at European law firm Stibbe, at the VMworld Europe 2012 event in Barcelona.

Although virtualising databases using VMware products took off robustly two or three years ago, IT executives are only now finding compliance issues as they are consolidating or cleaning up their IT estate – or even looking to renew their contract with Oracle, experts said.

"One large enterprise virtualised Oracle using VMware products but didn't put much thought into how they were doing it," said Daniel Hesselink, a licensing expert at Licensing Consulting. "Oracle was going to conduct an audit at this company and its own audits beforehand showed that there was a \$14.8m licensing compliance issue."

ORACLE GUIDE IS 'INCOMPREHENSIBLE'

Experts insist the fault is with the supplier. The text in Oracle's licensing contract – called Software Investment Guide – is "utterly incomprehensible", Krikke said. "No one understands it and no one can explain it."

"When Oracle issues a warning about licensing penalties, customers write to Oracle saying 'we did not know and it is not on the contract'," Krikke continued.

"Oracle's response is 'if a certain type of usage is not described in the guide, it is not allowed'. But that's not how contracts work – they should be clear and specific," she added.



PGIAM/ISTOCKPHOTO

Customers should also be careful while virtualising Oracle databases using non-Oracle platforms such as VMware's vSphere platform.

"Having just 'some' virtualisation 'somewhere' could cost you at least \$4.56m in Oracle non-compliance charges," said Licensing Consulting's Hesselink.

Customers should conduct in-depth analysis of their infrastructure, re-evaluate their virtualisation deployment and look at the licensing agreement carefully. Read the contract's "order document" clearly and be sure of the number of licences they have bought and the exact type of licensing, he added.

Another option is to buy Oracle products as part of an SAP package.

"If you purchase Oracle databases as part of an overall SAP contract, then Oracle licensing cannot touch you," said Hesselink.

Oracle has yet to listen to customers and virtualisation suppliers such as VMware, regarding its licensing policy, experts said.

"Oracle's goal is to maximise revenue

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through licensing costs and make users spend more," said Hesselink.

"Oracle is the only supplier that does not have a simple volume licensing package and its existing single processor licensing can make IT professionals lose track amid mass virtualisation of their infrastructure," he said.

The experts admitted that licensing is an issue with many other suppliers, including Microsoft and SAP too, but insisted that Oracle's is the most complicated.

"This is because most companies use Oracle databases and a majority use VMware platforms for virtualisation," said Krikke.

Will Oracle change?

"No, because if they backtracked now, thousands of past customers who have paid licensing penalties will demand cash back," said Hesselink, adding that the only way forward is for the database provider to introduce volume licensing policies.

CALLS FOR MORE TRANSPARENCY

SAP users in the UK and Ireland want more transparency in licensing from the supplier.

A UK and Ireland SAP User Group survey of 336 SAP users in 150 organisations, revealed a customer base demanding better value for money in difficult economic circumstances.

The ongoing shift of enterprise IT from on-premise to the cloud, or to hybrids, continues to muddy the licensing waters.

Philip Adams, vice-chairman of the UK and Ireland SAP User Group, said it was to SAP's credit it is engaging with users over licensing.

The UK and Ireland group is one of 16 internationally that has been talking to SAP through the SAP User Group Executive Network (Sugen) about licensing, under the rubric of a licence charter, for "about a year".

"The solution has to be global. There is no point doing this country by country," said

Adams. "We don't feel that SAP is pulling a

fast one. It is more that we, as users, need to understand what we are paying for and feel that we are getting value for money."

That requires transparency and flexibility from the supplier, he added.

SAP users want to know how they can

OTHER FINDINGS

- 95% of SAP users believe the company's software licensing policy is too complicated
- 88% of respondents believe SAP should make its price list public
- 89% of users stated they would like SAP to reduce complexity by offering software that is only limited by one licence or usage metric
- 67% said the supplier's expanding product catalogue has made it hard to keep track of licence usage – especially as certain SAP modules can be installed automatically
- 97% said they should have the ability to park unused licences for support periods

move from on-premise to cloud, but there is confusion around licensing terms.

Research last year revealed that 80% of User Group members expected their SAP implementations to be a mixture of on-premise, on-demand and on-device services.

This latest research, however, revealed 97% of users believe SAP has not effectively explained the migration path from on-premise to its mobile or cloud offerings and how this affects their existing licensing agreements.

"There needs to be greater clarity from SAP regarding licensing, much of which stems from a need for improved customer communication," said Adams, in a press statement.

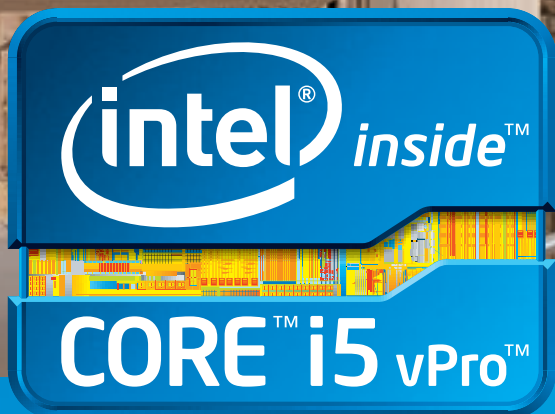
"More than half of users don't understand the difference between what SAP defines as a "Professional" and a "Limited Professional" user. We hope to work quite closely with SAP in the UK to ensure this happens and licensing will no doubt be a big theme at this year's User Group Conference," he said.

Tim Noble, managing director of SAP UK and Ireland, said: "We are continuing to address some of the perceived complexities around SAP's software licensing through a number of measures including standardising our terms and conditions globally so that the same licensing terms apply, no matter which country our customers reside in, and publishing our software rights online for all products and services – including the full Sybase suite."

The survey will be discussed at the SAP UK and Ireland User Group Conference in Manchester from 18-20 November 2012. ■



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- SEPA REAPS SAVINGS WITH ORACLE ON VMWARE
- SEVEN WAYS TO REDUCE SAP LICENSING FEES



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¹ The cumulative number of unique malware samples in the McAfee® collection exceeded the 75 million mark at the end of 2011. Source: "McAfee Threats Report: Fourth Quarter 2011," available at www.mcafee.com (<http://www.mcafee.com/us/resources/reports/rp-quarterly-threat-q4-2011.pdf>).
² No system can provide absolute security under all conditions. Requires an Intel Identity Protection Technology-enabled system, including a 2nd or 3rd Gen Intel Core™ processor, enabled chipset, firmware, software, and participating website. Consult your system manufacturer. Intel assumes no liability for lost or stolen data and/or systems or any resulting damages. For more information, visit <http://ipt.intel.com>.
³ Intel AES-NI requires a computer system with an AES-NI-enabled processor, as well as non-Intel software to execute the instructions in the correct sequence. AES-NI is available on select Intel Core processors. For availability, consult your system manufacturer. For more information, see <http://software.intel.com/en-us/articles/intel-advanced-encryption-standard-instructions-aes-ni>.
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WHY THE
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TAKE-UP

How to manage suppliers in a multi-sourced IT environment

Managing multiple IT service providers is a tougher job than deciding what to outsource, but there are examples to follow. Karl Flinders reports

IT departments within large businesses are increasingly using multiple IT service providers in an effort to cut costs and increase service levels. But managing and ensuring your best interests when you have a supplier ecosystem with multiple, often competing companies, is a challenge.

