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DATAWATCH

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The Editor's Chair

I am now firmly out of the editor's chair but Annabel, our new editor, has kindly invited me to say a few words about the 'new look Datawatch', (I won't use the term 'New Datawatch' because of the political connotations!)

The magazine that you are reading is the culmination of two years of intensive effort, most of it dedicated to turning around the finances, from a £6,000 per annum loss to a £500 per annum profit last year. It has also been necessary to establish regular publication dates and deal with all that entails in terms of sourcing a regular supply of copy to fill 28 pages every 12 weeks. Nancy and I have also looked long and hard at our production process which was antiquated and primitive. We examined many options to improve this and, following the production of a business case, the Chapter Committee agreed to the purchase of 'Quark Express'. This is a 'high end' desktop publishing system used extensively in the printing and pre-press design industries. It offers features which are ideally suited to the production of magazines such as 'Datawatch'. It enables us to improve print quality by permitting output direct to high resolution film. This gives us significant flexibility and cost efficiency in production. We have made use of the new process for the first time with this edition.

You will notice that we have stopped calling Datawatch a 'newsletter'. This is because that function is now well served by The Mailshot.

Datawatch still has a long way

to go to become the magazine that Editorial Board is aiming for but we are well on the way.

At Annabel's invitation, I will remain on the editorial board and, as a member of her team, I look forward to helping our new editor steer Datawatch into a bright and exciting future.

Andy Farrington

As Andy has said, he is no longer taking the role of editor, but he will still be part of the team to provide much needed advice and assistance as we continue the hard work that has gone before. In fact the Editorial team remains relatively unchanged, which should make our task of continuing to improve Datawatch easier - it's just the roles that have changed around, and the task of sitting in the Editor's chair has fallen to me. Thanks for leaving the cushion behind, Andy, as the seat is a bit hard. And thank you for the work that you and Nancy have done over the past two years to get the magazine into its present state. We have come a long way, and of course there is further to go, but the editorial team, for whom I get the privilege of being the "front woman" are committed to building on our past achievements. We want Datawatch to be of assistance to the members and so we are more than happy to receive comments and suggestions regarding present or future content. We have a letters page, so get in touch and make your views known so we can make Datawatch better reflect what you want. Here's to the next two years!

Annabel

The Y "Zero" K Problem

Message from: Rome
January 18, 1 B.C.

Dear Cassius,

Are you still working on the Y zero K problem? This change from BC to AD is giving us a lot of headaches and we haven't much time left. I don't know how people will cope with working the wrong way around. Having been working happily downwards forever, now we have to start thinking upwards. You would think that someone would have thought of it earlier and not left it to us to sort out at the last minute.

I spoke to Caesar the other evening. He was livid that Julius hadn't done something about it when he was sorting out the calendar. He said he could see why Brutus turned nasty. We called in the consulting astrologers, but they simply said that continuing downwards using minus BC won't work. As usual, the consultants charged a fortune for doing nothing useful. As for myself, I just can't see the sand in an hourglass flowing upwards.

We have heard that there are 3 wise guys in the east working on the problem, but unfortunately they won't arrive till it's all over. Some say the world will cease to exist at the moment of transition. Anyway we are continuing to work on this blasted Y zero K problem and I will send you a parchment if anything further develops.

Plutonium.

From the President

By Gerry Penfold

Two years ago when I was elected President of the London Chapter, I set a clear, overall objective for the committee: to improve services to members within a sound financial framework. Well, the Treasurer's report will pass the verdict on our finances (which I am pleased to say now look very healthy) and you, the members, will of course pass the verdict on the services you receive. However, let me give you a few highlights from the past year.

Perhaps the most visible activity is the programme of monthly Chapter meetings. The subjects have ranged from Year 2000 and e:commerce to computer fraud and SAP. The attendance at the meetings has regularly been 30-40 members and guests, sometimes with standing room only which is certainly positive feedback in itself. I am grateful to the speakers who have given up their time to share their knowledge and expertise and to KPMG for providing the venue. On a personal note, I also want to thank my secretary, Clare Bird as well as Roli Alatan for liaising with our administrator, Nancy Watt and making sure the arrangements are made and you are all welcomed each month. The committee will shortly be planning the 1999 - 2000 programme of Chapter Meetings, so further feedback and ideas on subjects and speakers, as well as on timing and venue are always welcome. The feedback from the membership survey carried out last

year is already part of our planning for the coming year.

Our publications, *Datawatch* and the *Mailshot* have continued not only as successful ways of communicating with members but as valuable sources of news, information and professional development. Some of you may not know that *Datawatch* is circulated to all three UK Chapters (London, Midlands and Northern) so it reaches parts other magazines can't! A special vote of thanks is due to the editor, Andy Farrington (who is standing down from the committee) and Nancy Watt who together have put in the hard work needed to produce our publications. The quality of their work and the input from the many contributors continues to gain recognition, with *Datawatch* again winning an award from the International Association for "best Newsletter for a large Chapter".

Speaking of large chapters, London is still the largest chapter outside the US, with membership standing at 568. This is a large membership to support, with diverse needs so we are constantly looking to keep in touch. How do we do this? Well, publications, web site and chapter meetings are the main ways the committee make themselves available to members and members can contact the committee again at chapter meetings as well as by telephone and e-mail.

Closely linked to membership is the CISA qualification. Although it is not required for membership, CISA is still the leading IS audit

qualification recognised worldwide. I am very pleased to say that 128 people have registered for the CISA exam this year at the London exam centre and internationally 5800 have registered - a ringing endorsement of the qualification. The London Chapter has again provided a CISA Review Course to help candidates prepare for the exam. Our thanks again go to Archie Watt and BDO Stoy Hayward for delivering the courses again this year. In addition, the international organisation has provided a database of 300 CISA questions via its website (www.isaca.org) to help with those final preparations. For those of you that like statistics, last year 112 out of 143 London candidates were successful, a pass rate of 76% compared to the international pass rate of 55%.

Special Interest Groups (SIGs) continue to be active in the London Chapter. The Networks SIG for example has been meeting since 1997 under the leadership of Bill Hawkins, covering subjects ranging from TCP/IP and encryption to legal issues and PBX security. Our thanks go to Arthur Andersen for continuing to provide the venue for the group which now has some 40 members. The objectives of SIGs are to provide an environment for members to develop their professional expertise, share knowledge and experience and develop practical materials (e.g. articles, guidelines, checklists). Recent SIG initiatives are groups to cover the Internet, Risk and Fraud. If any member is interested in any of these SIGs, please contact John Hunter or Kamal Khan, our SIG co-ordinators. On the international front, ISACA HQ in Rolling Meadows continues to provide valuable support as many of you will know from reading Derek Oliver's article in the last edition of *Datawatch*. Management of membership records and subscriptions as well as the CISA exam by ISACA HQ mean that local chapters can concentrate on serving local members needs. In addition, members have the benefit of publi-

cations (for example the international journal and the bookstore), education and training material and research material all produced via ISACA HQ. *Continued on page 5*

In the past year, the London Chapter has sponsored a research paper on Digital Signatures, contributing \$3,000 to the project. The results will be published by ISACA HQ shortly. Recent international news that is really noteworthy is that Paul Williams of the London Chapter has been elected International President. This is great news and our congratulations go to Paul who continues the line of London Chapter members who support the International Association. In addition, Lynn Lawton of the Northern UK Chapter has been elected a Vice President (just to show London can't have it all its own way!) Congratulations Lynn.

Finally, a few words about the London Chapter committee. There are three committee members retiring this year: Andy Farrington (Publications), Justin Crowhurst (CISA) and Andrew Bolton (Library). On your behalf, I would like to thank them for putting so much into the Association and our profession. On a personal note, they have all been great to work with and will be missed on the committee. However, as one door closes, another opens and there are some new names nominated for the committee who, I am sure will continue the good work and refresh our efforts.

I have certainly enjoyed the past two years as President, working with so many professionals both on the committee and in the wider membership. I hope you will agree that a lot has been achieved. Nevertheless, there are still more interesting and challenging opportunities ahead and next week the new committee will be gathering for an awayday to get started without delay. I am certainly looking forward to continuing as part of the team.

Gerry Penfold

London Chapter Events 1999-2000

The Extended Enterprise

"No man is an island" and neither is a modern enterprise. All kinds of businesses and public sector organisations have embraced networks and distributed computing within the boundaries of their organisations. With the explosion of the internet, business to business e-commerce is becoming easier and cheaper. Links to customers, suppliers and other third parties such as banks or information providers are increasing. Business processes are reaching out into other organisations, not only for transaction processing (e.g. ordering, invoicing, distribution, payments) but also for business planning (e.g. suppliers accessing customers' systems for demand planning or customers accessing suppliers systems for product information).

Technology is also enabling other efficiencies in areas such as procurement through the use of smart cards for example for high volume, low value purchases.

The era of e-commerce and the latest technological developments makes the concept of the Enterprise a reality today. This is a growing challenge for IS Audit and Security professionals, especially as the high performance companies of tomorrow will be exploiting the concept rapidly, challenging our current thinking on IT governance, risk management and control. What sort of enterprise will we be auditing in the next few years? The London Chapter's 1999/2000 programme of events aims to explore this theme and propose some of the answers - so come along and help shape the future!

16 September 1999

The High Performance Co
Gerry Penfold

21 October 1999

BS7799/C:Cure
Derek Oliver

18 November 1999

Development Issues in the
Extended Enterprise
TBA

16 December 1999

Christmas Meeting
Annabel Lane & Andy
Farrington

20 January 2000

Internet Security
TBA

17 February 2000

PKI
Zergo Baltimore

16 March 2000

Digital Signatures
Fred Piper & John Mitchell

20 April 2000

Intrusion Detection
ISS

18 May 2000

AGM &
Penetration Testing
Steve Bailey

15 June 2000

Contingency Planning for
the Extended Enterprise
TBA

All meetings will take place at the offices of KPMG, 8 Salisbury Square, London EC4 commencing at 4.30pm. Meetings are free to members, a charge of £20 will be made to non-members.

Introduction to e-Business

By Judy Altrudo

In this first part of a two part article on E-commerce, Judy Altrudo discusses the background, business models and the legal framework. The second part will appear in the Autumn edition of *Datawatch* and will deal with the technology infrastructure.

In the last year there appears to have been a sudden leap in the global use of e-Commerce (EC). This is especially evident in the US where the traditional shopping season, Christmas last saw an explosive rise in the consumer use of Internet-based

sales. From every conceivable medium, (magazines, bill boards and cable TV), the message was loud and clear; you can acquire any information you need and purchase anything you like on the Internet. This is just the start of things. E-commerce, over the next 10 years, is predicted to grow as fast as the Internet infrastructure has been growing throughout the 90s.

This wave of consumer Internet business is starting to percolate into the UK, where companies such as Tesco, British Midland, and more recently the high street banks have become more proactive in the trading of services, goods and information.

British households are traditionally Europe's leaders in home-PC ownership and are now starting to reap the benefits of the new generation of free ISP services by the likes of BT, the Dixons group and Virgin. On top of this, as technology and connectivity costs continue to drop, a

new generation of computer literates are helping to pull computer and Internet use into the mainstream.

