Technical Briefings 1996/97

8 October 1996
Auditing and automation

To be held jointly with the IT faculty of the ICAEW at their premises in Moorgate Place

Chairman
Automating UNIX Audits
Viruses from the Internet
Data Matching
Implementing automated working papers
Evaluating against BS7799 using COPIT

Paul Williams: Partner, Binder Hamlyn
Mike Chorley, Trillion Software
Joseph Richardson, Dr Solomons
Simon Keane, London Team Against Fraud
Ken Ebbage, Pentana
Andrew Birkbeck, Glynwed Steel Ltd

Tuesday 14 January 1997
Networks: moving ahead securely

Royal Aeronautical Society

ATM and security
Open doors into networks
Moving to Novell4: Security Implications
Secure Gateway implementation

Leslie Hanson, Cabletron Systems Ltd
Rose Hines, IT Vulnerabilities
Peter Wood, First Base
Yag Kanani, KPMG

Tuesday 15 April 1997
Systems development audit: Adding value

Royal Aeronautical Society

Diagnosing project problems, Signs and Symptoms
Systems Development audit: The IS manager’s view
Testing the Testers
Preventing problem projects: the auditor’s role at the outset
Auditing RAD

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EDITORIAL

I live in a number of parallel worlds and I appear to do it simultaneously. As with the 'X Files' I often wonder whether my current reality is in fact the reality, or whether I will suddenly find myself in the real reality, whatever that may be. Nowhere is this more so than when I find myself traversing my parallel world of academia. This world is full of the most wondrous and strange creatures, most of whom are obviously not of this planet. Their hold on the real world is at the best tenuous and at the worst non-existent and thus is shown in a number of ways (at this point I hastily point out that our academic editor and his colleagues are definitely from this universe).

An example. Some of you may remember that last year we carried a call for papers on behalf of a forthcoming conference dealing with Professional Awareness in Software Engineering (PASE). I thought it would be useful for the delegates to hear a little of our involvement in this process and promptly submitted an abstract which was accepted. I subsequently submitted a full paper for refereeing and this was accepted without change. I then went ahead and prepared the visuals and waited for the speaker information to be sent to me. This subsequently arrived with a request that I pay the conference fee for the privilege of delivering my paper! I thought that there had been a mistake and contacted the organisers. No mistake, I was assured, this is how it's done in the academic parallel world.

My thoughts immediately turned to authors paying for their books to be published. Only if no one is willing to buy I thought. I said that I would withdraw my paper, upon which I was told that they would make an exception in my case and I could attend the very session when my paper was due for delivery! I thanked them very much for this concession, but considered, on balance, that they could do with their conference, what I sometimes suggest to errant children. Now a real concession emerged, I could attend for the whole day providing that I kept it secret from the other delegates, who had obviously coughed up to present their papers. What about the second day? No deal they responded, so I withdrew my paper. Three weeks later I received a letter from the organisers stating that they were sorry that my paper did not meet the necessary standards for the conference! Unfortunately, they also included my paper annotated with the two referees' comments stating that it was a suitable paper which met the conference requirements. See what I mean by 'off the planet'?

There is however, a serious point to this. If papers are only going to be presented at academic conferences when the presenter agrees to pay for attendance, then UK research is going to suffer accordingly. I could not convince the PASE organisers of this, but it stands to reason that if acceptable papers never see the light of day because the author is unwilling to pay, then the potential delegates are losing out on useful information.

Looking at it from another point of view, it could be argued that commercially this makes sense. All the universities are striving to improve their research ratings in order to attract greater funding. One of the performance indicators relates to papers presented at conferences. So, if you want a good research rating, you have no option but to pay up. Good wheeeze eh? And I thought that they were off the planet!

Now back to reality. This is the last edition of the current volume and it carries no refereed articles. This has nothing to do with my dissertation above, rather it relates
Chairman’s Corner
Alison Webb

In the last thirty years, our view of the best way to organise society has moved away from a paternal, hierarchical and authoritative approach to its current emphasis on self-determination.

Originally, auditors, or inspectors, checked that the rules imposed on organisations by those at the top were being obeyed, and reported when they weren’t. Our responsibilities stopped there. Changes in our way of working reflect the changes in society: we now encourage management to take responsibility for their own security and controls, and control risk self-assessment takes the process one stage further and prompts them to design the control strategy they feel will be best for them.

Auditors are busy switching images: no longer the policeman but the counsellor, encouraging others to talk through their problems and plan constructively the next step along the road to self-improvement. We can no longer bully: we need to be infinitely patient and approachable.

People are starting to worry that we’re doing ourselves out of a job. When we’ve given all our workshops, and told everyone in a straight-forward way all we know about controls, what will we do then? I talked to two people at our last Technical Briefing who thought computer auditors might soon be an endangered species. Have we talked ourselves out of a job?

Perhaps: but I can remember thinking in the same way at the start of my career when I was a schoolteacher. One of my main worries was that someone would challenge me: “Why pay you when you’re only telling the students things they could easily read in a text book for themselves?” (I read up most of my lesson material the night before in just such books). Yet no-one ever did. Data isn’t power: it’s only when it’s assimilated it becomes knowledge: and that transformation is what a good teacher does: takes some unremarkable fact and makes you see why it’s interesting or important.

The people we talk to in the workshops have jobs to do: they aren’t going to take the time to read text books on client/server or ucp for themselves just because their application uses the technology: they want us to do the interpreting for them. Then they’ll take the principles we’ve distilled and apply them to their control strategy.

To do this effectively, we need to know a lot: all teachers and counsellors need to be well-informed so they don’t inadvertently do damage by saying the wrong thing. We can’t be lazy and ignore innovation, because if we do, like the bad psychotherapist, we’ll put the emphasis in the wrong place and harm our clients.