BP is one company that has successfully done this. While few have the punch of BP, with its massive IT outsourcing spend, others are successfully navigating multi-sourcing strategies.

Finance firm Old Mutual and agribusiness Syngenta are two examples, which shared their approaches with delegates at Gartner's recent outsourcing summit in London.

OLD MUTUAL'S MUTUALLY BENEFICIAL MULTI-SOURCING MODEL

Financial services firm Old Mutual has improved the service from its IT suppliers, increased IT effectiveness and reduced costs through the creation of an outsourcing strategy that is mutually beneficial to the company and its suppliers.

When Old Mutual, which provides long-term savings, US asset management, banking and short-term insurance products, wanted to increase its focus on customer services, it decided to cut IT costs and complexity dramatically. Quite a tall order for Old Mutual, which has 12 million customers and manages funds worth £260.7bn.

The company first outsourced IT in 1999, when it signed a deal with CSC under which 400 staff transferred to the supplier. In 2008, T-Systems took over as the main supplier. Old Mutual uses a multi-sourcing model, so other IT suppliers are involved.

RESHAPING THE OUTSOURCING MODEL

When Richard Boynett, CIO, long-term savings at Old Mutual, came on board in 2010,



Old Mutual has created an outsourcing strategy that is mutually beneficial to the company and its suppliers

he recognised that things needed to change.

At the time, the IT environment comprised 1,800 applications, 31 datacentres and 15 regional networks that were not linked.

Boynett says the firm needed to get more out of T-Systems, so he set out to create a multi-sourced outsourcing environment that was "mutually beneficial".

The company could have forced a contract breach to get out of the deal, he says, but took a different approach because it did not want to go through the process of renegotiating the contract with other suppliers.

Old Mutual and T-Systems each stated what they were seeking to gain from the contract. "I was looking at my company's targets, which meant running the business effectively at a lower cost," says Boynett.

He wanted better service and support, as well as greater synergy across the company's disparate global IT infrastructures.

PENALTY PAYMENTS COUNTERPRODUCTIVE

In the past, had Old Mutual wanted to change the behaviour of its suppliers, it would have used penalties and service level

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agreements (SLAs), of which it had 200. The company had a team dedicated to monitoring suppliers and their SLAs. "We would cut costs by penalising suppliers that did not meet the SLAs," says Boynett.

But this method was counterproductive, he says, because if suppliers missed a target they would see no reason to make any effort because they had already lost the money.

Although the company has retained penalties under the new model, it wants them to be exceptions.

SHARING GOALS AND IDEAS

Old Mutual embarked on a strategy of sharing goals and adding more than what is outlined in a contract. Other changes saw suppliers and Old Mutual jointly develop

SLAs to be mutually beneficial. "We went from having more than 200 SLAs to 14," says Boynett. "As they are jointly developed, we have not had any penalties in 18 months."

Suppliers were also given the opportunity to win more business through ideas. To achieve this, Old Mutual would invite suppliers to address a topic and come forward with ideas for mutually beneficial approaches.

There was also an understanding that both parties had to make money, so transparency of costs was essential.

Another important change was to combine the supplier's staff with the Old Mutual team.

Boynett says the approach has been successful in making IT more effective, and has enabled him to reach his corporate target of a 10% cost reduction. ■

MULTI-SOURCING KEY TO GROWTH AT SYNGENTA

Agribusiness Syngenta has put multi-sourced IT at the heart of its ambitious plan to double its revenues in the next eight years. It has moved from having thousands of suppliers across the world to a select few which it has close relationships with.

Syngenta was formed in 2000 following the merger of Novartis Agribusiness and Zeneca Agrochemicals. Its business is seeds, seed care, crop protection and garden products. Its customers are farmers in rural areas in 90 countries.

Neither of the merged companies had dedicated global IT services, but rather separate IT in different countries. Syngenta had more than 3,000 independent suppliers, including IT suppliers and contractors, as a result of regional businesses buying locally. There was an opportunity to rationalise IT and a need to improve IT's scalability to support ambitious growth plans.

The company has set a target of growing its annual revenue from \$13.3bn to \$25bn in its latest financial year. Jonathan Apted, global IS strategic relationship manager, says the ambitious growth targets mean the IT department had to ensure it was scalable.

He says the company is almost entirely outsourced, so to get more out of IT it requires a sourcing strategy that motivates suppliers and drives efficiencies. The company wanted to move away from using thousands of suppliers in different regions, so it collected all the information about the services it uses from all its locations and selected a small number of global suppliers that different procurement teams could buy from.

"We needed to create separate groups of services and suppliers for them," says Apted. Services were split into five groups: business process outsourcing (BPO); projects; application support; helpdesk and infrastructure; and mobile; as well as LAN, WAN, IP telephony and voice.

"It was difficult to get a single global service from one supplier," says Apted. Suppliers were chosen for particular roles and were given the opportunity to expand that role in the future.

The company wanted cooperation between suppliers and drove this home to partners with a year of talks regarding Syngenta's "partnership principles". The environment of cooperation means problems are sorted out quickly and without the need for lawyers and new contracts.

The CEOs of Syngenta and individual suppliers meet each other regularly and have joint planning sessions. Apted says communication is critical to make the multi-sourced IT model work.

In 2006, Syngenta spent 56% of its IT budget with strategic suppliers; now it spends 83% with its strategic global suppliers.

[Read the full Syngenta case study online](#)

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Sandvik streamlines supply chain by implementing single order portal

*Mining and construction company has saved a lot of time and money, as well as enabled a better decision-making process. **Brian McKenna** reports*

Sandvik, a global Swedish mining and construction engineering company, has simplified its supply chain with a single purchase order portal. This has created information, not previously available, to make decisions about supplier relations, such as renegotiating contracts.

Dubbed "SupplierConnect" at Sandvik, SupplierWeb – from Finland-based data integration supplier Liaison Technologies – has saved "a lot of time and money" according to programme manager Lars Holmström. Individual buyers are now dealing with 20,000 purchase lines per month, and it was previously a fraction of that.

The engineering company, founded in

1862 and employing 50,000, has many thousands of suppliers with dozens of ERP (enterprise resource planning) systems and instances. SupplierConnect covers 750 suppliers in 22 countries, and encompasses 13 Sandvik ERP systems.