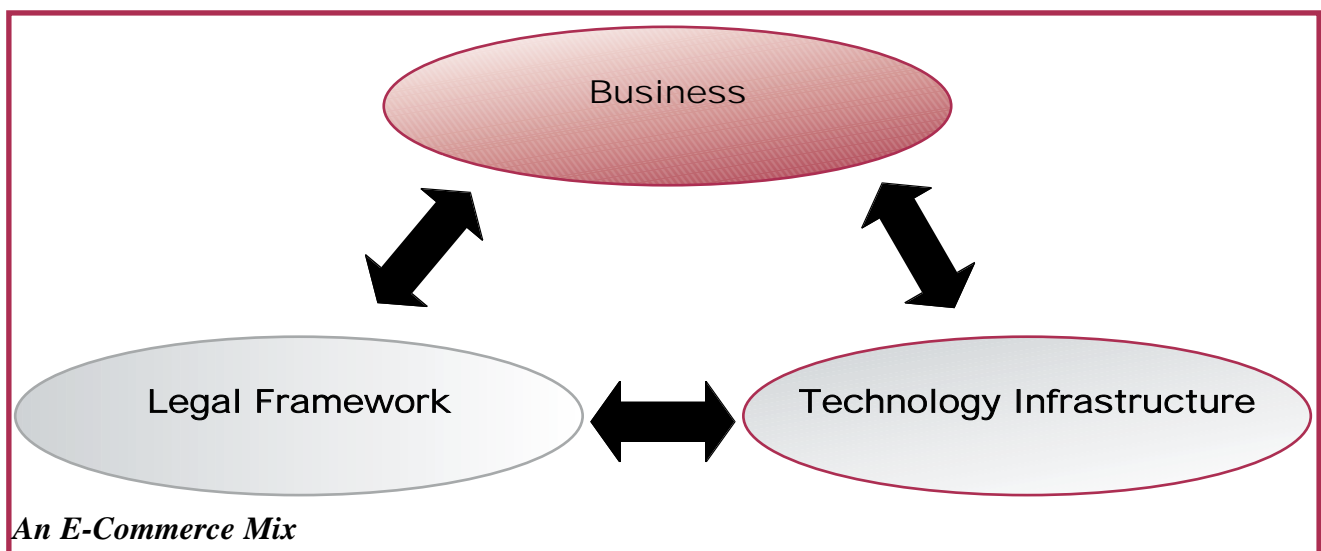
Very soon, computer ownership may not be the barrier that it has been. Although Oracle's touted net-PC seems to have suffered some setbacks the battle is still on, and Digital TV-top sets, and home Internet appliances will soon enable trading and open up the market for armchair shopping even further. An interesting development along these lines is currently taking place in Finland where the high density mobile network is being leveraged. Very soon you'll be able to buy a drink from a vending machine by simply dialing a telephone number from your mobile.

The successful exploitation of e-commerce presupposes the development of a business model that can support this medium which, in many cases, falls outside of the existing in-house expertise. A reason for this might be the interdisciplinary nature of EC - that few people understand. This paper looks at three key areas that support this new business model:

- Business
- Legal Framework
- Technology Infrastructure

Succeeding on the Internet

There are many areas within existing businesses that have been found to be pivotal in a successful deployment of Internet technologies in general, and electronic commerce

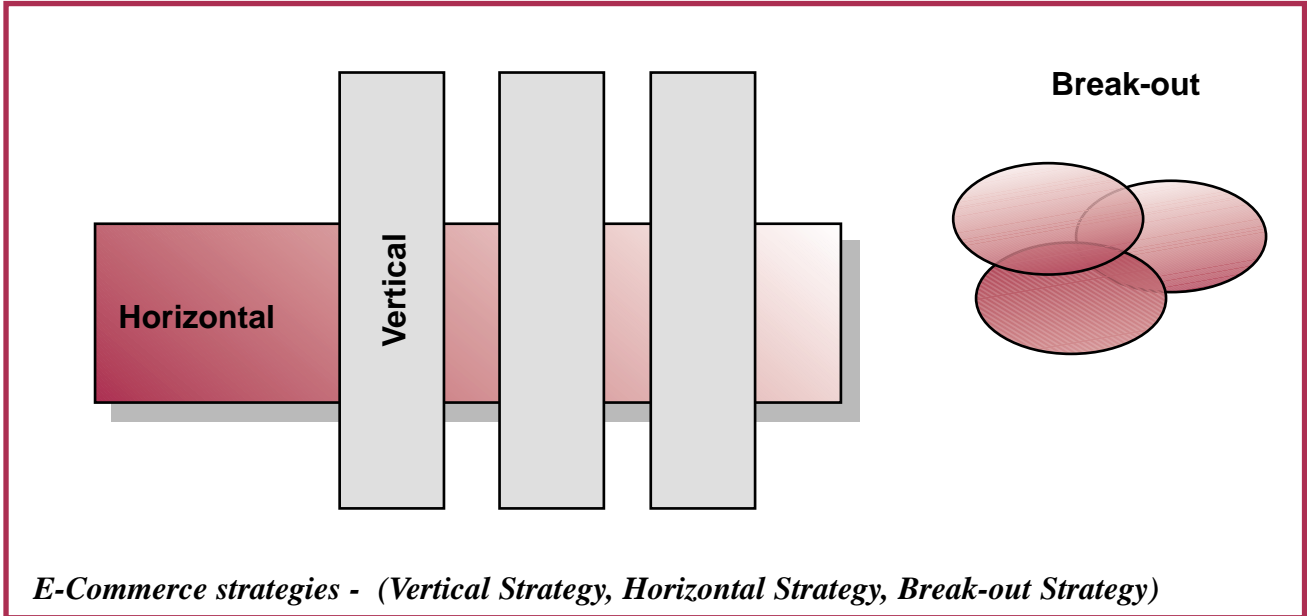


in particular. Some of main ones are:

- Good leadership
- Strong and flexible IT infrastructure
- The ability to climb the learning curve quickly
- Deployment of small specialised and focused teams

ness opportunities. For example, leveraging off existing customer or supplier information in a way that provides a competitive advantage. This approach may also include building partnership-type relationships with suppliers. Competitors

middleman) and entry into a wider market (the Internet reaches more people). An opportunity for better personalisation is being achieved through new web technologies that allow the on-line interface to be cost efficiently customised. This provides



Perhaps the most important, however, is a defined a strategy which is supported by new business models.

Strategies

The most common strategies for EC are:

The **vertical strategy** - where EC development is concentrated at the department level. Here business decisions are autonomous with respect to the rest of the company. This type of strategy is more suitable for a specialist area, where it is not prudent to commit all business functions or where there is no clearly defined EC strategy and the investments can be treated as experimental.

The **horizontal strategy** - which crosses departments at a functional level. This is a more expansive model with the potential advantage of exposing the customer an integrated range of goods and services. This approach is more suitable where the aim is to reduce the cost or enhance existing business process.

The **break-out strategy** - which involves using your existing core competencies to generate new busi-

ness opportunities. For example, collaborating to offer complementary services that are believed to be worth selling.

Whatever the strategy one thing is clear. It is important that it includes information technology. It is important that the technology chosen is one that not only provide a presence on the Internet but also enables EC to integrate within the overall business objectives. The cost of technology can be high. E-commerce is not just about setting up a web site. As well as start-up capital there are running cost such as on-going updates, and the marketing and promotion of a site through Internet ads, and other media outlets. These costs can run into the millions!

New Business Models

E-Commerce is changing the traditional linear supply chain model by providing direct routes in the delivery of goods to the consumers. This generates both opportunities and threats to new and existing businesses.

Opportunities include the reduction in cost (by cutting out

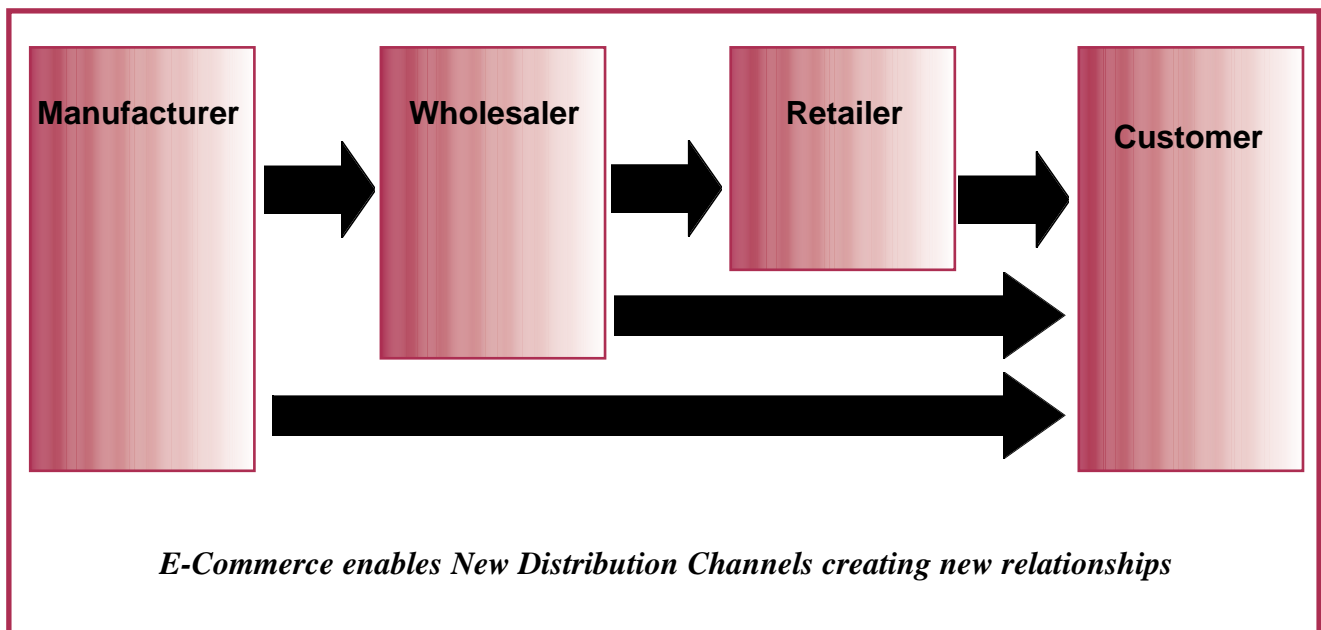
a kind of personal service that was only traditionally achieved by the small retailer but at high prices.

The use of new channels, however, may poses some threats to existing businesses (through the destruction of a company's core competencies or distribution network asset). For example, Apple decided to bypass its retailers in the UK and trade directly with the public. This resulted in a drop in sales.

The success or failure might be related to the value proposition on offer. For example, cinema and home videos can coexist quite well because they offer different things to different people.

Intermediaries

Because the Internet has the potential to bring more goods to more people, the consumer should, in theory, have more choice. However, most of the information on the WWW is disorganised and, therefore, how does a consumer know when the best deal has been found? There is a definite need (and opportunity) to provide new added-value services to both



consumer and businesses and this gap is being filled by a new set of agents called intermediaries. Intermediaries provides a new kind of interface between many buyers and sellers by providing the merchants with the mechanism for providing the right sort of information to their customers. They already exist to some extent. Portals such as Yahoo provides a central place where users can initiate their Internet interaction and start the process of searching for goods and services they want to buy. The newer types of intermediaries are providing other value added services which focus on specialised areas such as payment processing services (between the merchant and consumer); virtual shopping malls (which bring together other malls and on-line catalogues); and TTPs (Trusted Third Parties - that provide secure and trusted services). Others are becoming even more sophisticated by providing part or the whole infrastructure (rather like a facilities management service) so that other companies can concentrate on their core business.