I don’t think auditing is dead: but I do think the sort of person who makes a good auditor is different now. We still need to be principled: we still need to be good communicators: but we also need, more than before, to be interpreters. If computers are easier to use now, it doesn’t mean the insides are simple: cars today are easier to drive than they were in the 1920’s: but you can’t any longer mend them yourself with a bicycle spanner and a few spare washers. Our job as computer auditors is firstly to understand enough of the underlying technology to be confident we have assessed correctly the security risks in using it: and secondly to be able to express ourselves well enough to give users an accurate picture of the risks they’re running.

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Editorial continued from page 3

to practical reality. We are repositioning the editions to more closely reflect our membership year which runs from July to the following June. In order to do this we are having a sort of leap year by having a fifth edition in our current year so that we can start volume 7 in September. I have an excellent article on Computer Abuse in stock, but it needs to be split over a number of issues. I will therefore, start this in the first edition of the next volume in September. So, if you renew your membership you will get off to a flying start with a major series. If you don’t renew, well your colleagues who do so will have a competitive advantage over you. This edition does contain two excellent articles however: the first relates to the audit of tele-

phone logs, whilst the second deals with the problem of migrating to the Windows NT server. My thanks to Trevor Williams and Peter Wood respectively. We also have a couple of book reviews, a report from our Treasurer and yet another communication from Monsieur Harrison on the trials and tribulations of auditing in a foreign land; no it’s definitely not Bognor!

Have a good summer, but please remember that to your committee it’s simply another three months of work.

John Mitchell
INTRODUCTION

My first task as an auditor, back in the early 70's, was to attend the opening of the mail. Having two independent members of staff open the mail, carefully record the cash and forward mail to the appropriate senior management before passing onto the staff was (and still is) considered an important control. All outgoing mail was carefully read (remember proof reading, before the days of spell checkers) and signed by the appropriate authority.

These days, as well as manual or "snail" mail we have telephone contracts, fax and e-mail between organisations. The combination of an explosion in availability and a lowering of costs has led to the volume of electronic communication increasing significantly. The Internet has added yet another dimension. As a manager I know put it "I sometimes wonder why staff who have had no previous interest in technology suddenly need to have access to the Internet". I puzzled over this until I saw an analysis of the most frequently accessed pages on the Internet/Web which gives the answer! Trying to control let alone view what is happening on e-mail and telephones is nearly impossible. However, there are some tools to help us.

File interrogation has been used by Computer Auditors for many years on traditional audit areas such as accounting ledgers or other financial information. However it is also a useful technique to analyse and sieve out relevant messages from e-mail/Internet logs, computer security logs and telephone logs. Telephone and e-mail logs/accounts may be audited as part of a Value for Money or cost cutting exercise. They are also a very fruitful information provider in fraud investigations e.g. to prove/identify supplier collusion.

There is no guarantee that a suitable log of communications is kept or that if there is one, that it is retained. However some simple research should determine whether your organisation has, or can have, the relevant logs. Some requests may then be made to ensure the appropriate logs are retained.

If a call logging system is used, then the log file can probably be accessed in electronic format either using a copy of the log file (if in a simple format) or through printing the log report to disk and then importing using a "print report translator" such as Datalnport or Monarch.

Electronic versions of telephone accounts can be obtained from most telephone companies, usually on diskette, although there may be a charge (eg Mercury charge £30).

This article considers how File Interrogation can be used as an effective tool to monitor electronic communication.

PURPOSE

The reasons for wishing to audit communications vary but often include:

- Cost or time control
- Review of employee activities
- Fraud investigations

Many call logging systems have been built in facilities for analysing cost by extension but only have limited enquiry facilities. E-mail logs may summarise by person but the level of management and review facilities in most e-mail/Internet systems is limited.

FILE INTERROGATION

It is not the intention of this article to describe File Interrogation in detail. However, the basic principle is that the auditor uses a software package to access the relevant data and performs whatever analysis or test themselves. There has been a growing trend over recent years for auditors to use PC based packages due to the relative ease of use, low cost and benefits of greater coverage and scope.

Example of a Telephone Log in a File Interrogation Package

When auditing communications the particular log files in question are copied to the auditors PC and the tests which are described below carried out.

Cost Control

Despite decreasing costs of communications due to competition, the explosion in use of such communications and the ease of access to information has undoubtedly resulted in higher telephone bills.

Organisations may have preventive controls to block international calls or make employees go through operators. However in an age of direct dial and the global village these measures are not particularly practical.

The first stage is to find out what costs are incurred and where. This can be done by summarising calls and their cost by number (representing a supplier or customer in many cases), by size (by stratiifying calls into bands, e.g. cheap i.e. less than £1, medium and expensive, say more than £10) or by totalling by caller extension. The more expensive calls such as those to international numbers, calls to mobile numbers and premium rate services can be identified by running a query.
This can be based on cost or by looking at the initial digits of the numbers dialled (eg 00, 0891 etc). It can also be worthwhile checking on the number of calls to directory enquiries, and other chargeable services.

Time Control

In some organisations it is not the cost of the phone calls which is the major problem but the length of time employees spend on the phone. Particularly if they are personal calls. Excessively long calls can be identified using interrogation software. Further, if home phone numbers are held, say on the personnel system then they can be matched against the call log.

Review of Activities

There is a limit to how much time and to what depth employee activities should be monitored but an analysis of phone calls can be an interesting exercise, particularly where fraud or some form of undesirable behaviour is suspected.

From Supplier and Customer ledgers it is often possible to compile a list of "authorised" phone numbers. Calls can then be matched against these and the remaining calls investigated. Summarising by number and then picking out those with significant cost and/or time is relatively easy with software. These calls can then be investigated to see if any abuse is occurring.