Mikko Soirola, vice-president of sales at Liaison, stressed that being ERP supplier-agnostic was crucial to Sandvik at the beginning of the engagement in 2009.

In the existing system, when Liaison receives purchase orders from Sandvik's ERP systems, it sends them to suppliers via electronic data interchange (EDI) or using SupplierWeb. To suppliers the portal looks the same; the Sandvik buyers work in their own ERP.



An automated loader and dump truck at work in a Sandvik mine

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Holmström confirmed that a need to cut costs in the wake of the 2008 crash was the initial impetus for the project, but that this gave way to a need to support business growth, as its mining and construction markets picked up sharply.

Underlying the need for a unified supplier procurement portal is Sandvik's growth pattern – organic, but also by frequent acquisition, said Holmström.

BETTER BUSINESS PRACTICE

The company has a variety of different processes and multiple ERP systems throughout its dozens of global locations.

"Our supply chain was fragmented around the world. Some areas were really good, others were not," said Holmström. "That put us in an awkward situation. It got to the point where we really needed a better way to conduct business with our suppliers."

Previously, the company had used a lot of manual processes, including fax and email. "Our choices were either to go for unique implementations for each location or a standardised, shared process," he said.

The selection of Liaison was as much to do with an established advisory relationship as with technology, said Holmström, referring to a relationship with Sandvik, in Finland, since 2000.

After the 2009 pilot programme – focused on the initial cost-saving phase – Sandvik's senior business leadership approved a plan to implement SupplierConnect globally within 18 months.

LINKING GLOBAL LOCATIONS

Sandvik and Liaison chose a roll-out approach in which basic functionality would be implemented in multiple locations while,

at the same time, developing and implementing additional functional-

ity – such as advance shipping notices and electronic invoicing – in pilot locations.

"A key component of each roll-out is what is called an 'acceptance test', performed in each location to prove that the integration solution is extremely stable," said Holmström.

"I am very calm with every go-live. We can focus on our business, which is mining and construction, not data integration."

Holmström's advice to others considering similar projects to streamline a global corporation's transactions with its supplier base is to keep things simple and focus on the process, not the ERP.

His team's procedure was to identify "lowest common denominators" in the procurement business processes at 10 locations, and

**"OUR CHOICES WERE
EITHER TO GO FOR UNIQUE
IMPLEMENTATIONS FOR
EACH LOCATION OR A
STANDARDISED, SHARED
PROCESS"**

**LARS HOLMSTRÖM,
PROGRAMME MANAGER, SANDVIK**

"go from there".

Now that the system is established, the company has seen unintended benefits. "We have one Australian supplier who delivers to three locations there, but also to Singapore and China. There are four different ERP systems on our side, but they see one interface. And they are pushing our other locations to adopt the portal," he said.

Having one uniform supplier portal makes new common and shared key performance indicators (KPIs) possible, which are starting to reveal the best or worst suppliers said Holmström. "We can also see how our sites and factories are performing".

And so business decision-makers in the sourcing function at Sandvik have "new decision material" to use in sacking suppliers, re-negotiating contracts, and the rest, he said.

And "since the corporation as a whole is committed to a 'One Sandvik' ethos, the SupplierConnect portal is a good fit," Holmström added. ■



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Transforming IT delivery at Royal Mail

CIO Catherine Doran talks to Angelica Mari about the role of IT in building a sustainable future and driving profitable growth for the postal service



Royal Mail wanted a CIO who is comfortable in a really volatile and changing environment to drive change. And I am," says the postal service's CIO, Catherine Doran. "I joined because the scale of the challenge is huge and I would be mad to say no to that."

She appears to be thriving on that challenge. One year after joining Royal Mail to oversee the postal service's technology transformation plans, the CIO is excited about seeing the first deliverables of her strategy come to life.

EMBRACING A BIG CHALLENGE

The government-owned postal service is being groomed for privatisation, and IT plays a crucial role in the process. It is a tall order for Doran, who joined after a few difficult years for the IT team, which included the controversial mandate of former CIO Robin Dargue, who left to join Alcatel-Lucent and was succeeded by Transport for London IT chief Yvonne Ferguson, who left after barely six months.

Doran is a seasoned CIO with an impressive CV of technology and business experience, the latest of which was at Network Rail where she led a multi-million-pound transformation programme. She admits that her new role, while enjoyable, is the most challenging of her career.

"My job at Royal Mail makes my time in previous organisations – including Network Rail – seem like a leisurely walk in the park. Understanding the complexities that arise simply because of scale – Royal Mail is five times bigger than Network Rail – has been quite a steep learning curve for me," she tells Computer Weekly in an exclusive interview.

"There is a lot going on – changes in the regulatory regime, getting the pensions sorted out, attracting external investment and separating out the Post Office operation.

All of those things have a profound effect on the business strategy," says Doran.

"Attracting investment is what we need to do – and to do that, we need to make our numbers, from a financial perspective and also in terms of quality of service, delivery targets and so on. There is a huge emphasis on making sure we are credible on our journey, and an equal focus on delivering the goods internally," she adds.

DEFINING IT PRIORITIES AT ROYAL MAIL

During the past nine months, Doran has been immersed in the creation of a five-year business plan, along with senior management. The cornerstones of that plan are based on getting the basics right, building a sustainable future and driving profitable growth.

Since everything Royal Mail does relies on technology, Doran's slice of the strategy pie consists of ensuring that IT is not a



Catherine Doran, CIO, Royal Mail: "Royal Mail is the land of opportunity if you are a technology person"

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bottleneck or something that hampers the business in its overall goals.

"I have been doing a lot of work to understand what the key priorities are and what the IT function needs to look like to partner effectively with the business and deliver the solutions to support it," says the CIO.

One key area of focus for Doran is the parcels business. She says while it is no secret that the number of letters is declining, the rate of growth in parcels is increasing fast as people embrace online shopping. In its most recent set of results, Royal Mail reported that parcels represented 48% of revenue.

Within this area of the business, the company is about to begin a major IT project to replace key bespoke platform, Parcelforce Advance. According to Doran, her team is looking at an alternative that would leverage systems currently used at mail processing centres, supported by the Oracle Transportation Management product suite. This will be rolled out over the next 18 months.

Another important project is looking at increasing efficiency through intelligent barcodes, which would allow Royal Mail to automate the tracking of the volumes going through its mail centres. Doran's team is talking to suppliers about possible products to use for this.

Last month, the deployment of an SAP human resources system was completed, and for the first time, employees are being paid from a single system, which also gives staff the ability to claim expenses, apply for courses and request annual leave. That is a first step towards employee self-service, with the intention being to add more functionality to the platform.

Doran is also pushing for the completion of the roll-out of handheld devices to frontline staff. Royal Mail has one of the biggest handheld computer deployments in Europe, with

55,000 devices. According to Doran, it is expected that by the end of next year the postal service will have reached a target of 80,000 devices and there will be a periodical refresh programme.