Secure Information Management

It is the customer at the end of the chain that makes the decision to buy or not, and therefore business must convince the customer that it has the ability and motivation to develop and maintain goods and services at a price and quality that is expected.

In order to remain competitive, there is a continuous process in which businesses try to either reinvent themselves, or reinforce their position in the market in order to stave off the competition. This invariably attracts fraudulent opportunists who, according to a recent survey by the US Department of Commerce, are able to generate a disproportionate widespread distrust amongst consumers in part due to the low entry and exit costs associated with setting up an electronic business.

Trust

A major way in which electronic commerce differs from more traditional practices is the way in which the familiar element of a close physical interaction between customer and seller is now replaced by a much more anonymous transaction. An issue that business owners need to bear in mind is the lack of trust. Research has found that trust is most readily found when both parties share similar backgrounds (such as cultural, social or legal). The implications to the business is that although they may be accessing a wider market they may not acquire a wider customer base and increased sales. It is important, therefore, that a marketing strategy is devised to ensure that opportunities are not missed and expected return on investment is achieved. Trust can, however, be destroyed. For instance through

the obvious action of fraud, or by differential demographic pricing and preferential treatment of customers. The problem with the latter being that customers lose faith if they ever find out about it. The level of trust is also related to the perceived level of risk. For instance in this new business environment consumers may need to be convinced that they will receive the right goods, and if they're unhappy, that there is an effective returns policy. Business controls must, therefore, address, the protection of consumer rights.

Fraud

As with all unregulated enterprises, the Internet attracts opportunists and unscrupulous profiteers who seek to defraud unwitting customers. There have been a number of cases of Internet businesses misleading, or giving false credentials in order to give the customer a false sense of security. The Internet Fraud Watch, (sponsored by a US consumer group) receives approximately 100 fraud reports per month.

Some of the more renowned cases are :

Pyramid schemes/Chain letters - The Internet provides a cheap way of communicating though electronic mail. This enables unsolicited Junk mail to be sent many people quickly. In the pyramid scheme a letter is sent to a person, asking them to pay some

money to the top person on a list, then to put their name on the list and send it out 10 or 20 friends.

Pump and Dump - By aggressively promoting and generally hyping company stock /shares, the price can be artificially inflated and sold immediately afterwards.

Sexygirls.com scam - In this case, people were offered free pornographic pictures of girls. And yes no money was exchanged and the pictures were received. However, the user's PC was disconnected from the web site and reconnected to a site in another country. This generated higher costs telephone bills; the profits of which were shared between the telephone company website owners.

Legal Framework

In view of the above, there is a need for a legal framework to overcome these issues and generate the trust that is needed for a wide-scale electronic market to survive. The UK Government is actively promoting electronic commerce. It has its own target of achieving 25% of its dealings with the public through electronic means by 2002. In order to generate trust within this new market the UK Government is in the process of developing new laws.

UK EC Bill

The UK Electronic Bill is one of the first steps that the Government is taking. It is still in the initial phases of writing and consultation (which is being handled by the Department of Trade Industry). Its development is aligned to European Union directives such as the Electronic Signatures and Electronic Commerce Directives. These directives cover (amongst other things) the legal recognition of electronic signature, the promotion of electronic signatures through CA (Certification Authorities), rules of business establishment, commercial communications, legal validity of

electronic contracts and the liability of intermediaries (such as clarifying responsibilities for ISP, telecommunication service providers and others). Its main proposals are to:

- ◆ promote the set up of a voluntary licensing scheme for CA (based on some criteria which is yet to be defined);
- ◆ be "technology neutral" (that is

E-commerce, over the next 10 years, is predicted to grow as fast as the Internet infrastructure has been growing throughout the 90s.

not to discriminate between traditional and electronic ways of doing business). Currently in some circumstances there is doubt whether a signature can be met legally using an electronic signature. The current requirement for information to be written may be clearer and in these circumstances a digital signature cannot be used. Other areas E.g.. births, marriages and deaths would require further debate before digital signatures could be deemed to be legal;

- ◆ provide for the for voluntary licensing of TSP (Trust Service Providers) for intermediaries providing confidentiality services. Licensing will ensure minimum standards of quality and service and high levels of trust and will distinguish between providers of signatures services and providers of confidentiality services. . The reasons for voluntary is because in existing closed environments, this type of trust already exists;

- ◆ differentiate between the provision of electronic signatures and encryption services. A licensed CA will not, therefore, be allowed to store the private key of a key pair which is used for electronic signatures purposes only. Its protection will be the responsibility of the owner, This will help prevent repudiation;

- ◆ allow lawful access to encryp-

tion keys or plain text messages versions in recognition of a country's interest in law enforcement, national security and encryption abuse. A warrant or court order will be needed;

- ◆ not to mandate third party key recovery and key escrow for licensing TSP confidentiality services. However, they will be encouraged for law enforcement agency use and maintain quick recovery service levels;

- ◆ voluntary licensing for KRA (Key Recovery Agents - where the public key of an agent is incorporated in an encryption product). This allows users to recover their data by presenting an encrypted part of the

message to the KRA;

- ◆ the licensing authority to be OFTEL.

Intellectual Property (IP) and Taxation

As well as promoting trust there are other reasons for legal intervention. For instance the protection of electronic goods (which already has legal provision) and taxation where the complex international market is going to provide one of the biggest challenges yet.

Unlawful copying of information is probably the most common violation. It could be interpreted that we are all breaking this law every time we use the WWW since it uses requires information to be copied from a central web server to the local PC (either in the PC's memory stack or in local files where quickly accessible copies are held). Also, the mere fact that electronic data can be repeatedly copied with ease and without deterioration and detection, this media is inherently susceptible to abuse.

There are a number of legal provisions for the protection of IP:

Copyright protection falls under the Copyright Design and Patents Act 1984) and is easy to apply (since it automatically takes effect on the creation of the work) without the need

to formally register it and it is free;

Patent Law is concerned with the new inventions such as a new type of computer hardware. An application must be made to the Patent Office and, if granted, can be renewed for up to 20 years. The invention must be new and be capable of industrial application;

Law of Confidence protects information. It is derived almost entirely from case law as opposed to statutes. It protects trade secrets, know-how, client and contacts lists, personal information and ideas not yet expressed in a tangible form (for example, an idea for a new computer program). The information must be of a confidential nature (a case is weakened if the information falls into the public domain); and

Trade Marks are usually in a form of a symbol or name which is distinctive and graphical. They are registered in respect of goods or services and are important because they are associated with the success of product and represent brand, reputation and goodwill and thus have a commercial value.

Taxation is generating all sorts of concerns in the electronic market. These issues are being addressed at an international level with the Organisation for Economic Cooperation and Development (OECD) facilitating. At an OECD Ministerial Conference last October, Governments and businesses agreed on the principles for a global taxation system. However the participants have yet to come up with clear strategies for implementation them.

The reasons for taxation concern and interest by senior officials is probably to do with the difficulties in the tracking and monitoring of commercial activities that the electronic environment presents.

The Internet provides just another route for trading just like the Silk Roads of China did in the 2nd century BC and the shipping lanes did in 7th century AD. Those routes also required new laws and controls to ensure that taxes were paid. The silk trade was subject to border controls

and taxes between the far east and Europe. The shipping laws reduced the number of border controls that needed to be crossed to a single control at the destination port. When Admiralty law was introduced it enabled ship and trading owners to choose the country in which to register and this proved most convenient for taxation purposes.

In many ways, EC is a further development of the shipping lanes where knowledge goods travel across an Internet no-mans-land. Companies can potentially trade in tax-efficient jurisdictions (without actually needing to be physically present).

The types of taxation issues that new laws will need to address include jurisdiction (which countries laws will apply); identity (so that revenue authorities maintain their ability to identify tax payers); double taxation (international agreements to guard against, consumers being charged tax at both ends of the transaction); non-taxation (digital currency may provide anonymity which hinders a transaction's traceability); and levies and collection (it might be easier to collect all tax centrally e.g. income taxes, or business profits and/or it might be difficult to levy consumption tax when it is only payable in the country where the good is consumed).

Judy Altrudo is an information systems auditor at NatWest and during the past 18 months has specialised in Internet and e-commerce systems. Prior to her auditing career she was a security consultant where she was involved in Internet and distributed security risk analysis and solution design. Judy holds an honours degree in computer science, is CISA qualified, a member of the British Computer Society and a Chartered Engineer.

NewsBYTES Extra

999 Out for 2000

A depressing report issued in May by the Government's millennium watchdog, Action 2000, paints a bleak picture of UK emergency services. The report names eight police forces and fire brigades which it says have failed to adequately address the Year 2000 issue. The forces which have generated the greatest concern are The Met, Avon and Somerset, Devon and Cornwall, Cheshire, Hampshire and Warwickshire. Also named as being at serious risk are the Sussex police and the national Criminal Intelligence Unit. The report states that these forces now have, "little chance of rectifying problems". This means that emergency radios, closed circuit television systems, crowd monitoring and traffic control systems could all be affected as could police command and control systems.

Ian Hugo, the author of the report, has pulled no punches in stating that only 13 of the forces examined in the national Audit had conducted any sort of audit programme to determine the equipment that could be at risk. The report criticises local authorities as being well behind required benchmarks and states that many have, "done virtually nothing".

The report goes on to criticise the unnecessary Whitehall secrecy over the issue masquerading as 'commercial sensitivity' for stifling any release of information on the issue. This makes it extremely difficult to 'name and shame' according to government policy on the issue or conduct independent audits.

ISACA DIRECTORY

International:

Voice..... 001 847 253 1545

Fax..... 001 847 253 1443

Web www.isaca.org

London:

Tel/Fax: 01487 815705

Web <http://members.aol.com/isacalondn/>

NETWATCH

By Annabel Lane, Nestle Plc

Hello and welcome to another edition of Netwatch. As you know I try to keep up with developments and changes to the websites visited in the past, as well as introducing new ones that may be of interest.

Audit sites:

With that in mind the first site in this issue is the new site from the Institute of Internal Auditors in the UK, which was officially relaunched on 18th April as a new revamped resource for internal auditors and can be found at www.iaa.org.uk. The IIA UK new site has a profes-



sional, outer space type look to it. Is it just me or does the homepage make anyone else think of a Pink Floyd album? It provides the visitor with several major site areas to follow.

The "About the IIA" area speaks for itself, giving a little of the organisation's history and rationale - there's a "what is Internal Auditing" in case you didn't know or wanted an official version to use when being introduced to people at parties. They divide it into primary and secondary

roles too. It also links through to some information on QiCA, their computer audit qualification - what's in the syllabus and what experience you need to attain it.

The News area contains press releases - for example there is an IIA reaction to the Turnbull report and how they feel it fits in with the IIA's view on control; plus diary dates, mainly conferences and district meetings.

Services again links through to qualifications, training courses and details on examination- timetables, etc should you be convinced by now to add QiCA to your CISA qualification.

Products - books is especially interesting as it has a search engine in it which you use to pin point books of interest, eg there are books in the database on auditing UNIX, Novell, VME, plus many others.

There are also contacts, benefits of becoming an IIA member and a links site, leading to the IIA site (US), a few district society sites and the IAWWW (the internal Auditing World Wide Web)

<http://www.methodware.com/links.html>

I don't know if anyone's looked into this after it made the charts last issue, but I promised then that I'd go back into it and give you a bit more direction and detail as it's a new entry and basically a big link site. Some of the more interesting and esoteric sites it points to:

ACL: Audit Central: [audit2.htm](#)

As well as yet more links, this

site, sponsored by ACL which I am sure many of us use, has hot audit sites of the month (though this months is the Accountants Ledger, an online magazine for accountants. There are press releases too for those of us who are ACL users, like the new release for Windows Version 5. There's also an auditors' reading room, jointly sponsored by ACL and Amazon, though the ordering isn't yet fully automated.