It can also be worthwhile looking at out of hours calls. In a recent case there were a number of early morning (06:00am) calls to Nigeria which were traced to a cleaner, but employees carrying out their own business have also been caught out this way. In some businesses, such as professional practices, employees may be tempted to deal with clients on a private basis. If any client is lost and the new adviser not known then it pays to check that the clients phone number does not continue to appear on the log.

Some firms put work out to tender and have rigid tendering rules with sealed bids being opened by a selection teams etc. Again the calls to the tendering companies over the period of the tender can be monitored to see who is speaking to them and when.

Most e-mail systems have a variety of logs, but often lack detailed enquiry or reporting facilities. Once the logs have been read into an interrogation package then there are several good analysis and tests that can be performed. In my own organisation I chose to first look at remote "dial ins" to the mail system and Internet traffic. There are a number of services available on the Internet, many of them geared to individuals rather than companies. A high volume of Internet traffic for a particular user is a sign that they may be using the Internet for their own purposes as we have found. While the cost of calls may not be significant, the loss of business hours probably is.

Typical Tests

The following is a list of typical tests that can be carried out on a telephone log using file interrogation:

- Verify the total cost of the calls and number of calls to the total account charge.
- Summarise number of calls and cost by external telephone number.
- Stratify time and costs for both the detailed and summarised files.
- Extract high value calls on both the detailed and summary files.
- Extract high frequency call numbers.
- Extract and analyse overseas calls.
- Extract calls to premium service numbers e.g. chat-lines, speaking clocks, directory enquiries etc.
- Extract calls made outside normal working hours e.g. before 7:00am and after 8:00pm.
- Extract calls made at weekends.
- Extract calls to "blacklisted" numbers.
- Match against a database (from personnel) of home phone numbers.
- Monthly files can be compared/matched to identify high value "new" call numbers.

Monthly or quarterly files can be appended and calls analysed over longer periods.

Additional Tests For A Call Logging System Which Identifies The Caller

- Summarise time and cost by caller.
- Extract exceptions by caller.
- Extract and analyse fax and modem calls.
- Extract high value calls made from unusual numbers such as conference/meeting rooms.

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CONCLUSIONS

The choice and appropriateness of tests depends on the organisation and the audit objectives. However there is a wealth of information lurking in telephone and e-mail logs and it is worthwhile finding out what is kept and what use can be made of it.

On the basis that "prevention is better than cure", if staff know that logs are available and are interrogated this will often be a deterrent to personal/fraudulent use.

As a final thought consider the "laws of discovery". If you are in dispute with an organisation then requesting a copy of their e-mail logs may enable you to find the information you are looking for. Unfortunately they may also request a copy of yours.

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Book Reviews

TITLE: The Collapse of Barings
AUTHOR: Stephen Fay
PUBLISHER: Richard Cohen Books
ISBN: 1 86066 037 1
PAGES: 308
PRICE: £20.00
Reviewer: Andrew Hawker

This is a book without any heroes. In the months leading up to the demise of Barings, various clues pointed to the fact that the bank might be sitting on a time bomb of megaton proportions. However, managers were preoccupied with power struggles, regulators saw themselves as referees allowing play to continue under the advantage rules, and the local audit team was reassured by a forgery which, according to Fay, "would not have convinced a fourteen-year-old of its authenticity".

Leeson’s now-famous 88888 account was of course at the heart of the scandal. False accounting was conducted via the account on a grand scale, and Fay describes both the nature of the transactions (often entered with the active assistance of an “obliging” settlements clerk) and the methods which Leeson used to explain them away.

Anyone looking for a detailed account of the financial impact of Leeson’s activities, or for specific conclusions about regulation and control, will still need to refer to the Board of Banking Supervision report published last July. Fay’s contribution is to show how an ambitious and unscrupulous employee seized his chances at every step, subverting the returns from his computerised system from the outset and, as the profits appeared to roll in, playing the part of the corporate star who ought not be challenged in case it might upset him. Fay concludes that an event like the collapse of Barings is likely to happen again. He is probably right. This book is an entertaining and thoughtfully written account of a disaster which could have been avoided. But do you or I have the makings of the kind of hero who could have prevented the catastrophe? Perhaps Fay’s biggest achievement is to leave us feeling not at all sure.

★★ (Recommended)

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Title: Computer Security Handbook (Third Edition)
Authors: Arthur E Hutt, Seymour Bosworth and Douglas B Hoyt
Publisher: John Wiley & Sons
ISBN: 0-471-11854-0
Pages: 1000
Price: £45.00
Reviewer: John Stillow

What a wonderful book. Somewhere close to a thousand pages split evenly between chapters and appendices, with a very comprehensive index to make sense of it all.

It is an American volume with no inclination towards the international perspective. In view of that, you won’t find any references to UK legislation. Some of the references and appendices which relate entirely to American legislation may not therefore be specifically relevant to your area of work either, but this is a minor complaint.

It is organised into several logical segments:
- management responsibilities,
- basic safeguards,
- physical protection,
- technical protection, and
- special protection.

The first four are self-explanatory, but the last one perhaps needs enlarging upon. It contains four chapters: Outside service; Security for personal computers; Local area networks and Security on the Internet. Interestingly enough, this latter subject also has two appendices devoted to it.

Audit issues are not overlooked with both chapters and appendices devoted to this topic. There is some useful product information and reviews to back up the theoretical texts.

Standards and policies are not overlooked, with actual copies or samples to give a flavour for how that side of the security process should be handled.

This is the third edition of this Handbook with a pedigree stretching back 20 years. On the strength of this volume, I can see why it has been successful and have no doubt it will continue for a long time to come.