"If you consider the pace of development in the mobile world, by the time you finish the roll-out, you have to start refreshing, so everything remains current. So we have put together a rolling programme to refresh a proportion of the estate yearly in a sustainable fashion, because that's how we do business now," she says.

Doran is also concerned about the state of the infrastructure underpinning the web operations at Royal Mail, given the issues faced over Christmas 2011. To avoid a

ON THE BUSIEST DAY OF THE 2012 OLYMPIC GAMES, TRAFFIC GOING THROUGH THE ROYAL MAIL ONLINE SHOP WAS 2,500% ABOVE NORMAL VOLUMES, AND THINGS RAN SMOOTHLY

repeat of the problems, the CIO says her team is doing a lot of work to deal with the huge volumes of traffic expected during the festive season.

Some of that effort is already paying off. On the busiest day of the 2012 Olympic Games, traffic going through the online shop – where customers could buy limited-edition stamps featuring Olympic gold medallists – was 2,500% above normal volumes, and things ran smoothly.

"We were pretty excited as there was a huge buzz across Royal Mail, with people talking about it all the time. It was every business's dream – the team is very buoyed up and proud of what we have achieved as a business," says Doran.

She is also launching a recruitment programme to take on 100 people across all areas of IT service delivery. IT staff will be recruited in London, Chesterfield and Milton Keynes, with the possibility that more will be needed at sites along the M4 corridor. ■

This is an edited version. Click here to read the full interview.



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Is it time to consign traditional software licensing to history?

When will the traditional model of software licensing die? Surely it is only a matter of time. Last week, Oracle was accused of costing customers millions of pounds through its "non-transparent and complicated licensing policy". Legal experts say firms are being forced to pay huge penalties when using Oracle software in a virtualised environment.

Meanwhile, SAP users in the UK have called for more transparency and better value for money. Here too, a survey suggests that 95% of SAP customers believe the firm's software licensing is too complicated.

Licensing has always been a point of contention for IT leaders. Computer Weekly was writing about how big software firms would rip off customers through opaque terms and conditions as long ago as the 1990s.

But now, with the growth of the cloud and software as a service, those old models of upfront licence fees with annual maintenance payments look increasingly outdated and inappropriate for a modern IT environment.

Even Microsoft is showing signs of realising the world has changed. CEO Steve Ballmer told shareholders last week that the firm is undergoing a "fundamental shift", and now sees itself as a "devices and services company".

The implication, surely, must be that you don't sell devices and services on the same basis as a conventional software licence. It would be a huge change, with enormous financial implications, were Microsoft to move to a subscription-based model more in tune with the pay-as-you-go ethos of the cloud. It won't happen overnight – but if that is the direction of travel, perhaps even Microsoft is starting to get it right.

Of course, supporters of open source will be smiling smugly at the travails of licence-encumbered users. It is no coincidence that most of the new cloud services – Amazon, Google, Facebook, etc – are built on open-source principles. Imagine the cost of an Oracle database licence for Facebook's server infrastructure.

There is a bright future for software companies – their products will power the world and our lives. But there are gloomy prospects for any that insist on hanging on to outdated software licensing practices from a different age. ■

Bryan Glick
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EC CLOUD PLANS

Will European Commission law lend the momentum to float the cloud?

An EC report has identified obstacles to cloud uptake which it says could be removed through legislation, report Graham Hann and Neil Hawley

The European Commission's cloud computing strategy document – titled *Unleashing the Potential of Cloud Computing in Europe* – has outlined the obstacles to establishing a vibrant market for cloud computing.

The main obstacles are: a lack of clarity on rights, responsibilities, and liability; insufficient data protection; and insufficient standardisation, particularly across jurisdictions.

The European Commission (EC) aims to develop model terms for cloud computing service level agreements (SLAs) for contracts between cloud providers and users. The plan recognises even large companies have little negotiating power with cloud providers and contracts often do not provide for liability, data integrity, confidentiality or service continuity.

The EC says this lack of negotiating power is one of the main factors hindering the growth of cloud computing and emphasises that SLAs could provide the basis of trust customers can have in a provider's ability to deliver services.

Take-it-or-leave-it contract terms are similarly imposed on consumers and small firms who are often unaware of their relevant rights, especially in the applicable law and jurisdiction. Some of these issues will, the EC hopes, be addressed by the proposed regulation on a Common European Sales Law, which addresses many of the obstacles of diverging national sales law rules, by providing a uniform set of rules.

In addition, the EC proposes to develop an optional instrument to address areas outside the scope of the Common European Sales Law with the aim of creating transparent and fair cloud services contracts.

The EC has considered ways to address



Hawley: The EC says it will work with providers

data protection issues with transfers of data to the cloud, often across jurisdictions. To this end, it will call on the data protection authorities of the member states to approve the "Binding Corporate Rules" (BCR) specifically for use by cloud providers, under which a company or group of companies providing cloud services could sign up to legally

binding rules enabling international transfers between them.

The EC says it will work with cloud computing providers in an attempt to agree a code of conduct for cloud computing that would help to support a uniform application of data protection rules across jurisdictions.

The EC calls for a wider use of standards and the certification of cloud services to show they meet these standards.

The report says the endorsement of such certificates by regulatory authorities, indicating compliance with legal obligations, would help cloud take off.

Consequently, the EC has requested that the European Telecommunications Standards Institute set-up a Cloud Group to look into the needs for cloud standardisation and conformity with interoperability standards.

The EC also says it will work with relevant bodies to assist the development of EU-wide voluntary certification schemes in the area of cloud computing and plans to publish a list of such schemes by 2014. ■

Graham Hann is the lead partner in the technology team and Neil Hawley (pictured above) is an associate in the technology team at international law firm, Taylor Wessing LLP

This is an edited excerpt.

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MICROSOFT'S BUSINESS TARGETS

With Windows 8, Microsoft hopes to make developing enterprise client applications easier, but will compatibility be an issue? Tim Anderson reports

Microsoft developer division
chief, Soma Somasegar



MICROSOFT

"Connected devices, continuous services" was Microsoft's mantra at the recent launch of Visual Studio 2012 – the primary development tool for Windows. This is the essence of what the company considers a modern app – another often-repeated phrase. Although Microsoft emphasised that the client for a so-called modern app is not necessarily Windows 8, the tablet personality side of the new operating system (OS) is tailor-made for the concept, which includes the idea of high usability and rich interactivity as well as correct functionality.

"Consumer applications and business applications have more and more attributes in common," said Microsoft's developer division chief, Soma Somasegar, referring to the consumerisation of IT and the bring-your-own-device (BYOD) movement. "If you want to provide that level of user experience, you really want to pick up a platform like Windows 8, with touch interface and a high level of interactivity."

LACK OF COMPATIBILITY

It is all very well talking up the advantages of Windows 8 in the enterprise, but the practical problem is that apps built for the touch-friendly side of the platform are incompatible with all other OS – even Windows 7.