Accounting and Audit Resources: <http://www.disastercenter.com/audit.htm>

The web site appears to be run by the Disaster Centre and opens up with a year 2000 link site which even has a link to a Y2k page for women as well as to reports from various industries; Insurance, Maritime, Postal Service, etc - useful if you are working in those areas. The home page of the site makes no apology for the fact that it is directing this information on disasters at auditors. As it says, this reflects the fact that auditors are, and will increasingly be, called upon to inspect business disaster recovery plans. Another link worth following is that to ABR's DRP manual (in the main text on the right of the screen) which lists the three goals of Business Recovery Planning and disaster management.

Out of the sites listed on the left of the home page I particularly liked the site security handbook which is a guide to setting computer security policies and procedures and concentrates on IT security risks. It would be useful for a review of security on a computer using site, especially to spark off an auditor's thoughts.

Aetna Internal Audit Department: <http://www.aetna.com/audit/>

This is quite an interesting site as it gives an insight (no pun intended!) into another audit department. The home page is set up as an auditor's desk and clicking on different parts of it will take you to different areas such as quotes (comments about enthusiasm, management and change - "If you don't like where you are change it - you're not a tree!"); the rationale of

the department and what it is trying to achieve. Even the auditees - oops sorry, customers - seem to have nice things to say. Clicking on the drawer marked workplans leads you onto



some audit programmes for areas such as Disaster Back up and Business Recovery, a LAN review and UNIX. The next drawer down deals with their audit methodology and how they analyse and test risks.

IDEA:

<http://www.cica.ca/idea/index.htm>

Okay hands up who has used IDEA. Hmm, that many of you eh? If I have the ACL site in here, I have to be fair, don't I?! Well here's a site exclusively devoted to this interrogation tool. If you want to know who to contact for support, read the latest newsletter or download add ins and even IDEA screensavers (tell the Information Security Officer the Editor put that bit in!) this is the place for you. Associated with the site is a "knowledge base", maintained by Howarth Software Services, containing FAQs, Hints and Tips, IDEA scripts and many other items.

The IT Audit Web site:

<http://www.itaudit.org/>

Run by the IIA, this site consists chiefly of an IT audit forum on which you'll find articles on how to be a better IT Auditor, risk management, Year 2000, that kind of thing. There's also a reference library which you can use to get links to other sites by subject - for example security, standards, systems development - and that's only some of the entries! It is designed, it says, to be the premier information technology resource for

auditors. And although it's run by the IIA you don't need to be a member to subscribe.

Control Self Assessment Resource Centre:

<http://www.teleport.com/~jhw/csa/>

Whether you're using this or want to find out a bit more - you could do worse than look here. It of course has links to other sites on the same subject, for example there's one run by KPMG, and also one under the auspices of

the IIA. Theirs takes the form of a CSA centre and they even offer a qualification in Control Self Assessment (or Control Risk Self Assessment as it's sometimes called.) And you can wake up now, you techies as there is also software to download to facilitate your CSA process.

WWW.securityportal.com

For the more paranoid among you, this is a good place to go for the hot news on computer security related issues. The site features a regularly refreshed news centre and a research centre where, among other things, you can learn how to secure a LINUX system should you feel so inclined. You could also access the latest RFCs, read white papers on firewall configuration, learn about the Corel Galadrial Virus add the news service to your existing channels. If you have a particular problem you can access the security search engine. Out of curiosity, I typed in 'MVS' and got a list of half a dozen or so archived articles on various aspects of MVS security. The funding for the site is gleaned from the various code scribblers who are all anxious to sell you their wares although the banner ads are not intrusive and a separate directory guides you through lists of 'consultants' and vendors.

As ever, I haven't covered as much cyberspace as I intended, but there's so much out there. I have

surfed into some particularly interesting sites on hacking. I'll discuss some of these next time.

In case any of you haven't heard, several large companies have a radical new solution for the Year 2000 issue that also means they can slash their IT budgets drastically. The goal is to remove all computers from the desktop by Jan, 2000. Instead, everyone will be provided with an Etch-A-Sketch. There are many sound reasons for doing this:

1. No Y2K problems
2. No technical glitches, keeping work from being done.
3. No more wasted time reading and writing emails.
4. Substantial hardware cost savings.

Frequently Asked Questions from the Etch-A-Sketch Help Desk:

Q: My Etch-A-Sketch has all of these funny little lines all over the screen. What do I do?

A: Pick it up and shake it

Q: How do I turn my Etch-A-Sketch off?

A: Pick it up and shake it.

Q: What's the shortcut for Undo?

A: Pick it up and shake it.

Q: How do I create a New Document window?

A: Pick it up and shake it.

Q: How do I set the background and foreground to the same colour?

A: Pick it up and shake it.

Q: What is the proper procedure for rebooting my Etch-A-Sketch?

A: Pick it up and shake it.

Q: How do I delete a document on my Etch-A-Sketch?

A: Pick it up and shake it.

Q: How do I save my Etch-A-Sketch document?

A: Don't shake it.

I am looking forward to getting mine!

INTERNET RESOURCE LIST

WEB SITES:

<http://members.aol.com/isacalondn/>
<http://www.isaca.org>
<http://www.cert.org>
<http://www.auditnet.org>
<http://ciac.llnl.gov/ciac>
<http://www.microsoft.com>
<http://www.alw.nih.gov/security>
<http://spam.abuse.net>
<http://www.cauce.org>
<http://www.acua.org/usu./main.htm>
<http://www.cl.cam.ac.uk/spam>
<http://www.rain.org/~lonestar/audit.htm>
<http://www.rain.org/~lonestar/kits.htm>
<http://www.iki.fi/liw/mailfilter.html>
<http://.ntresearch.com>
http://csrc.nist.gov/secpubs/unix_security_checklist.txt
<http://year2000.com/cgi-bin/y2k/year2000.cgi>
<http://www.bcs.org.uk>
<http://www.auditserve.com/frmain.htm>
<http://www.coactiveconnection.com>
<http://www.mc2consulting.com>
<http://www/2600.com/mindex.html>
<http://2000.jbaworld.com/>
<http://www.year2000.co.uk/year2000.htm>
<http://www.open.gov.uk/bug2000/>
<http://www.ibm.com/IBM/year2000/>
<http://pw2.netcom.com/~helliott/00.htm>
<http://www.anao.gov.au/reports.html>
<http://www.year2000.com/archive/NFaudit.html>
<http://www.year2000.unt.edu>

<http://www.year2000.ca.gov/Summit/Contingency/Y2Klinks.asp>
<http://www.theia.org>
<http://www.iaa.org.uk>
<http://www.sophos.com/virusinfo/>
<http://www.drsolomon.com/vircen/>
<http://www.ntsecurity.net/>
<http://www.csrs.nist.gov/welcome/html>
<http://www.gallaudet.edu/~auditweb/kits.html>
<http://www.gallaudet.edu/~auditweb/index.html>
<http://www.year2000.ca.gov/Summit/Contingency/Y2Klinks.asp>
<http://www.methodware.com/links.html>
<http://www.first.org>
<http://www.y2kinfo.com/>
<http://www.acl.com/audit/audit2.htm>
<http://www.disastercenter.com/audit.htm>
<http://www.cica.ca/idea/index.htm>
<http://www.itaudit.org/>
<http://www.teleport.com/~jhw/csa/>
<http://.securityportal.com>

NEWSGROUPS

[comp.security.announce](#)
[comp.security.firewalls](#)
[comp.security.misc](#)
[comp.databases.oracle.misc](#)
[comp.databases.oracle.server](#)
[comp.unix.unixware.misc](#)
[alt.business.internal-audit](#)
[comp.os.ms-windows.nt.admin](#)

Linkages

By Puzz

The answer to each clue is a word which links with each of the three words listed. This word may come at the beginning (e.g. ODD linked with BALL, FELLOW and SOCKS), at the end (e.g. VILLA linked with ROMAN, ASTON and HOLIDAY), or a mixture of the two (e.g. AGE linked with BOND, BRONZE and GAP). Once you have solved all the clues, take the first letter of each word and rearrange them to form a phrase well-known to us all. (8,5). Answers on page 28.

- | | | | | |
|-----|--------|--------|---------|-------|
| 1. | LINEN | DOZEN | DANCING | ..... |
| 2. | CENTRE | GIRL | SIGN | ..... |
| 3. | LAP | DAY | TIRED | ..... |
| 4. | STRESS | POP | SHEET | ..... |
| 5. | EASTER | HEAD | BOUND | ..... |
| 6. | WHITE | MAN | PINK | ..... |
| 7. | FARM | SOME | HOLDER | ..... |
| 8. | STRAP | LEG | BOY | ..... |
| 9. | BLACK | ION | HOT | ..... |
| 10. | HEN | BOARD | GRAND | ..... |
| 11. | DANCE | COWARD | CAP | ..... |
| 12. | FAR | WIND | END | ..... |
| 13. | BEAT | END | CENTRE | ..... |

Data Warehousing - Part II

By Charles Mansour, CISA

What's not so exciting about Data Warehouses?

Whilst there have been some outstanding successes claimed as a result of installing a Data Warehouse, there have been many cases reported where the large outlay has not been repaid. This is largely because companies have tended to bite off more than they can chew, installing an enterprise wide solution where a series of Data Marts would probably have suited them better.

How do they work?

At a high level, Data Warehouses take data from various systems, iron out data inconsistencies by 'cleaning' data items, and storing them in a way that is meaningful to data warehouse users, who extract information of value to them.

In a bit more detail (see Figure 2)

Data used by application systems is collected by the Data Warehouse application from Operational Databases. It is then 'cleaned' and merged with other data in a way that is meaningful and useful to the data warehouse user. For marketing purposes, time is usually not vitally important in governing the data collection effort, but where a data warehouse is being relied on to supply up to date Executive information, it is critical for it to be collected promptly. An important decision that firms have to make is about the quality of data that they will find acceptable to store in their data repositories.