★★★★ (Highly recommended)
Migrating to Windows NT Server

Peter Wood - First Base

Domains

The basic unit of security for Windows NT Server is the domain. All the Windows NT Servers in a domain use the same set of user accounts, so a user account exists only once for all the servers in the domain. The servers in a domain form a single administrative unit, sharing security and user account information. Each domain has one database containing user and group accounts and security policy settings. The primary domain controller and backup domain controller keep copies of this database.

Trust Relationships

Trust relationships between domains enable pass-through authentication, in which a user has only one user account in one domain yet can access the entire network. It is possible to create trust relationships such that all Windows NT computers will recognize every user account, and a user will need to log in and provide a password only once to access any server on the network. In a trust relationship, one domain (the trusting domain) trusts the other (the trusted domain). The trusting domain recognizes all users and global group accounts from the trusted domain. These accounts can be used anywhere in the trusting domain; they can log on at workstations in the trusting domain, be placed in local groups in the trusting domain, and can be given permissions and rights in the trusting domain. A trust relationship can be one-way or two-way. A two-way trust relationship is simply a pair of one-way relationships, where each domain trusts the other. Trusts are not passed on from domain to domain. If A trusts B and B trusts C, A will not trust C.

Servers

A domain must have a primary domain controller running Windows NT Server. This stores the master copy of the domain's user and group database. A domain can also include other servers: backup domain controllers, Windows NT servers and LAN Manager 2.x servers. Workstations may be running Windows NT Workstation, Windows for Workgroups or MS-DOS. The domain's account database is replicated to all the backup domain controllers in the domain. Both the primary and backup domain controllers can process logon requests.

If the primary domain controller fails, a backup domain controller can be promoted to primary domain controller, and the domain will continue to function. Domains embracing different physical sites across a WAN should have at least one backup domain controller at each site. When you assign rights and permissions on any NT Server in a domain, you can include user accounts from the server's domain as well as trusted domains. These user accounts can then access the server and use its resources.

Windows NT Workstation Computers

Each Windows NT Workstation can either participate in a domain or a workgroup. A Windows NT Workstation computer participating in a workgroup has its own database of users and processes logon requests by itself. No computers in a workgroup share account information. This is considerably less sophisticated than the domain structure.

The Importance of Design

The planning and design of domains is critical. A poorly configured network may be insecure and very difficult to administer. There are four basic design concepts: the single domain model, the master domain model, the multiple master domain model, and the complete trust model.

Comparatively small networks can use the single domain model. No trust relationships are needed, because there is only one domain on the network. A network can use the single domain model if it has a small enough number of users and groups to ensure good performance. The exact number of users and groups depends on the number of servers in the domain and the specification of the servers.

For medium-sized organisations, where departmental splits are required but there are not a huge number of users and groups, the master domain model may be the best choice. This model gives both centralised administration and multiple domains. All users and global groups on the network are created in the master domain. All other domains on the network trust this domain and thus can use the users and global groups defined there. Typically the MIS department will administer the master domain.

Larger organisations requiring centralised administration may select the multiple master domain model, since it is the most scalable. Here there is a small number of master domains. Each master domain serves as an account domain, and every user account is created on one of these master domains. There are then many departmental domains which provide resources. Each master domain trusts all the other master domains. Every departmental domain trusts all the master domains, but the departmental domains do not need to trust each other. Thus every user account in the company will be usable in all domains but only for the appropriate resources in their home domains.

For organisations wanting to distribute the management of users and domains among different departments, the complete trust model will be more suitable. In this model, every domain on the network trusts every other domain. Thus each department can manage its own domain and define its own users and global groups, and these users and global groups can still be used on all domains in the network. However the number of trust relationships required for this model may make it impractical for large companies.

Logon

Logon at an NT workstation may be on to the domain or the local computer. In either case they must provide both a user name and a password. Only members of the Administrators, Server Operators, Print Operators, Account Operators, and Backup Operators are allowed to logon at an NT server. Users logging on from a DOS or Windows PC are checked not at log on, but whenever the user first accesses a server running Windows NT Server.

Users & Groups

As with most network operating systems, it is good practice to use groups for allocating rights and permissions. Windows
A similar strategy can be applied to permit a domain's backup operators to back up files on any NT Workstation or another domain

Accounts in a domain's or computer's Administrators local group have power to do almost anything on the domain or computer. This includes creating, deleting, and managing user accounts, global groups, and local groups, sharing directories and printers, granting resource permissions and rights to users, and installing operating system files and programs.

However, administrators do not automatically have access to every file on a server - if a file's permissions do not grant access to an administrator, the administrator cannot access the file. Every file on an NTFS volume has an owner, who can set permissions on the file. When a file is created, its creator becomes its owner. If needed, an administrator can take ownership of a file and thus have access to it.

Types of users (user groups) include: Users, Guests, Server Operators, Account Operators, Print Operators, Backup Operators and Power Users.

Two default user accounts exist initially on every Windows NT computer: Administrator and Guest. Administrator is the account to use when first administering a new server or workstation, before the administrators create accounts for themselves. The Administrator account can never be deleted or disabled. Guest is an account used for logons by people who do not have an account on the computer, in the computer's domain, or in any of the domains trusted by the computer's domain. The Guest account is disabled by default when Windows NT Server is installed.

In addition to local groups, there is an identity called Everyone, which represents all people on the network, including administrators, all types of operators, users, users from other domains, and guests. It is not possible to change the membership of Everyone, it always contains all users. Everyone is not actually a local group and does not appear in the User Manager list of groups, but can be used to assign file permissions (in File Manager), and to assign rights (in the Rights dialog box in User Manager for Domains).

Permissions & Rights

The most important method of controlling access is by using the predefined local groups. Simply by adding a user to one of these groups, a large set of predefined rights and abilities is granted. User accounts settings, such as limiting logon hours and the network computers they are allowed to use, may also be defined user by user.