"Windows 8 has been released to manufacturing and will be formally launched in October, but the reality is that most organisations are still working on eliminating Windows XP and deploying Windows 7," says Gartner vice-president Michael Silver.

The broad deployment of Windows 8 apps in the near future is the stuff of fantasy for most businesses, though the hardware requirements for Windows 8 are not that different than for Windows 7, so upgrading is technically possible. Windows 8 will also slot neatly into a Windows 7 environment, in that most desktop applications will still run correctly.

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It is still worth looking carefully at the potential of Windows 8 in an enterprise environment. If Microsoft has got it right, business apps for the platform could be commonplace in a few years' time. If not, the company is merely hastening the decline of the Windows client in favour of browser-based apps and competitors like Apple's iPad.

Windows 8 apps should be more secure than traditional Windows apps. The tablet personality in Windows 8, formerly called Metro, is not just a new user interface but a new application programming interface (API) that runs within Windows.

LEARNING FROM PAST MISTAKES

The programming platform is called the Windows Runtime (WinRT). Microsoft created WinRT in a conscious effort to create a new app platform that avoids the errors of the past and is designed for world of connected devices and continuous services. Developers can code for WinRT in either C/C++, .Net languages, or HTML and JavaScript.

The API for WinRT is a subset of the full Windows API and supports a service-based, web application model for connecting to data. There is no client for SQL Server, for example, though apps can use a local database engine for caching data.

Behind the design of Windows 8 was Microsoft's recognition that Windows' desktop interface would not be suitable for tablets, which is interesting when you consider how former CEO Bill Gates championed tablet PCs running Windows XP back in 2000.

Back then it was assumed that users would have a stylus but, thanks to Apple and the iPhone, the expectation today is that you can do most of your work using fingers alone. Windows 8 apps are touch-friendly by default, using chunky controls that are easy to target. Another characteristic is that they normally run full-screen, though on wide displays you can also use a view showing two apps split approximately 75/25 across the screen.

Conceptually the idea is to emphasise content over toolbars and other screen furniture. Arguably this benefits productivity, though some early adopters have complained the enforced full-screen view is too restrictive.

Windows 8 apps have an optional app bar, hidden at the top and/or bottom of the screen, that comes into view with a right-click or swipe. There is also a right-hand menu called the "charms", which offers system functions, as well as app-specific settings.

Another major innovation in Windows 8 is the introduction of an ARM version, confusingly called Windows RT (not to be confused with WinRT). Microsoft's own-brand Surface tablet will be released initially with Windows RT, with an x86 variant to follow. The two key facts about Windows RT are that Microsoft Office (but without Outlook) comes pre-installed and that no further desktop applications can be installed.

This means that only sandboxed, tablet-style Windows 8 apps can be installed, which could make it the perfect enterprise device, as secure as an Apple iPad but with the benefit of Microsoft Office. The chief obstacle, of course, is that users will have to do without desktop Windows applications. In mitigation, there are already Windows 8 clients for remote desktop applications, including Citrix Receiver and Microsoft's Remote Desktop.

Apps written in managed code such as C#, VB or JavaScript should work on both x86 and ARM. Native code apps need to be recompiled, and, while this should be straightforward, there will be cases where the version of Windows available on ARM will cause problems.

Visual Studio 2012 has full support for designing, developing and building Windows 8 apps. The idea is that developers can continue to use their existing skills, whether that is C/C++, C# or Visual Basic, or HTML and JavaScript. The user interface of a Windows 8 app is generally designed either with XAML, the same XML-based presentation language used by the

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Windows Presentation Foundation (WPF), or using C++ and DirectX for rich hardware-accelerated multimedia effects.

That said, there is a considerable learning curve before developers can expect to turn out strong Windows 8 apps. The model is more like that of a smartphone or tablet than a traditional Windows application. Apps can be suspended or terminated by the OS at any time when not in use, and you need to handle this transparently for the user and without losing data.

The look and feel is also important, which means studying Microsoft's design guidelines and sample code. Using the templates in Visual Studio is recommended. Finally, the API is different, with much added and much taken away, so the idea of simply porting an application from, say, WPF to Windows 8 by copying the XAML and C# code is not going to work.

How do you deploy a Windows 8 app? This turns out to be a complex question. The general public can only install apps from the Windows Store. Once installed, the store handles updates making this an easy way to obtain and service apps. Apps can be removed with a couple of taps too. It is a welcome change from the intricacies of the Windows Installer for desktop applications.

SIDELOADING AND THE SELF-SERVICE PORTAL

Businesses though are unlikely to use the store for custom apps, though there are several alternatives. Visual Studio builds Windows 8 apps into packages with an .appx extension, and there is a PowerShell command, add-appxpackage, which will install an appx package.

This is called sideloading, and can be used at runtime, or to build a Windows image. However, there are certain requirements that have to be satisfied before sideloading will work. It must be signed with a trusted certificate and Enterprise editions, or Server 2012, need only be joined to a Windows domain and have sideloading enabled in Group Policy – Microsoft's system for configuring Windows centrally. Other editions of Windows 8 (including Professional) will not work for sideloading unless a special product activation key is used.

Windows RT uses a different approach, based on an internal store called a self-service portal. Some details are yet to be clarified, but the self-service portal combined with user-specific permissions looks like Microsoft's preferred direction and you would expect this to be supported in System Centre for both Windows RT and x86 app deployments.

Is Windows 8 fit for business? The positive is that Microsoft has thought carefully about how to create an app platform that is tablet-friendly, while working well with mouse and keyboard, secure, easy for deployment and servicing, and suited to BYOD. Windows Phone 8 will also share the same kernel as Windows 8, and while the first release will fall short of full compatibility, there is the prospect of apps that with little adaption will work across phone, tablet and desktop versions of Windows.

Microsoft is taking a risk – the new platform is unproven, and users may struggle to accept the sometimes jarring interaction between the desktop and tablet personalities.

"Windows 8 is not your normal low, or even high, impact major release of the OS," said Gartner's Steve Kleynhans. "It's the start of a new era for Microsoft – the RT era – following the NT era, which began in 1993 and is just now starting to fade out."