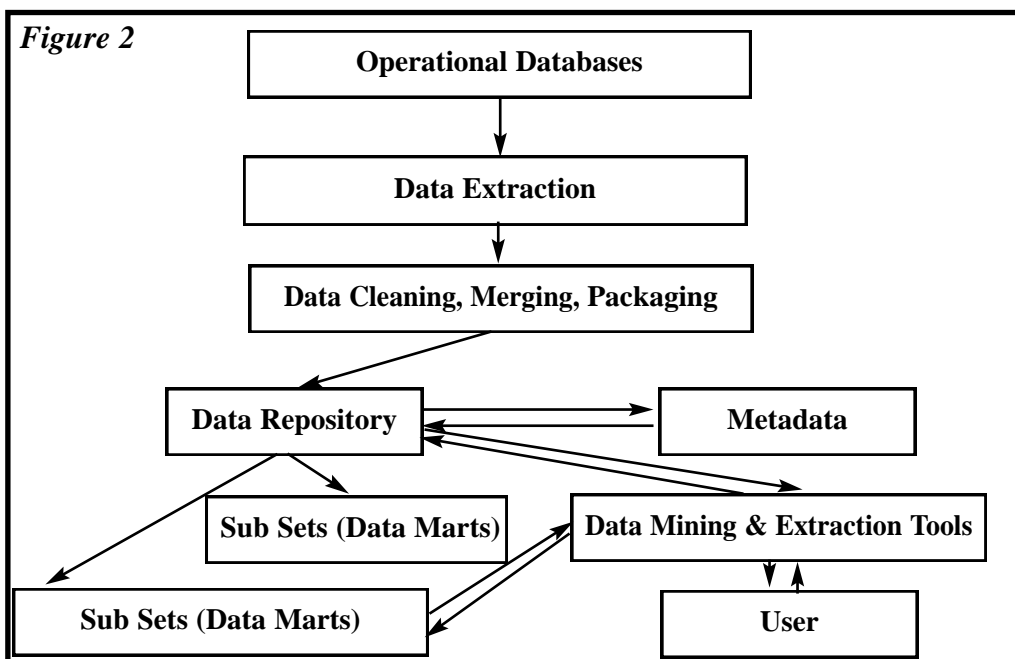
Data is 'packaged' so that it can be added to the data repository in an appropriate format. Data Warehouses have to be administered, usually by a Data administrator, who is responsible for controlling the overall data

resource. This role should be separate from IT and report to Senior Business Management. Users may need vastly differing types of information, which may result in storing faxes, scanned letters, photographs, geographical information, satellite imagery, voice and video data, and these all have to be stored and communicate with each other.

Data can be extracted by users from the either directly from the data warehouse into a series of data marts (see above), then manipulated so that business can produce meaningful information that will drive business decisions. An important part of the Data Warehouse is Meta Data (data about the data in the Data Warehouse), which is like a Data Dictionary in an operational database. As mentioned above, the tools used by users for extraction of data can include some extremely sophisticated Data Mining techniques, and incorporate highly complex and interactive graphics.

A data warehouse system does one thing that databases don't (or aren't supposed to) do. They intentionally create data redundancy. For instance, summary and detailed information can be used for different purposes.

Some Other Things to Know about Data Warehouses



Data Warehousing - The Risks

The main risks associated with Data Warehouses are in the areas of:

Effectiveness:

The relevance, usability and timeliness of the data delivered from the operational databases

Integrity:

The information may not be sufficiently valid, accurate or complete. This is often seen as being the most important risk in Data

Warehousing because major business decisions will hinge on the data within the repository. Risks of loss can also arise if the data is not used appropriately.

Data items merged from operational databases can be inconsistent.

Availability:

The data may not be available to support the business process when it is required. The Data Warehouse may not be recoverable in the event of loss of computing facilities. The greater the amount of corporate reliance placed on the data, the more stringent should be the need to recover promptly.

Efficiency:

Storage arrangements may not strike a balance between the volume of data stored (which can be vast) and the ability of the Data Warehouse to perform efficiently. One of the main conflicts in Data Warehouses is between the technicians, who have to maximise storage and efficiency, and the business, who want to retain as much as information as they can. 'Scope Creep' in Developments as users become more familiar with the system.

Confidentiality:

Sensitive information may not be sufficiently secure. Much the same technical risks arise as in a large database. The Database Administrator, who will define users, allocate passwords and manage access and view privileges, will usually administer security. This aspect is most productively addressed during the systems development stage.

Reliability of Information:

The data may not be appropriate for management to use for its intended purpose. Metadata (see above) which is the data model and the data dictionary for the Data Warehouse, defines all data elements and provides source, transformation, integration, storage, usage relationships and history of each data element.

Why should Auditors be Interested in them?

Data Warehouses have a lot of business information in one place associated with a wide range of tools for obtaining and manipulating that data. On the face of it, an auditor's dream!

There have been arguments made for Data Warehouse information not to be used for audit purposes, primarily because the data held in the Data Warehouse has undergone some form of transformation and cannot be relied on as evidence to support audit conclusions. Philosophically, correct, and in a Data Warehouse that has a high population of 'dirty data', probably true. However, businesses will probably require some degree of integrity and reliability if they are to place reliance on Data Warehouse contents, and the auditor should ascertain this level before considering using its contents.

If an auditor can determine that a Data Warehouse has a high level of content integrity, then there is no reason why its contents cannot be used in support of audit contentions.

How Auditors Should Approach Auditing Data Warehouses?

Speak to the data administrator.

Use the Metadata.

Understand the origin and destination of the information of all the information in the Data Warehouse.

Understand who can and cannot use the Data Warehouse

Audit Plan

Plans will vary from site to site to site, depending on experience, but should broadly follow the main areas of risk outlined above. Some useful questions to ask are:

- ◆ Did all of the data acquisition jobs run?
- ◆ Did the jobs run in the correct sequence?

- ◆ Did we use the correct extract or was it the same data that we processed last month?
- ◆ Did we load all of the transactions that should have been loaded?
- ◆ How many records were deleted due to validation failure?
- ◆ How many records from different systems were merged?
- ◆ Did the count of records and the monetary amount balance?
- ◆ When can the new data in the Data Warehouse be accessed?
- ◆ Why are there differences in operational system and Data Warehouse volumes?
- ◆ What is done to verify that all the data in the Data Warehouse are complete and accurate?
- ◆ Who can access Data Warehouse information?
- ◆ Who monitors access violations?
- ◆ How important is it for the business to recover its Data Warehouse system?
- ◆ How is the balance struck between efficiency and storage?

Useful Places to Look

The Internet is a fruitful source of information about Data Warehousing issues. Some sites worth a visit are;

- <http://www.praxisint.com/abdataw.html>
- <http://www.microtimes.com>
- <http://www.datawarehouse.dci.com/articles/1998/10/20secure.htm>
- <http://www.datawarehouse.com/articles/>

Conclusion

I hope that this has helped you to get a better understanding of what Data Warehousing is about. There isn't really that much different for the enquiring auditor, except that the nature and volumes of information held and the complexity of tools are a magnitude removed from what most auditors have experienced. The application of sound audit principles will get you there every time.

Good luck and happy auditing!

Paul Williams

An interview with London Chapter's first International President Elect

How long have you been a member of ISACA?

18 years. I was a charter member of the London Chapter when it was formed in 1981.

What made you join the ISACA and start a chapter in London?

I was invited to the pre-formation inaugural meeting at the Cafe Royal along with some 50 or 60 other computer auditors. I was so put off by the North American style of over the top presentation that I vowed I would never join. A few days later I got a letter from John Iverson, our first London president to thank me for volunteering to join the Committee! I have never found out who volunteered me but I have had my suspicions!

The ISACA has been going for 30 years, what changes have you seen during this time?

I guess that I have been around for two thirds of this time. Clearly the growth of the Association has been astounding - from a worldwide membership of not much over 5,000 in 1981 to over 20,000 now. It has become a more globally focused organisation with a lesser emphasis on its US origins. We have achieved a degree of maturity and financial stability, and now have proper professional management. At both local and global levels it is now a much more professional organisation with member services that we can all be proud of.

.. and what changes do you foresee?

I hope for continued growth in membership and greater ISACA influence in IT governance matters. It is transitioning from a specialist members' 'club' to a widely respected professional body. This transition brings many challenges for us all. The



main challenge is to preserve and continue to develop all that is good about our current activities whilst continuing to evolve into a broader-range of activities aimed at a global IT governance audience.

What do you see as your 'mission' for the ISACA during your presidential year?

A year is a very short time. All that any president can do is continue with the tasks and challenges initiated by his predecessors and, hopefully begin some new initiatives. We have many strategic challenges which must be managed whilst at the same time continuing to maintain and hopefully improve the services already enjoyed by our current members. However, my main areas of emphasis are likely to include a strengthening of the CISA qualification, further development and influence of COBIT, building the Global Information Repository into a 'one stop' information resource for our members, and encouraging greater member involvement in the affairs of the Association.

How do you see this affecting the general membership?

Our prime intention is to ensure that all of our members obtain maximum value from their membership dues through the range of central and Chapter level services whilst giving them real pride in belonging to a professional body that protects their interests, promotes their career prospects and enhances their value to their companies.

What benefits do you see accrue to members of a local chapter?

It is always surprising to me that by far the greater majority of our members in most Chapters, and I include London in this, take no active involvement whatsoever in local Chapter matters, never even attending a single Chapter event. This is a pity as I believe so much of the value comes from the opportunities to meet and share knowledge and experiences with other members. Members should obtain their benefits both from local level and from the central services, such as publications and conferences. Local Chapter committees work incredibly hard to provide excellent local services and events. It must be dispiriting to them to see relatively so few members actually using these services. London has a membership of around 600. I would hazard a guess that fewer than 100 of these ever participate in local events. I would like to see the Membership Board and the area Presidents' Council Meetings working actively to find ways of encouraging greater local interest and involvement.

What would you like the Association, and local chapters in particular, to do more for members?

Chapters already do a great job in providing local services. We must just

find better ways of encouraging more of our members to take advantage of the services. From the central services point of view we must continue to improve the range and the quality of all of our offerings. I am particularly excited by the potential offered by our new Global Information Repository on our Web site.

... and what would you like the members to do more for the Association and their local chapter?

I would like more to volunteer to get involved both at local and international level. It is always difficult filling all committee and board positions but those who do get involved greatly value the experience. We need also to encourage more members to suggest new initiatives to benefit the membership at large.

The last International President sought to extend membership of ISACA into different sectors. Are you planning to continue this? Which sectors do you see as the most important?

I do intend to continue this. On average an ISACA member joins the Association for just five years. Many move on into other jobs where they do not see ISACA membership as being of direct benefit. Yet we still have much to offer to security specialists, project managers, IT managers and all those interested in IT governance matters. The emphasis on audit is seen as no longer appropriate for many of these members. We are seeking to establish alliances with other relevant bodies as well as extending our services to appeal to a broader membership without diluting our services to the traditional and loyal membership base.

Certification is a growing trend - is the ISACA considering introducing any new forms of certification?

The CISA programme has been one of our greatest successes. It is still building year on year and in a very short time has become the only internationally respected qualification in our field. I understand that we have almost 6,000 candidates registered for

the 1999 exam. This is an incredible result. This momentum will continue but at the same time there are increasing calls for us to consider an advanced qualification for those with greater experience and knowledge. This will be debated fully during my year of office but at present there are no firm plans for any new forms of certification. We are also well aware of the fact that greater competition now exists for professional qualifications in our and related fields. We must make sure that we protect our current global leadership in this area.

Would it be interested in working with other organisations who already administer certification programmes?

This has already started to happen, particularly with accounting /auditing professional bodies where there is a perceived need to provide a qualification in our field. Not surprisingly many of these bodies do not wish to compete with us and see value on finding ways for their members to work towards our qualification.

What issues do you see facing the profession over the next 2 years?

Certainly there will be a greater demand for the skills that our members currently have. There will also be a need for our members to constantly extend their skills and knowledge. As the world evolves into a global electronic commerce economy the potential and the challenges for our members and our profession are far reaching. However we need to build the business skills onto the technical skills that our members are already able to demonstrate through their CISA qualification. We must also ensure that the CISA domains properly cover all aspects of electronic commerce knowledge. Our members must become the prime source of advice and assurance on all e-commerce security, control and governance matters. I will be using my period of office to build on what has already been done and, hopefully, move us further forward towards this goal.

Membership Matters!

This is my last column as Membership Secretary as future columns will be produced by Kamal Khan who has taken responsibility for Membership as a result of my move into the Presidential chair.