Permissions on each file, directory, or printer shared on the network define who can (and cannot) access those resources. Permissions can be assigned to local groups, global groups, and directly to individual users.

Auditing an action or resource causes an entry to be written to the security event log whenever that action is performed or that resource is accessed, ensuring that users are accountable for the actions they take.

User rights, which specify what actions that local groups, global groups, and users can perform, may also be used. However, usage of the predefined local groups, and their predefined sets of rights should serve most needs.

A user's Windows NT desktop environment can also be controlled by assigning the user a profile.
Permissions on files and directories in NTFS partitions on NT computers apply to both users working at that computer itself and to users accessing these files over the network. Permissions may be set at the directory level or against individual files. Directories on FAT or HPFS partitions may be protected by specifying one set of permissions that apply to users for all files and subdirectories of the shared directory.

Audit Files

An audit entry may be written to the security event log whenever certain actions are performed or files are accessed. The audit entry shows the action performed, the user who performed it, and the date and time of the action. Both successful and failed attempts at actions may be logged, so the audit trail can show both who actually performed actions on the network and who tried to perform actions that are not permitted.

Auditable actions include: Logon and logoff attempts, creating and breaking of network connections to servers, accesses of a directory or a file, successful and failed uses of user rights, creation, deletion, and modification of user and group accounts, granting of or revoking of user rights to users and groups, and the establishing and breaking of trust relationships with other domains, shutdowns and restarts of the computer, the filling up of the audit log, and the discarding of audit entries if the audit log is already full, and starts and stops of processes on the computer.

User rights & policies

Users may be granted one or more of the following rights: Manage auditing and security log, back up files and directories, restore files and directories, change system time, access this computer from network, log on locally, shut down the system, add workstations to domain, take ownership of files and other objects, and force shutdown from a remote system.

Other abilities are not directly controllable by the administrator, but are granted to some built-in local groups. The only way to grant a user one of these built-in abilities is to make that user a member of the appropriate local group. For example, the only way to allow a person to create user accounts on a server is to make that person a member of either the Administrators or Account Operators local groups on the server.

A password policy may be set for each domain, including: minimum password length, minimum and maximum password age and password uniqueness. Account lockout controls include whether account lockout occurs and whether users are forced to disconnect from the domain's servers when their logon hours expire.

Whether or not users must be able to log on to change their passwords may also be set. If users are required to be able to log on to change their passwords, then they cannot change their passwords after they expire. If a user's password expires, the user must get help from an administrator to change the password and be able to log on again.

As with all networks, most administrators have a dual role: They are both administrators and users of the network. Although at times they will perform network administration tasks, at other times they will simply be network users, performing the same tasks as other users. For this reason, it is a good idea for each administrator to have two user accounts. One in the Administrators group (the account the administrator uses when performing network management tasks), the other in the Users group (the account the administrator uses at all other times).

Guest Logons

A network guest logon occurs at a computer when a user from a domain that the computer does not trust tries to access the computer over the network. In this case, the access is approved as a guest logon as long as the Guest account of the target computer has no password. The guest user then has all rights, permissions, and group memberships on the computer that are granted to the Guest account, even though the guest user doesn't specify Guest as his or her user name. By default, the guest account is disabled for both local and global guests.

Secure Attention Sequence

Windows NT provides an important safeguard against Trojan horse programs: Before a user can log on at a Windows NT computer, the user must type the secure attention sequence, CTRL+ALT+DEL. This series of keystrokes always directly invokes the Windows NT operating system logon screen; Trojan horse programs will never be activated by it. This way, users are guaranteed to be providing their user name and password only to the operating system itself. The secure attention sequence is also required before a user can unlock a locked workstation or change his or her password.

User Profiles

The most powerful method of managing user environments is through user profiles for users of NT Workstations. A profile is a file that serves as a snapshot of a user's desktop environment, defining the Program Manager groups and program items in those groups, printer connections, window size and positioning, and screen colors. Profiles can also restrict users' ability to change these settings on their own workstations.

Local profiles are always created automatically by Windows NT; no work by administrators is necessary. Whenever a user (with the exception of those users who don't have the ability to keep local profiles) logs on and subsequently logs off at a Windows NT Workstation computer, Windows NT saves the settings made by the user in a local profile. These settings include network connections, program groups and items, window size and position, and screen appearance. When the user logs on again at this workstation, the workstation will recognize the user and load the profile created the last time the user logged off at this workstation. Profiles ensure that each user always has his or her preferences available when logging on. On workstations that are used by different people, profiles allow each user to set up a unique environment. Each user's environment can be different from the environments used by the other users of that workstation, but each environment is preserved, and the appropriate one is loaded when a user logs on. On networks with servers running NT Server, profiles for users that have domain accounts can be stored on servers. Thus each user can have a single profile, with one configuration, which is loaded when the user logs on at any Windows NT Workstation computer.

Peter Wood is Managing Partner of Firstbase. He can be contacted on 01903 879879. (Please note that the telephone number given in the last edition was incorrect. Apologies - Ed).
Home and Away

M. Harrison

(The Winter edition featured an article on the trials and tribulations of an anonymous auditor in France. Another mis-
sive arrived, via my newly repaired bedroom window in the
early hours of a day in May, which seem to continue the saga -
Ed).

Eh bien mes colleagues,

At last we have performed follow ups of some of the areas
reviewed towards the end of last year.

The company continues to move on, meetings continue to
be held, problems continue to be identified and solutions
agreed with management.

HOWEVER: there is a Gallic perversion to actually getting
to a completion or deliverable date.

Reasons for this now vary from misunderstandings, mis-
translations, lack of budget and 'oh you mean we have to do it!'