In that light, the inclusion of the regular Windows desktop in Windows 8 is a smart move. Provided you use the x86 version, Windows 7 compatibility is excellent, allowing safe trialing of the new platform features. ■

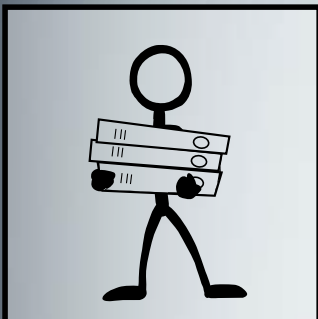
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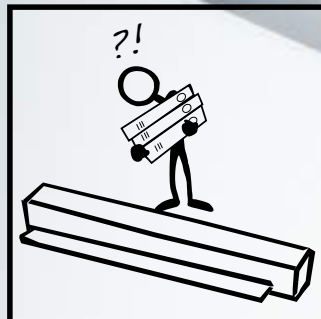
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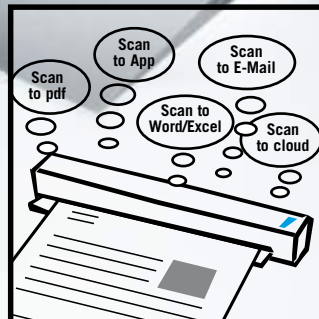
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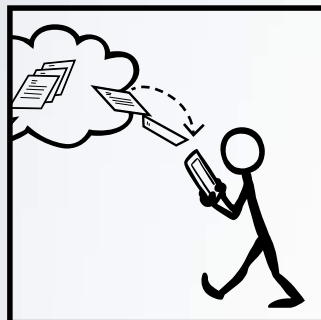
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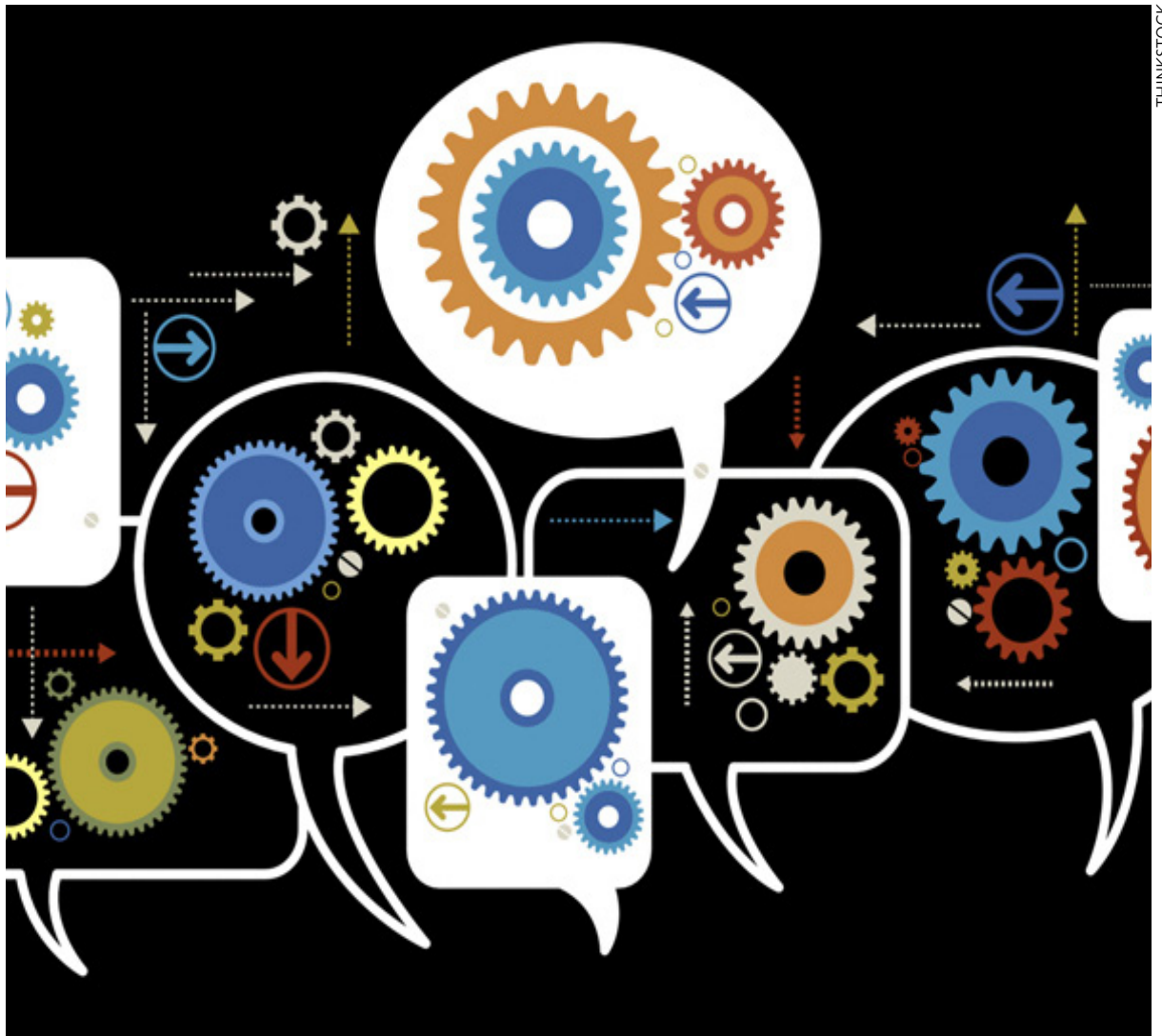
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M2M TECHNOLOGY USHERS IN THE AGE OF TOTAL CONNECTION

Machine-to-machine (M2M) communications is transforming the world into one where everything and everyone is networked. Kathleen Hall reports

"I'm friends with my toaster on Facebook and my laundry sends me a message to tell me when it has dried," says Jari Arkko, internet architecture expert at Ericsson Research.

Arkko is showcasing his "connected home" at the company's research labs in Stockholm. He says the technology for ubiquitous connected devices is already here.

"When I check my incoming events feed I see things like the laundry is dry and my toaster is toasting," he says. Sensors in the room plateau when his washing has finished drying, or his toaster has turned off, which activates an algorithm to notify him on Facebook.

"It is a simple user interface, even though it sounds crazy, it's more natural as it provides the opportunity to have information in one go."

The number of connected devices is set to double over the next eight years to 50 billion globally, according to the trade body for mobile operators GSMA and Machina Research. If these estimates are correct, communication between these connected devices will explode.

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Arkko says that, in the future, consumers and businesses will have fully networked environments using social media platforms as the common interface: "We now have the capability to use the networks we have and the IP to communicate where we need to go," he says.

"Social media is not perhaps as widely deployed as it could be. Anything that you need to know and interact with could be represented in this manner, such as the copy machine telling me it's broken and needs to be repaired, to more abstract things.

"There are a lot of programmers that can do web-based applications, using platforms such as Facebook or Google. It is surprisingly easy. Now any school kid with programming expertise can link things up. I have 200 ports in my house, but that is not enough for me. I've run out! We are on the brink of the networked society, many of the tools need for building these things are here."

Open source, wireless LANs and next-generation networking tools such as IPv6 will be key in arriving at this point, he says. "The boom will come when people realise the fun we can have with these things."

THE SPREAD OF M2M BY SECTOR

Certain industries are already seeing an uptake in M2M, particularly where regulations are driving adoption.

The UK government has set a target to have 53 million smart meters in homes and business by 2020. Key to this is the use of M2M technology as the meters will communicate with a central datacentre, which then sends messages to the utility companies, which will alert the user about their energy usage.