The monthly membership roster that I receive from our International office indicates that the membership 'purge' took place at the end of April with non-renewals being removed from our list. This resulted in a net loss of about eighty members, bringing us to just under the magic 600 level. This represents a net loss of 15% of our pre-purge total. This compares very favourably with the international shrinkage of some 25%. The Chapter has grown by over 100% in the last five years and we are now one of the largest Chapters in the World and one that provides an enviable level of service: a monthly newsletter, free monthly meetings, special interest groups and a quarterly Journal. Yes, membership really does matter if you want to remain in the premier league of information security and control!

John Mitchell

The gradual overhaul of corporate governance practice that started with the Cadbury Committee is finally drawing to a close. Proposals published recently by the latest grouping of the great and the good will slot the last piece of the governance jigsaw into place.

While many businesses will feel that yet more guidance on this subject is the last thing they need, these new recommendations create a significant opportunity for companies to add value.

Implemented in the right way, the draft guidance published in April by the Turnbull Committee – as this new group is known – will encourage companies to embed risk management in everything they do. But many businesses will fail to reap the enormous benefits of that change unless their boards of directors take a more serious, informed and high profile approach to IT-related risks.

A bit of history

For anyone not up to speed on the raft of corporate governance guidance that has been issued in the last few years, the need for the Turnbull proposals is a complicated story.

When the Cadbury Committee published its guidance on corporate governance best practice in 1992, its focus was largely on how to ensure that the board remained accountable to shareholders. In 1995, the Greenbury Committee issued guidance which specifically addressed directors' remuneration. The Hampel Committee was then asked to look at what further guidance was necessary and in June 1998, soon after the

that a company's objectives and the environment in which it operates are continually changing. As a result, it suggests a broadly risk-based approach to establishing a sound system of internal control and for reviewing its effectiveness.

The proposals provide guidance that companies can tailor to their individual circumstances, rather than a uniform set of rules that would not be applicable in all cases.

The proposed process for reviewing effectiveness is based on US COSO framework, which will be

familiar to anyone with a background in risk management. Basically, the Turnbull proposals give companies a relatively free hand, allowing the board to emphasise what it considers to be the key risks facing its particular business and the appropriate control infrastructure.

When the board sits down to consider whether the company has a sound system of internal controls,

As a minimum boards would have to disclose that there is an on-going process for identifying, evaluating and managing the company's key risks.

Turnbull says it should consider four key issues: the nature and extent of the risks that the directors regard as acceptable; the threat of these risks becoming a reality; the company's ability to reduce the incidence and impact on the business if the risk actually crystallises; and the costs and

IT risks – will Turnbull wake up the board?

By Andrew Steet and John Machin of KPMG

Hampel report was issued, the 'Combined Code' on Corporate Governance was issued bringing all the existing guidance into one place.

The Combined Code does include one highly controversial recommendation – that directors would have to review the effectiveness of all internal controls, not just internal financial controls. The Code also said that companies must have a "sound system" of internal control, but provided no guidance about what that would entail.

Faced with a wave of protest (in which KPMG played no small part) in December last year the Stock Exchange announced a moratorium – companies would not have to comply with this part of the Code until the Turnbull Committee had provided further guidance.

Turnbull guidance

The Turnbull proposals recognise

benefits related to operating relevant controls.

To help boards recognise what an effective system of internal control looks like, Turnbull then sets out a long list of characteristics grouped into five interrelated components: control environment; risk assessment; control activities; information and communication; and monitoring.

When the board comes to review the effectiveness of the system of control, Turnbull states that it should not rely solely on the monitoring process that ought to be embedded within the company. So it also proposes that the board should receive and review regular reports on internal control from management and/or others qualified to prepare them. There are also specific steps that boards should undertake in order to make their internal control statement in the annual report.

Disclosure

Turnbull proposes “high-level” disclosures that are not dissimilar to the existing disclosures on internal financial controls. However, it stresses that the board should ensure its disclosures do not give a misleading impression. This is positive from a shareholder’s perspective in that it reduces the opportunity for boards to avoid reporting relevant factors which, although not specifically required to be disclosed, could have an impact on the readers’ perceptions.

As a minimum boards would have to disclose that there is an on-going process for identifying, evaluating and managing the company’s key risks that is regularly reviewed by the board; how the board has reviewed the effectiveness of this process; and that they are responsible for the company’s system of internal control and for reviewing its effectiveness.

More bureaucracy...

At KPMG, we welcomed Turnbull as a step forward in highlighting the importance of risk

management to all listed companies. In particular, the guidance is succinct and will assist companies in focussing on their principal risk areas. Many companies will welcome guidance that can be tailored to their individual circumstances rather than prescriptive controls that may not be relevant either to the company or to its shareholders.

Another important acknowledgment is that risk management is best achieved by controls that are embedded into the operations of a company and that this whole issue is too important to be viewed as some add-on function divorced from the management process. The requirement to review these processes each year reinforces this point.

However, in some areas, Turnbull is a disappointment. Directors looking for guidance on the review of internal financial control will find little, if any, new information. And it lacks much needed guidance for the large number of companies not at the forefront of corporate governance. Directors who are less familiar with a risk-based approach to establishing sound internal control will find limited practical help in Turnbull.

But directors who do feel left in the dark will need to sort themselves out fast. When adopted this summer, the Turnbull guidance will apply to all listed companies. As part of the Combined Code, listed companies will have to state in their annual reports whether they have complied with Turnbull’s principles and provisions.

...or adding value?

Essentially, companies can view Turnbull in two ways – as another layer of bureaucracy that can be followed to the letter but not in spirit,

or as a means of adding value.

KPMG believes that Turnbull can add value to the extent that it encourages businesses to embed good risk management in everything they do – this is a positive development because it should make them more agile and better able to respond more quickly to both threats and opportunities.

Fast-food chain McDonalds, for example, added value in the way it responded to the BSE scare. In the short term it offered to serve breakfast all day, which gave customers the option of whether or not to eat British beef. After a few weeks, it was importing enough beef to get back to normal. Perrier, on the other hand, damaged value when it failed to immediately recall all its bottled water as soon as allegations of contamination emerged. And Hoover caused itself severe embarrassment when it failed to anticipate demand for its now infamous free flights offer.

Key challenges

Unfortunately, many IT professionals will regard Turnbull as a missed opportunity. Of the eight people on the committee, not one was an IT professional – and it shows! This is a serious omission, because when the Turnbull Committee decided to emphasise the importance of all controls and risks it had an excellent opportunity to remind boards of the specific dangers of IT-

A survey that KPMG Information Risk Management carried out last year exposed an alarming level of IT-risk complacency.

related risk. Year 2000 aside, this kind of wake-up call is badly needed.

In future, boards will need to disclose whether there is an on-going process for reviewing all risks, which by definition includes IT-related risks, and that it has reviewed the effectiveness of this process. But do boards really understand IT-risks? In our experience, many, if not most, do not.

Of the eight people on the committee, not one was an IT professional – and it shows!

The length of time it took many boards to wake up to the potential damage of the Y2K problem is just one example of this failing. The lack of boardroom and company-wide awareness of IT risks has always been a problem for IT professionals. But now it's a more serious issue.

With so many companies dependent on IT systems for their day to day operations, the potential impact of a simple e-mail virus like Melissa or Chernobyl can be enormous. New technologies have made it very easy for companies to rapidly enter non-traditional markets or work with new business models, such as e-commerce, without fully understanding the risks involved. And the information that a company holds about every aspect of its business and the people with whom it does business is an increasingly valuable asset, which demands and deserves protection.

Alarming complacency

A survey that KPMG Information Risk Management carried out last year exposed an alarming level of IT-risk complacency. We asked companies about the plans they had to recover from an IT systems failure and found that 71% of all organisations had never tested their business unit recovery plan, 38% had never tested their network plan and 25% had never tested their computer systems plan.

A worrying 75% of organisations with an untested network plan stated that the consequences of loss of their network would be either critical or very severe. A third of the respondents to our survey were board directors.

We found similar problems with

Internet use. Over three quarters of respondents had not tested the security of their Internet site and less than half of users and intended users had procedures covering use of the Internet.

Some of the fastest growing organisations in the world are those that have embraced technology and see it as an enabler, an integral part of their value proposition. Those that view it as a cost issue are simply missing the point.

By contrast, the survey found an improvement in the number of organisations taking more traditional security precautions against loss of hardware (through inventories and physical protection) and against damage to software (through virus protection). Does this improvement reflect a better understanding of the risks involved or merely signify quick wins?

In many cases the process for identifying, reviewing and disclosing risks will be dependent on IT systems. When considering whether the internal control process is effective (as Turnbull requires), the board will inevitably have to consider whether their IT system are helping to report risks in the right way and whether they are sufficiently robust. But does the board really understand and question these issues?

If information and communication is a major part of the business and the board is not dealing with IT risks, its governance is very questionable indeed

In our experience, even sophisticated organisations often lack the sort of measures needed to track IT risks and the integrity of their IT systems. Sadly, they do not have the appetite or understanding to deal with these issues because they do not see them as "top-table" issues and that needs to be corrected. Some of the fastest growing organisations in the world are those that have embraced

technology and see it as an enabler, an integral part of their value proposition. Those that view it as a cost issue are simply missing the point.

Turnbull should encourage boards to think again about what are the real risks to the business - hopefully this will be an opportunity to raise awareness of IT risk. In fact, if information and communication is a major part of the business and the board is not dealing with IT risks, its governance is very questionable indeed. But because of the lack of IT-aware input into the Turnbull guidance, this opportunity is buried - and it needs to be made more explicit.

Ultimately, Turnbull may require many companies to look at IT in a different way. Often IT performance is managed and assessed on indicators that are not helpful in terms of internal control issues - sometimes the only benchmark is cost of provision of IT. But a board that has to consider all the risks to the business will need to start asking questions about issues such as the company's vulnerability to hacking and e-mail viruses or even its ability to share and capitalise on its knowledge thus recognising that information is an asset that demands some respect.

Most IT professionals would welcome that sort of change and that sort of respect too. Who knows, Turnbull could result in IT being recognised as an effective enabler of business controls and assessed as generators of added value, rather than just another cost to be controlled and contained.

But what do you think? Has the Board really had its wake up call?

Andrew Steet is Head of UK Internal Audit Services for KPMG

John Machin is Head of UK Information Risk Management for KPMG.

MILLENNIUM NewsBYTES

By GREMLIN

Millennial Madness: Mark 1

While resting in the splendour of the new British Museum reading room and idly thumbing through the archive listings of ancient vellum documents, Gremlin came across this item, circulated to the Royal and Ancient Society of Town Criers.

An atmosphere of panic prevails today throughout Europe as the millennial year 1000 approaches, bringing with it the so-called "Y1K Bug, a menace which, until recently, clerics and sages had never heard of. The learned clergy are warning that Christendom, based as it now is upon monastic computations, could collapse, and the sands of the hour glass are fast ebbing leaving us a paucity of time to make good this abomination.

Why did no-one anticipate that a change from a three-digit to a four-digit year would throw into disarray all liturgical chants and all metrical verse in which a date is mentioned? All formulaic hymn, prayer, ceremony and incantation concerning dates must now be rewritten to accommodate three extra syllables. All tabular chronologies with three-space year columns, maintained for generations by our industrious

monastic scribes using carefully hand-ruled vellum sheets, will now have to be converted to four-space columns, at enormous cost to the Holy Mother Church. In the meantime, the validity of every clerical event, from baptisms to executions from burials to confirmations and from coronations, to the selling of indulgences may be called into question.