However on more important things life continues. We have
now made so many crossings on the various cross channel
routes P & O have invited us to their Christmas party next
year.

We have experimented with different hotels at various price
and comfort bands. Food, well what can I say it varies from
escargots (which really are snails, I thought it was a race
horse) to race horses. Religion has now found its way into the
set up. On a recent visit to a central city on a Sunday evening
(accompanied I have to say by a very, very, very inebriated
female friend) we found ourselves attending mass in a cath-
dral. This is not a good thing in fact, trying to explain to some-
one who is out of their tree at seven in the evening what is
happening when you are only a couple of drinks behind. This
does nothing for religious tolerance or racial harmony.

Another thing, why do French breweries every now and
then decide to brew a special brew for no apparent reason?
And why is it only later someone tells you it’s twice as strong
and as expensive as the normal brew?

We stayed in a jolly chateau the other week. 4 Michelin eti-
oles (stars) and a rossette for the restaurant! (The restaurant was
a converted barn, this was useful as it meant the meat didn’t
have to travel far). Cheapest room which would have accom-
modated our entire audit department (with two in the bath) one
hundred notes par soir. The cheapest menu thirty pounds.
Lovely place Where did we go wrong? The starter had to be
the only course the colleague and I both had, a raw fish and
salad dish. Next day out for the count... several times both of
us. Complained to hotel management who explained that as no
one else was ill it must have been something we ate ????

British beef, now here is a story... The French beef market
has now totally collapsed. They can’t sell anybody’s beef and
there are a lot of worried looking horses about...

Le driving is getting worse. I’ve started to notice more and
more that driving on the wrong side is very peculiar, we can
do it, they can’t! Now I'm not talking of le periphique ici, but
your out of town chappies, they can’t do roundabouts, it’s
unnatural and they get in the wrong lane (well that’s what I
say), do they have an equivalent of the highway code?

I learnt something recently which explains all the times I
have been to France or Belgium looking for somewhere, fol-
lowing the signs no prob, then suddenly - lost. It’s because
they haven’t got a word for straight on. In France its ‘toute
droit’ well I (when whizzing along in a strange place reading
foreign signs) always thought that was some variation on turn
right... Quelle Plonker!. I have done the same in Holland.
Every time I came to a sign ‘Doorgangwekker’, or something
similar, I knew I didn’t want to go there so I went the other
way. It was days later I discovered, having been lost lots of
times in between, that it means through traffic.

The Czech republic has now entered our sphere of employ-
ment. One of my colleagues was stopped on a motorway last
week for doing twice the national speed limit. He received a
fixed penalty fine the equivalent of £12.50!

I am currently looking at inventory procedures. When in a
warehouse the other day I asked the Chef de department how
does he know how many units he should have and how would
he know if any had been lifted. He shrugged his shoulders said
tres simple, pointed and counted une, deus trois etc. What
about theft I repeated? His Gallic answer was that we would
find it at the annual stock take!

This is a wonderful culture shock.

Anyway as you can probably gather time marches or vois
or something so I must fait plus travai or I shall be in receipt
of grief...must sign off for now But watch this space...

A Bientot.

M. Harrison

This being the last edition of this volume, the bottle of bubb-
lly I promised for the most amusing article must go to
Monsieur Harrison for his brace of the same. However, I have
a problem, due to the strange way that his articles arrive in
the editorial study. I will keep you posted on how I solve this
problem. Meanwhile Monsieur, cheers! - Ed.
TECHNICAL BRIEFINGS
1996/97
Alison Webb

The committee has got a good way with planning next year’s Briefings and, so you can put the dates in your diaries, we are printing a summary of next year’s main events now.

As those of you at the last Technical Briefing know already, our first day in October is on automated audit tools, looking at a selection of the latest products available. It also includes a look at some of the technical issues that lie behind particular specialised computer audits.

In January, we return to the ever-topical theme of networks. We have speakers on some of the more recent technology that is being used to control users on large networks - and to check visitors from the World Wide Web.

Systems development audit is another hardy perennial: but we have had a number of requests to do more in this area. In April, we’ll be focusing on project management issues: from both the auditor’s and the IS manager’s perspective.

Secure in the knowledge of our healthy bank balance, we experimented in 1995/96 with a charge for members of £40.00 plus VAT. In practice, although events have been well-attended, we have made a small loss on each one. We have decided to raise our prices so the Briefings are not only self-financing, but also contribute a little to some of our administration and printing costs. Next season, we’ll be charging £65.00 plus VAT per briefing. If you feel this is an exorbitant charge, please let one of the committee know, or write a letter to the Journal.

THE BRITISH COMPUTER SOCIETY COMPUTER AUDIT SPECIALIST GROUP
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED 30 APRIL 1996

<table>
<thead>
<tr>
<th></th>
<th>1995/96</th>
<th>1994/95</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Briefing Sessions and other meetings</td>
<td>8,802</td>
<td>9,348</td>
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<tr>
<td>Subscriptions</td>
<td>6,285</td>
<td>4,910</td>
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<tr>
<td>Interest on bank accounts</td>
<td>1,218</td>
<td>1,089</td>
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<tr>
<td>Journal Advertising</td>
<td>150</td>
<td>529</td>
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<tr>
<td>Sundry Income</td>
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<td>639</td>
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<td></td>
<td><strong>£16,455</strong></td>
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<tr>
<td>Expenditure</td>
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<tr>
<td>Technical Briefing Sessions and other meetings</td>
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<td>9,012</td>
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<tr>
<td>Journal</td>
<td>7,896</td>
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<tr>
<td>Printing, postage and other administrative expenses</td>
<td>1,607</td>
<td>1,969</td>
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<tr>
<td>Prior Year Items</td>
<td>601</td>
<td>0</td>
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<td></td>
<td><strong>£19,714</strong></td>
<td><strong>£16,459</strong></td>
</tr>
<tr>
<td>(Deficit)/ Surplus for the Year</td>
<td>(£3,259)</td>
<td>£56</td>
</tr>
<tr>
<td>Fund Balance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Fund Balance at 1 May 1995</td>
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<td></td>
</tr>
<tr>
<td>Less 1995/96 deficit</td>
<td>(£3,259)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fund Balance at 30 April 1996</td>
<td><strong>£26,882</strong></td>
<td></td>
</tr>
</tbody>
</table>
We have been extremely fortunate this year to have an unusually energetic and dedicated committee. I make no apology for describing their achievements, as I feel we all owe the people involved a debt for their commitment and enthusiasm.