Smart metering is already widespread in Italy, Sweden and France because of regulatory enforcement.

Ana Tavares Lattibeaudiere, director at GSMA, says the connected automotive sector is another area that will grow fast. In 2014, e-car regulations will start taking effect, where cars will have to automatically send out information about their location after a crash.

Other sectors include the monitoring of chronic diseases such as diabetes. Diabetics who monitor their blood sugar levels can have their results sent straight to their doctor.

Lattibeaudiere says such an automated process would be far more user-friendly: "The problem with email is that it tends to get neglected or lost and doctors often don't have time to look at them." Dan Bieler, principal analyst at Forrester, says there is a difference between the M2M and consumer environment and enterprise.

"From the consumer end it's about having a lot of apps in the home, communicating with

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**JARI ARKKO,
ERICSSON RESEARCH**

M2M TELEMATICS SERVICE FOR TRUCKS AND BUSES

Telematics manufacturer Openmatics is the latest business to sign up to M2M technology, having partnered with Orange to offer telematics services for trucks and buses.

Under the deal the location and status of trucks and buses can be monitored, enabling fleet operators to plan and manage their businesses more efficiently.

Data will be recorded and received by an on-board unit and will be transmitted over the network via a web-supported portal.

Orange Business Services will provide Openmatics' communications infrastructure for data transfer, ordering, activation and tracking through its international M2M centre in Brussels.

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each other and elements of smart grids, such as electric and water meters. This includes applications in healthcare, monitoring heart rates which are linked up to a central database, so doctors can get in touch and inform patients they should have a check-up," says Bieler.

"In the enterprise space there are a number of solutions and metering in the context of facility management. It's being used to monitor areas such the oil industry, measuring holes in pipelines, asset tracking is another big area, as it is being used to track devices in hospitals.

"The range of applications is extremely widespread. It is quite horizontal in nature, being used to monitor, meter, navigate and notify in all sorts of sectors. But having said that, M2M surprisingly is still not a top priority. Our research found only one in 10 sees it as an important area."

One reason for this is that the return on investment is often hard to demonstrate. In austere times the focus of the CIO is often on how to cut costs and reduce headcount: "It's difficult therefore to come up with the required funding," says Bieler.

"In some instances, companies are struggling to define which processes they want to support with that solution. But it is clear that interest is growing."

NETWORK AND CONNECTIVITY ISSUES

One issue for the deployment of M2M is the lack of seamless connectivity for wireless and patchy 3G coverage. The GSMA says spectrum will be crucial in achieving a more networked economy, supported by a sufficiently flexible regulatory environment in the telecoms sector and in other industries. In the next four years the mobile industry will invest \$793bn in expanding the coverage and capabilities of mobile networks, according to GSMA.

Networks provider Ericsson forecasts mobile data traffic will grow tenfold between 2011 and 2016. But even with new spectrum, mobile operators will need to be able to manage the fast-rising tide of traffic on their networks, both to deal with congestion and tailor delivery to specific service requirements, it warns.

Bieler says lots of small bits of data can add up to significant amounts, which can easily be underestimated. Smart metering in itself does not include a huge amount of data, but in theory it involves millions of meters sending information every 15 minutes.

Regular upgrades will have to be part of the broader M2M scenario, he says, raising the question of who should bear that cost. At the moment it looks like it would fall on carriers.

"It will be a combination of developments, additional broadband technology, HTML5 will help and IPv6 of course. Plus the recognition that it can support and enhance business processes. There are a number of possibilities where M2M can play a role, such as automating processes that, in the past, would have been handled by people," he says.

Bieler believes that M2M will eventually become embedded into business processes.

"I don't see one part tipping the move to M2M, but several step changes, such as the 2014 EU regulations for cars that will certainly have a large impact on the automotive sector."

Warren East, CEO of microprocessor company ARM - which manufactures embedded chips for M2M technology - recently told Computer Weekly the initial growth of this market will be slow. "Over the next five years I'm not expecting there to be much take-up - the opportunity will be over the next decade," he says.

Bieler agrees. "In the next five years enterprises will start to see the value in M2M, it will be seen as a necessity and start to become more widespread," he says. ■

**"M2M CAN
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**DAN BIELER,
FORRESTER**

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HOW THE ENTERPRISE CAN REAP THE BENEFITS OF AN APP STORE

Centralising the private distribution of mobile apps for large workforces yields a number of advantages for mobile application management, writes [Linda Tucci](#)

Once enterprises move beyond mobility as a channel for email, contacts and calendaring, and start building applications to mobilise their workforces, CIOs will want to consider launching an enterprise app store.

J Schwan, founder and president of Solstice Consulting, says in-house app stores are similar to the public app stores users are familiar with, but live behind the firewall. They are maintained and owned by corporate IT and offer a way for the department to filter what apps in the public app store are available for use on corporate-owned or employee-owned devices provisioned for corporate use. An enterprise app store also allows IT departments to distribute apps to employees that they may not want competitors seeing, for example, a sales-enablement app.

Beyond access control, Schwan says it is easier to deploy apps from a corporate app store. "There is a lot more control around things like what version of an app you want different

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individuals to have. An example would be a beta or pilot test of users that are going to get the next version of an app before everyone else."

Schwan says the enterprise app store also provides a one-stop shop for the workforce to see which apps really matter for getting their job done and removing the clutter of the abundant other apps in the public domain.

But take-up has been low. According to Schwan the low adoption is due to the relative newness of enterprise app stores: "It is a relatively new concept, but it definitely isn't going to be that new a year from now."

Enterprise app stores belong to an area of technology now called mobile application management, or MAM. Schwan says: "MAM is a pivotal part of mobilising a workforce with apps. Once companies have graduated beyond email, contacts and calendaring and start building apps themselves, an internal mobile app store, or a 'mobile catalogue' as it is sometimes referred to, will definitely come into play."

When deciding whether to deploy an enterprise app store, Schwan says: "It really comes down to the number of applications IT wants to distribute or support; the number of users or devices that IT is dealing with; and the number of groups or segments of users they are supporting."

In his experience, a lot of companies start by dipping their toes into the water and building a single app such as mobilising their CRM for a handful of users in the organisation.

"You probably don't need a full-blown MAM enterprise app store for that. But if you are deploying multiple internal applications (and at some point every enterprise will get there) or looking to support devices in the

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IDEAL MOBILE APPLICATION MANAGEMENT (MAM)

1. Automatically removes apps once a device is de-listed from the MAM or mobile device management system
2. Automatically installs required apps when a device is enrolled. A MAM strategy should enforce the installation of specific apps from the public app stores. If you say: "This device is for corporate use and these 10 apps need to be on the device," a MAM strategy should ensure that, according to J Schwan, founder and president of Solstice Consulting.
3. Integrates with the company's existing enterprise access management system for single sign-on. Users should not have to remember a separate login.
4. Restricts access to pre-installed apps. On a corporate-owned device, IT should restrict staff access to iTunes store or to another public app store app. If a business needs to deploy a particular office productivity app across the company, Apple has volume purchasing programmes, which should integrate with the MAM.