"We should have seen it coming," says brother Cedric of the Holy Priory of St Peter of De Jaeger. "I am deeply concerned in that the word 'THOUSAND' contains the word 'THOU,' which is embedded within nearly all our prayers, and of course always refers to God. Using it now in the name of the year is a deep blasphemy, and will cause a plague of confusion among the laity. Our continued use of holy language of Latin itself is in doubt. The word for 'thousand' in Latin is "Mille" which is the same as the Latin for "Mile". Pilgrims will be cast into despair as they will know not time from distance! Nor can they travel safely as Ox carts depend upon Mile markers which will fail at the end of the year."

Stonemasons are already threatening to demand many purses of gold for having to carve an extra numeral

in all dates on tombstones, cornerstones and monuments. It is feared that shortage of stonemasons and monastic scribes within Christendom will further increase their insatiable demand for purses of finest coin. The effects of this will throw the hitherto stable corruption and dishonesty of the medieval economy into chaos.

A conference of clerics has been called at Winchester to discuss the issue, but many are convinced that the matter is now one of personal survival.

Families, in expectation of the worst, are stocking up on holy water, religious relics and indulgences.

Care in the Community

The NHS has been gripped with a new wave of millennial panic following a realisation that many patients have been supplied with renal dialysis machines, infusion pumps, oxygen concentrators and other medical equipment for use in their homes. Much of this equipment has been supplied as a result of private fundraising and the work of local charities. As such, much of it has slipped clean through the net of the Health Service Y2K programme.

It is becoming apparent that much of this equipment has not received the attention it requires to become compliant and the NHS Executive is embarking upon a desperate publicity campaign. However, it is already privately acknowledged that it may be too late to address the issue effectively and NHS planners are examining contingency options for when the inevitable failures occur.

Millennial Baby Crises

Another concern for the beleaguered NHS is the expected



strain on maternity units as staff try to cope with a higher than normal influx expectant mothers over the millennium holiday.

Internal predictions are that the birth rate will be at a higher peak than usual as couples race to produce the first baby of the millennium. The cash incentives are considerable with an expected rash of product promotions and TV chat show appearances associated with the birth as companies try to cash in on 'millennial fever'.

NHS managers are concerned about the strain that will be placed on Maternity and Emergency staff at a time when there could be increase in demand for hospital services generated by enthusiastic revelry and a spate of accidents caused by equipment failures. All this will occur when the NHS will face a staff shortage and the possible breakdown of key items of medical equipment.

I'm Mentor Y2K

The Government is becoming increasingly nervous about the inaction of the small and medium firms sector on the Y2K issue. Action 2000 revealed in April that 40% of the UK's smaller companies will not be compliant by the Year 2000 at the current rate of progress.

In response, Margaret Becket launched the National Mentoring Scheme in mid April. The idea is that larger firms, having resolved their own Y2K problems, will provide practical help assistance and guidance in getting small firms compliant. A number of the UK's biggest companies such as BT and Asda/Kingfisher are backing the scheme. The problem has been highlighted by Tractor firm Agco which is concerned that its production lines may come to a halt as only 20% of it's suppliers are on track to resolve their Y2k problems by the end of 1999.

The FSA and the Mystery 12

The announcement by the FSA in March that 12 firms in the financial services sector were given the 'red light' over their Y2K programmes has caused a mixture of concern and discord in the City. The traffic light assessment system drawn up by Action 2000 for use by the FSA classifies a red light as posing; "...a serious risk of disruption. Appears to lack effective manage-



ment and appropriate plans to remedy the position or both".

Given that the regulator has classed the 12 as having a high potential impact on the industry, they must count their customers in millions and have significant market positions to pose a risk of 'serious disruption'. However, as the FSA has refused to name the firms concerned the City rumour machine is rife. Many believe that this is little more than a ploy to demonstrate that the FSA is concerned about the matter and to encourage directors not to take their eye off the ball during the last months of the year. However, if it is true the situation is more alarming.

The Financial Services Industry consistently emerges for studies as being one of the best-prepared sectors in the UK in meeting the Y2K challenge. If the industry is still in the lead despite having 12 major players out on a limb what does that say for the rest of UK industry?

Bumper Payouts at Nat West....

NatWest is aiming to get 160 IT staff to volunteer for duty over

the millenium period. These will be in addition to the numbers already contracted to work over the millenium period. To oil the wheels, the bank is offering a lump sum payout of £2,000 for employees who volunteer to work. If Nat West has to call them in over the holiday period they can expect to receive quadruple time and 5 days holiday.

The Nat West staff association was seeking to extend the deal to contracted staff.

At the time of writing, (April 99), the other main retail banks were seeking to finalise millenium payment deals.

...While the Public Sector Struggles.

The largesse of the private sector on millenium payments contrast starkly with the frugal pickings on offer in the public sector. Deals are likely to be delayed for months while unions and employers negotiate. The Employers Organisation for local Governemnt has already rejected a bonus claim of £500 per head national deal tabled by UNISON - the public sector union. The employers want local negotiated deals but progress on this is unlikely while a national deal - pursued by UNISON remains a prospect.

'Falling Down'

In the wake of the Denver shootings, a worrying report from God's number one country. In the past year gun sales in the USA have surged by over 30%. Gun shops from Alaska to Alabama are reporting that millennial preservation is pushing sales through the roof. It appears that the great American middle class are convinced that the Y2K issue will bring about the widespread collapse of the economic infrastructure. They are convinced that the Police and National Guard will be so pre-occupied with controlling a lawless avalanche of looters and rioters in the

urban maelstrom that they will have little time to left to protect the leafy avenues of American suburbia - so, in homage to the Michael Douglas film, 'tooling up' for the worst is the only way of protecting the wife, kids and station wagon.

A Hidden problem with 'C' and 'C++'

A little snippet that the press has yet to discover was directed Gremlin's way recently. This concerns the "tm_year" function which is a very commonly used and mis-used programming function within 'C', 'C++', JAVA, JAVASCRIPT and PERL. The function, if invoked, returns "years-1900" from the operating system. In 1998 it will return '98' and in 2003 it will return '103'.

Sadly a large number of programmers have either misunderstood the description of this function or have programmed with a two digit mindset, expecting only a two digit response. If the function returns three digits, as in post Year 2000 dates, a field overflow would result, leading to an application malfunction.

Worryingly, this problem can occur in 'Y2K corrected code' if testing has not been rigorous and thorough and advanced clock testing has not been performed. It can also occur in applications that perform no date calculations but merely acquire the current date for time stamping purposes. Unfortunately, these are likely to be precisely the kind of applications where Y2K testing may have been more cursory.

New York, New York

Mayor Rudolph Giuliani is preparing New York City for year 2000 related trouble by establishing a £7.4m emergency control centre in a 23rd floor complex near the World Trade Centre. Los Angeles has adapted an existing travel control centre five floors beneath a federal building in the City centre and Columbus in Ohio has constructed a custom built bunker 10 miles outside the city rumoured to have cost in the region of £13m. The complex is

surrounded by razor wire and is equipped with dormitories, filtered air and ample supplies of food and water. Washington is already well equipped thanks to network of underground tunnels and control rooms connecting the Pentagon, White House and other government buildings.

Clinton Blows Bug Bill

The US proposal to limit the liability of companies to Year 2000 failures is likely to face a veto by the Clinton administration. The Draft Bill seeks to limit the amount of punitive damages that can be awarded against companies whose products or services fail to function properly due to the 'Year 2000 bug'. It also seeks to establish strict limits on the personal liabilities of company executives. However, the Whitehouse believes that in its current form the Bill could encourage companies to delay fixing their systems.

French Nukes in Peril

The French, who have a greater reliance upon nuclear generated power than almost any other European nation could be badly hit by the millennium bug if a recent report by the French Institute of Nuclear Safety is to be believed.

According to the report, French nuclear power stations are not only threatened by failures within their internal systems but could be affected by failures in the French electricity grid.

The report estimates that up to 80% of internal systems could be 'sensitive' to post millennial date processing. Worryingly, the report stresses that 40% of internal systems need to be operational to guarantee the safe operation or shut down of nuclear plant.

The IPSN report declares that many of the experts consulted believed that a generalised failure of the electricity network was a 'plausible possibility'.

The French nuclear safety authority, (DSIN), has declared its intention to shut down power stations if security appears to be threatened. This, of course, pre-supposes that the systems to permit a controlled shut-down are operational.

Bali Confidant

The Indonesian State run electricity company is confident that the Y2K problem will not affect the electricity supply in Jakarta. In an interview with Reuters the head of the State run company, Sunggu Aritonang declared. "Most of our systems can handle the bug, and 94% of our operating systems are Y2k compliant."

When asked about contingency plans, the interviewer was met with a quizzical stare followed by the comment that the company will be watching what happens on the International date line very carefully, "We can observe what happens in Western Samoa, New Zealand, and Australia, and have six hours to make plans" So that's all right then!

The Feds Cash Concern

The armoured cars will be working overtime in the States over the next few months. The US Federal Reserve has ordered the printing of an extra 2 billion banknotes this year, bringing the 1999 total to 11 billion, the biggest print run dollar bills in history.

The FED is concerned that 'tooled up' middle Americans, barricading themselves in their survival bunkers will be calling down inordinate amount of cash from ATM machines to stuff into their well protected mattresses. Jerry Nicholas, the VP of currency at the Feds Seventh District Office in Chicago stated,

"If people are going to be taking extra money out, we need to be prepared but we're in no way suggesting that people need to take money out. The safest place for their money is in the banks".

Under normal circumstances the Fed keeps 40 days cash supply, (\$150 billion) in its vaults but this is being increased to over 70 days worth of \$20 bills, (the most common bill dispensed by US ATM machines), as a buffer against a higher than expected demand. The fears of Federal Reserve Chairman Alan Greenspan, are more basic - a rash of robberies spawned by people keeping too much cash lying around.

The Security Column

By John Hunter

In this issue I want to start by looking at what I think is one of the most important facets of Security – the information security strategy.

It is so easy to get bogged down in being 'task' orientated (ie the more that you do, the more effective you are perceived to be), and end up running around achieving very little for the health of your organisation.

In the most successful organisations which have survived for a long time, everyone is pulling together. The directors have a clear corporate plan on where they want to take the business and how they want to get there. This message is indoctrinated into staff at all levels. Marketing departments base their annual plan on the direction given by the corporate plan. Finance departments go on to gear their corporate budgets around the sum total of everyone's similar outpourings. Human resources are planned based on the requirements to carry out the tasks which have been tightly geared to achieving the director's plans, etc, etc.

What about your audit/security department? Is everyone aware of the organisation's direction and what is important to the directors (and equally important, what they think is trivial). Or is the thinking 'technology' focussed? Hopefully, you

will be carrying out your work according to a risk-based plan. Charles Mansour, of 'The Woolwich' at a recent ISACA evening meeting in London gave an excellent overview of the process of developing a risk-based plan, based on hard-earned experience in his organisation.

If you don't start with the bigger picture, then you will almost certainly end up with your (limited)



resources covering unimportant issues.

So, where do we start? The likelihood of intrusion is probably high on your list – or should be. Intrusion can be costly for a number of reasons, but I think that one of its worst aspects is that through it the organisation can loose data to the outside world, yet be blissfully unaware. I'm not talking about the surge in giving notebook computers to staff, following the Inland Revenue's recent introduction of a tax break for suc loans to employees.