Membership

In the last few years, our membership, whilst always healthy, dropped slightly; and we saw this as a perhaps inevitable consequence of hard times. Our new membership secretary, Jenny Broadbent, has proved us wrong: our membership increased by a third this year, and has gone above the 300 mark for the first time in three years. I’ve no doubt this is almost entirely due to a great deal of hard work coupled with Jenny’s legendary persuasiveness. The membership is the cornerstone of the group: its administration is time-consuming and can be frustrating; so Jenny is to be congratulated on such a successful year.

The Journal

Of course, the point of joining a group is to get something out of it: and again we have been lucky: John Mitchell, our previous Chairman, took on the editorship of the Journal last May; and every quarter has produced an informative issue, with a judicious mixture of personal news and chat, and refereed articles of real practical use. I have several phone calls each quarter either complimenting John on the quality of the Journal, or pleading for extra copies.

Technical Briefings

Our other mainstream service to members is the Technical Briefing which was a new departure this year. By the attendance figures, it seems you agree with us that they are a good way of disseminating information and sharing ideas, and we intend to stick to the same format next year.

Committee

Again, the only reason the Briefings have worked so well is that the Committee have put so much work into their organisation. Allen Brown has been instrumental in organising the collection of money and the administration of attenders, devising and piloting our procedures for the first event. Jim Ewers and Diane Skinner have also taken on part-time jobs as unpaid purchase ledger clerks: and incidentally, it’s to Diane we owe our choice of venue: she is Chairman, as some of you will know, of the IDEA User Group: and it was after attending one of her meetings at the Royal Aeronautical Society I realised what a good place she’d chosen.

Bevan involved in handling the other side of the meetings: organising the speakers. Many of you will know them: Paul set up our day conferences in the past; and John has long experience of organising members’ meetings. The other person whom again many of you will know, is Geoff Wilson, who has not only looked after speakers, but has also been our representative this year on the Technical Board of the BCS. This meets quarterly and manages the liaison between our parent body, the British Computer Society, and its specialist groups. As one of the older and larger groups, we need to have a say in what is happening; and Geoff has been instrumental in identifying the key issues, and in putting forward our point of view.

Officers

Underpinning all our activities is, of course, the work of our two officers. You can read the report from Bill Barton, our Treasurer elsewhere in this issue: what he won’t report is how much time and care the role takes. We are most grateful to him for combining a demanding job with an important role within the group.

As for the Secretary, in my opinion, every group needs one like Raghu Iyer. Quite apart from the work he does administering our Committee meetings and disseminating information, I am most grateful for his wise and patient advice.

Plans for the future

Our chief concern for the future is that our core services: the Journal and the Technical Briefings: should continue at the same high standard: and they in turn depend on the health and strength of our membership. So whatever happens, we will be giving these areas priority.

There are many more things we could and would like to do. We are hoping to organise occasional events outside London: we hope we may be able to collaborate next year with the ISACA Northern Chapter, although this is still at an early stage.

We also see merit in holding events in conjunction with others. You will see from the new program card that the first of our Technical Briefings next year is with the IT Faculty of the ICAEW. Characteristically, the accountants are collecting the cash, but we have set the programme, and we hope it will appeal to both groups.

Conclusion

In the last analysis, this is your group: so my final thank-you must be to you, for your support. We’ve had a good year: and with your encouragement, we intend to have an even better 1997.
Held in the presence of 13 members of the Group including the Chairman and the Secretary. Apologies were received from the Treasurer and John Mitchell.

1. Approval of the minutes of the 1995 AGM

The minutes of the 1995 AGM held on 10 May, 1995 were approved by members as a correct record of the meeting.

2. Chairman's Report

Alison Webb presented her report for 1995/96 and highlighted the following:

- Alison praised her energetic and dedicated committee for their hard work and enthusiasm in making her first year a success.
- The membership numbers dropped last year due to the hard times. However, through the persistence and persuasion of Jenny Broadbent, the Membership Secretary, we have seen our numbers rise above 300 for the first time in three years.
- A judicious mix of chat and refereed articles has made the Journal a great success. This is entirely due to John Mitchell's efforts in making this a publication to be proud of.
- This year we tried a new format for our members' meetings. We held three all day Technical Briefings at a prestigious location, the Royal Aeronautical Society. This has become increasingly successful through the hard work of the committee.
- The organisation of each Technical Briefing was shared between two committee members, one undertaking speaker administration and the other the management of bookings and the incoming cheques for fees. Alison thanked Allan Brown, Jim Ewers and Diane Skinner for acting as 'unpaid purchase ledger clerks' and for organising the venue. She thanked Paul Howitt, John Bevan and Geoff Wilson for arranging the speakers for the meeting. Geoff Wilson also attended the Technical Board meetings of the BCS putting our point of view in an effective way.
- She thanked Bill Barton for putting in the time and effort required to organise our finances as the Treasurer and Raghu Iyer for his continued support as the Secretary.
- The major activities of benefit to all members are the Journal and the meetings programme, and these will get top priority for 1996/97. There will again be three Technical Briefings, the first one in October will be run jointly with the Institute of Chartered Accountants in England and Wales. A meeting in the North of England will be considered, perhaps jointly with the ISACA Chapter in the region, if there is demand.
- Finally Alison appealed to members to support the Group's activities and to come forward to join the committee.