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hundreds or thousands, then a mobile application management strategy is definitely important," Schwan says.

When developing a mobile application management plan, Schwan urges IT departments to manage and deploy apps based on user roles or segments or groups of users. The policy and technology used to implement MAM should distinguish between personally owned devices and corporate-owned devices.

"Certain apps a company produces may be made available on both corporate-owned and personally owned devices, but there are others that may contain more sensitive data or have access to more sensitive services in the datacentre," Schwan says, adding that these should only be allowed on corporate-owned devices.

A common problem CIOs will face is deploying a system that is too complex for users, Schwan warns. "The reality is that CIOs should not try to make life more complicated, so a MAM solution should ideally be coupled with your mobile device management (MDM) solution," he says.

"Most CIOs have started to, or already have MDMs in place. MDMs just allow for the provisioning of the devices that you are going to allow to be on the corporate network."

According to Schwan, MAM should be part of MDM. But he often sees situations where the CIO is looking at MDM without considering the MAM component. It is MAM that actually allows a mobile device to be used in business.

"We've walked into clients that have purchased an MDM solution with an inadequate MAM solution and once the business starts building apps and wanting to put different apps on their devices, they have to reevaluate their entire strategy and potentially pull out the MDM they have because the MDM supports IT security's needs but it is not supporting the business's needs," he says.

Schwan believes the IT department is in a strong negotiating position if it has deployed MDM without a corporate app store, as the suppliers are frantically building out MAM technology.

"You just need to understand what the supplier's roadmap is, what – if any – additional costs are going to come with enabling that functionality when you're ready to turn it on. Just make sure that the MAM strategy is in alignment with your business mobility strategy, and as long as you see those intersecting in the near future, then you can probably stick with what you've got," Schwan says.

There should not be many technical challenges deploying an enterprise app store, since it is really about IT configuration, but Schwan urges CIOs to take care when assessing the technology.

He says: "The biggest problem for CIOs is that the MDM and the MAM landscape is really fragmented right now and evolving quickly. There are a lot of decisions to make in figuring out what the best solution is for your business."

Once the appropriate solution is selected, the biggest challenge is often around setting policy: "When you get down to it, companies need to decide, out of the 500,000 apps in the app stores, which apps are they going to allow on corporate-owned devices? Everyone is going to come to the table with their favourites," Schwan says.

But IT really only needs a core list of 10 or 15 apps that can then be standardised and available through the enterprise app store. ■

**“THE BIGGEST
PROBLEM
FOR CIOs
IS FIGURING
OUT THE BEST
SOLUTION”**



› ENTERPRISE APPS HELP CONSUMER DEVICES
GO CORPORATE

› DEPLOYING ENTERPRISE MOBILE APPLICATIONS

This article first appeared on Computer Weekly's sister title, SearchCIO

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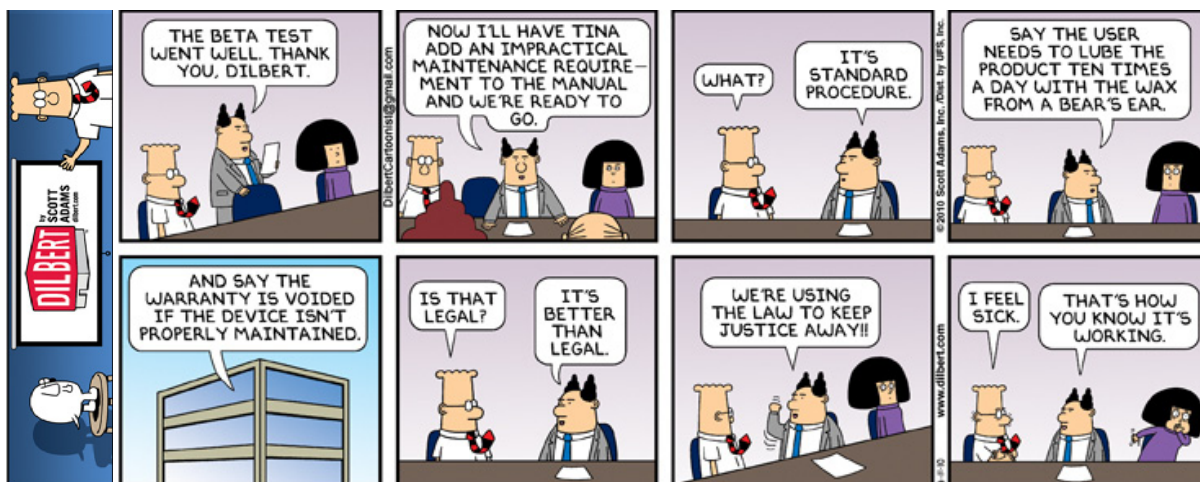
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It's all in the flick of a wrist

We have all seen enough *Minority Report* films or got over-excited playing Nintendo Wii to dream of the day when we can control technology through gesture alone.

Yes, there have been some attempts with the likes of Kinect, but nothing to really reassure us we have full control of our technology merely through our movements.

Now, research from Newcastle University and Microsoft Research Cambridge is taking this dream a step further to reality.

It has created a sensor one can wear around the wrist which produces a 3D

model of your hand, mapping finger movements and allowing you to move and control any piece of linked up technology with gestures.

Because the sensor is on your wrist, it is unlike current technology where you must be in direct range of a sensor normally placed on the TV, meaning you could leave the house with this attachment and still be able to control things on the move.

The research around the device is being focused on linking up with mobile phones and tablets, but what would you like to be able to control with gestures? ■

HEAVY METAL HEADPHONES

As we are sure you know, we have three true loves over here at Downtime; business, technology and heavy metal.

OK, maybe not all of us are enamoured with the last one but there is still something special when all three come together on a gloomy afternoon in central London.

Recently this dream became reality when the rock and tech press joined together in a basement of a swanky hotel to be introduced to Motörhead phones.

The rock band, headed by Lemmy, and famous for the *Ace of Spades* has moved on from just providing music, gigs and wine (it's true, the band has launched its own Shiraz and rosé) to bring headphones specifically designed to listen to heavy music to market.

There are three over-the-head sets named the Motörizer, Iron Fist and Bomber, from £79.99 to £129.99 and all featuring less-than-metal, velvet ear cushions. There are also two inner-ear sets called the Overkill and Trigger made entirely of metal, costing between £39.99 and £49.99.

As the loudest band in the world, it is amazing any of Motörhead can still hear themselves think, let alone play tunes on headphones, but they seem to love them and we wouldn't mind sporting these while trotting around next summer's festivals.