Let me expand this. If you have a virus attack on the corporate systems, then you know the consequences, can measure its effects and react accordingly. Strong controls will be put in place because, when

an attack happens everyone in the organisation will know. If its your responsibility, then you are gong to make sure that it doesn't happen. You can't have such a public finger pointing to you. However, what about the attach which causes no harm to your data, but simply copies it to the outside world. The Melissa virus was a start. Just to remind you, Melissa is Word macro in Visual Basic for Applications, which opened up your MAPI based address book and emailed the current document (though initially this was a list of pornographic web sites) to the first 50 available contacts, after infecting it of course. Pity if the document was a security listing. There were then further strains. One called Papa, is an Excel virus that sends itself in the same way as Melissa, but to the first 60 people in a user's address book compared to 50 with Melissa. Also, Papa sends an e-mail out every time the virus is activated. Melissa only sends the message the first time it is opened.

Of course. From an espionage point of view, this sort of virus is ideal. Without the x50 or x60 multiplication factor, would you have known? And rather than emailing simply the current document, the macro could have done much more sinister things. Visual Basic for Applications is very powerful - it could easily read the whole of the address book (including comments) and pass it to, say, a public newsgroup, where the perpetrator could pick it up anonymously. However, Visual Basic for Applications can go much deeper than that and doesn't only have to look at the MAPI address book. The golden rule then is to ensure that your all the PCs in your organisation have running unchecked macro switched off. And check this periodically – one of the first things that Melissa did was to lower this security barrier, allowing future infections to pass unnoticed.

Recruiting Through The Net

By Adrian Simpson

The influence of the internet continues to reach further into our business and personal lives.

It is possible to access information on a bewildering range of topics covering a whole host of leisure or professional pursuits. You can now reserve airline tickets, buy books, trade shares, organise bank accounts and download software using the web. Recruitment is not immune to this process. During the last two years a large number of internet related recruitment services have developed and the trend is gathering pace. What impact will the Internet have on the way computer auditors manage their careers and on employers who are seeking to recruit them?

The evidence to-date is that the internet will have some impact. However, in the short to medium term it is unlikely to significantly alter the existing recruitment process. This is not due to technological problems, but more the rate of technological change exceeding our capacity to alter the way we approach looking for a new position. The importance of face to face interviews is still key to the recruitment process. No matter what technological solutions are available to allow the on-line communication of CVs and remote interviewing of candidates, both client and job seeker would be very reluctant to enter into an employment contract without first having had the opportunity to meet.

The main benefit of the internet, particularly for those who are computer literate, is accessibility of information. In the past the main drawback of the internet was that the information it contains was too vast and unstructured to make it readily accessible. This is improving as search engines become more effective and more attention is given to web site marketing. A number of web sites have been developed which are specifically targeted at the recruitment market. While we are not yet aware of any which directly address computer auditors, searches of the various job sites such as JobServe, CVServe, Jobsite, gisajob and ukgaap, will yield a number of relevant entries which are easy to respond to. To-date there has been a heavy bias towards contract and temporary positions. However, permanent positions are now

Many employers now expect candidates to have visited their site prior to interview

becoming more widely advertised. The increasing number of corporate web sites is also beneficial. These are invaluable when preparing for interviews (and be warned, many employers now expect candidates to have visited their site prior to interview) and for researching potential employers prior to commencing a job search.

There are drawbacks to using the internet to identify and particularly to apply directly for positions. One area of concern is security. Where exactly has your CV gone to and who can read it? There is also the issue of CV version control. How do you

protect the integrity of your CV? Many corporate web sites will have a recruitment page with a number of vacancies and the facility to e-mail a CV to a catch-all address. These should be approached with caution. All sorts of CVs will arrive at these addresses and the numbers received can be high enough to prevent any effective handling of your application. This can cause difficulties, for example, if the person reviewing the CVs has no knowledge of computer audit.

Developments on the Internet will mean that its practical day to day usefulness will increase. As more people become connected to the net via "TV set top boxes" and local district web servers are developed, then the range of local services supplied via the net will increase dramatically. To see the potential of these local sites it is worth viewing <http://www.miltonkeynes.co.uk> a site hosted by a local newspaper group.

From the recruitment industry's perspective, it is reassuring that none of the major I.T. recruitment agencies, who have been web active the longest, have experienced a decline in their traditional recruitment business, nor have they materially changed the way they conduct their business. There has been a huge increase in the amount of vacancies advertised on the internet but research has shown that this has been in addition to the usual media based advertising, not in place of it. In the longer term, the development of

Internet services will mean that all intermediaries such as recruitment consultants will have to focus on the value they add if they are to avoid being replaced by on-line services.

The web is a useful source of information on companies and an additional, as opposed to replacement, advertising vehicle for the recruitment industry and employers to use. The spectre of "cyberspace" recruitment where job seekers and employers meet in harmony across the web as conjured up in the media is, at least for today, irrelevant to the practicalities of day to day recruitment. Tomorrow, no doubt, will be another story.

The Big Number Change

Due to a large increase in telecoms usage in the last few years Oftel has decided to make more changes to the national code and numbering system. The changes will generate hundreds of millions of new numbers, specifically designed with plenty of spare capacity for the future forecast demand.

The new codes can be grouped into the following families: Codes beginning

- 01 - Geographic area codes
- 02 - Geographic area codes
- 03 - Reserved for future use
- 04 - Reserved for future use
- 05 - Reserved for future use
- 06 - Reserved for future use
- 07 - Mobiles/pagers & personal no.s
- 08 - Freephone & premium rate no.s
- 09 - Premium rate no.s

Numbers beginning 07, 08 and 09 are progressively being introduced already and will continue until 2001. Oftel have decided to introduce the new 02 codes to six areas on the 22 April 2000. These areas are: Cardiff, Coventry, London, Northern Ireland, Portsmouth and Southampton.

The new London code that will replace the existing 0171 and 0181 codes is 020. All existing local London numbers will be increased from seven digits to eight digits. This means that a London number that is currently 0171 332 1296 will change to 020 7332 1296, a number that is currently 0181 123 4567 will change to 020 8123 4567. To dial these numbers from anywhere within the London area you would simply need to dial either 7332 1296 or 8123 4567.

The new dial codes will run in parallel with the old existing codes from the 1st June 1999 but will only work when used with the full dial code e.g. 020 7332 1296. The new local London numbers will not work alone until the 22 April 2000 (the new and old local numbers will run in parallel for a short time after April 2000). Oftel predict that other geographic areas will be affected and are likely to change by the year 2005.

Thus the telecoms of all major

companies face an upheaval this year. The big number change could effect all aspects of your communication system including the PBX switch, standard telephone number, helpline/emergency numbers, automatic systems containing programmed numbers, telephone numbers stored in records and databases, modems, mobiles, pagers, alarm & security systems etc.

Implication for audit

As auditors we should review our own organisations strategy on this matter. Attached are guidelines issued by the 'All the telephone companies together' organisation. They can be contacted at: www.numberchange.org and 0808 22 42000 (An information pack is avail-

able including a good CD 'Surviving the big number.. twelve steps businesses must take').

Number Change Business Plan

- 1. Put someone in charge:** if you don't have your own telecoms manager, put someone in overall charge of planning for The Big Number. Give them the time, resources and authority they need to do the job properly
- 2. Audit:** use the checklist to do a number audit of materials & publicity, systems & equipment and records & databases. What fixed, mobile, pager, personal, special and premium rate numbers do you use?
- 3. Contact details.** check the contact details of staff, customers and

Checklist of Potential Areas Affected

Materials and Publicity

List **all** materials that carry your contact numbers. Consult your suppliers about phasing in the changes:

Stationery	Advertising
Promotional Material	Signage & Livery
Website	Helpline & Emergency Numbers
Advertising	
Other	
Switchboard/PBX/Alternative network routing	Call forwarding/barring
Call loggers	Alarms/security
Teleconferencing	ISDN (incl CLI & international)
Modem (email/internet/laptops)	Telephones/mobiles/pagers/faxes
Private Payphones	Other

Records & Databases

Telephone numbers stored in records and databases will need updating. Some records may be paper-based, others electronic. Speak to your IT contacts to implement the changes:

Address/phone books (computers/laptops/mobiles)	Databases: staff/customers/suppliers
	Other

suppliers, some of whom may be based in the 02 geographic areas where codes and numbers are changing. Or they may have mobile and pager numbers that are changing.

4. Key dates. decide key dates as milestones for the planning process, taking into account major initiatives such as AGMs and Annual Reports, office relocations, new product and service launches and vehicle and signage refurbishment schedules. If you are in one of the new 02 areas decide how you are going to phase in the new

numbers from June 1999, when new and old codes and numbers run in parallel.

5. Opportunity. think how you can turn The Big Number into an opportunity for your business. For

example, is it a chance to renew contact with customers you have lost touch with, update systems or refresh your corporate identity and publicity material?

<http://www.numberchange.org>

The 12 changes required

Call Barring	Now (before 1 June 1999)
PhONEday Fixes	Now (before 1 June 1999)
Private Payphones	Now (before 1 June 1999)
ISDN Incoming (02 area codes)	Now (before 1 June 1999)
Call Management Systems	Now (before 1 June 1999)
Calling Line Identify (CLI)	After 1 June 1999 (before 22 April 2000)
Routers Connecting Lans & other equipment	After 1 June 1999 (before 22 April 2000)
Stored Numbers (local format in 02 areas)	After 1 June 1999 (before 22 April 2000)
Alternative Network Routing Equipment (local)	Urgently after 1.00am on 22 April 2000
International ISDN (data)	Between 22 April and 30 September 2000
All other stored numbers (non 02 areas)	After 1 June 1999 (before 22 April 2000) (After 30 September 1999 for mobile users)

Your Letters



Only one this issue, but definitely worth printing.

“Dear Ed (or whoever has replaced Andy),

I respond to Ian Beale's comments regarding "Millennium Newsbytes" - - it is my view that this column strikes the right balance between serious reporting of issues to be addressed and highlighting, in a humorous way, some of the rubbish that is thrown about by organisations that should know better.

Please keep it as it is.

Following on from my comment re the balance between humour and serious, I would like to ask when did Charles Mansour turn American? Was

it a result of presenting at conferences - I am of course referring to his use of the word 'leverage' in his, excellent, article on Data Warehousing. What next? Will he 'be seeking clarity' on the issues surrounding Data Warehouses and taking us to 'another level of granularity'?

Seriously, thanks for a great article.

Robert R Oliver”

By email

Thanks for your comments Robert. I'm sure Charlie will read them with great interest!

Please keep the letters coming.

Answers to Linkages:

- | | | | | |
|----------|-------------|---------|----------|----------|
| 1. Dirty | 2. Call | 3. Dog | 4. Song | |
| 5. Egg | 6. Elephant | 7. Hand | 8. Boot | |
| 9. Pot | 10. Mother | 11. Ice | 12. East | 13. Dead |

The initial letters of these answers form the phrase "Embedded Chips".

Since I bought these built up shoes, I've never looked back!



Nonsense, welly boots filled with Swartega - now that's interesting!



So, we threw out all the PCs and replaced them with Executive Etch-a-Sketch Units. Voila! Y2K problem solved!



Mmmm .. these peanut butter and yak spleen sandwiches are really good!



With thanks to our speakers and our members (we hope that you don't mind us having just a little fun!)

Chapter Meeting Photo Gallery