Full details of her report will be published in the next issue of the Journal.

3. Treasurer's Report

In the absence of the Treasurer, John Bevan presented the draft (unaudited) projected Income and Expenditure Account for the year ended 30 April 1996. He highlighted the following:

- All expenses were accrued but income included on cash basis. Finalised accounts to be provided later.
- Some £4000 included in 1994/95 income related in fact to the 1993 Annual Conference.
- Due to John Mitchell's success in getting four issues of the Journal out, instead of three the previous year, there was an additional £2,400 cost involved.
- It was noted that 'Technical Briefings' have been running at a small deficit.
- It is anticipated that the deficit shown in the draft accounts of £4,850 should be reduced when all accrued income is included, but we will certainly not break even.

There were no questions raised from the floor regarding the draft projected accounts for 1995/96 which were accepted by the meeting on behalf of the membership. The final accounts will be forwarded to the British Computer Society, after the completion of the audit.

4. Election of Officers and the Committee

In the absence of any other nominations, Alison Webb was re-elected Chairman, Raghu Iyer the Secretary and Bill Barton the Treasurer. Alison Webb thanked Chris Wright for acting as the Honorary Auditor and for agreeing to undertake this role for another year. All officers were elected unopposed.

It was noted that Paul Howitt and Jim Ewers were retiring from the Committee and that the remaining Committee members had all indicated their willingness to continue in office. She thanked Paul and Jim for their support in the past and wished them well for the future. Alison asked members present who wished to join the committee to either come forward or speak to her later or drop her a line. Three members volunteered to join the committee and were duly accepted to help with the Committee duties. The three were Stan Dormer, Dave Cox and Paul Plane and their precise roles will be resolved at the next Committee meeting.

The meeting approved the election of the officers, Hon. Auditor and Committee members as noted above.

The committee elected for 1996/97 was therefore as follows:

**Officers**

- **Chairman**: Alison Webb
- **Secretary**: Raghu Iyer
- **Treasurer**: Bill Barton

**Consultant**

- **KPMG**

B.SkyB
Guidelines for Potential Authors

The Journal publishes many different types of article.

Refereed articles are academic in nature and reflect the Group's links with the BCS, which is a learned institute governed by the rules of the Privy Council. Articles of this nature will be reviewed by our academic editor prior to publication and may undergo several iterations before publication. Lengthy dissertations may be serialised. See the separate 'academic' guidelines panel for details of the preferred format for refereed submissions.

Technical articles on any IS audit, security, or control issue are welcome. Articles of this nature will be reviewed by the editor and will usually receive minimal suggestions for change prior to publication.

News and comment articles, dealing with areas of topical interest, will generally be accepted as provided, with the proviso of being edited for brevity.

Book and product reviews should be discussed with the appropriate member of the editorial panel prior to submission.

All submissions should either be on double spaced, single-sided A4 paper, or on PC format diskette in ASCII format, or via e-mail in ASCII format. Electronic submission is preferred.

Submissions should be accompanied by a short biography of the author(s) and a good quality photograph, or electronic image.

Guidelines for Academic Articles

All would-be authors should follow the Harvard system of bibliographic references. At the end of your article list all the references in alphabetical order. Always start with the author's Surname followed by initials ALLAN G.W. Then put the year of publication in round brackets ALLAN G.W. (1994) Next comes the title of the article which is put in quote marks ALLAN G.W. (1994) "This is the Title of the Article" Next print the title of the book/journal/periodical magazine in which the article was published. This should be in italics ALLAN G.W. (1994) "This is the Title of the Article" This is the Title of the Periodical. Then follows the Volume Number and Issue Number ALLAN G.W. (1994) "This is the Title of the Article" This is the Title of the Periodical Vol. 12 (3).
HQ Reorganisation

Mayday this year saw the introduction of a new organisation for BCS HQ with senior level responsibilities as follows:

Chief Executive  Judith Scott
Registrar         John Southall
Finance Director  Philip Jones
Operations        Stan Kay
Development       Malcolm Sillars
Marketing         Colin Thompson

The change puts the HQ organisation onto a functional basis and, amongst other things, brings together into one Division, the full responsibility for all BCS sales and marketing, press and public relations, communications and publications.

Arrivals and Departures

Readers familiar with HQ will notice one new name on the list shown above - Stan Kay. Stan was previously a Director of Southern Electric and joined the staff in April to take on the Operations Responsibility, including membership processing and the internal HQ IS service.

One additional newcomer not shown on the list is Andrew Lewes. Andrew also joined the staff in April and will take over the responsibilities of Registrar when John Southall retires in July. John has been on the staff of the Society for 28 years and has been Registrar since 1976. We shall all miss him, not least for his encyclopaedic knowledge of the Society, its history and its members.

Professional Issues

One of the current objectives for the Society, established at a weekend planning session at the start of Geoff Robinson's Presidential year, is to become more vigorous and proactive in driving public debate on important, IS related issues of the day. The prime responsibility for action here falls to Mike Allan, chairman of the professional Issues Board, and Mike is keen to capture the views of members on the key issues to which the Society should be focusing attention. As part of this, the June edition of the Computer Bulletin will contain an invitation to members to submit issues for inclusion in the list. We recognise that the list is likely to be longer than we can handle effectively and we shall need to prioritise, but it is important that the activity in this area should reflect, as far as possible, the views of members.

There are, I know, a number of particular issues which concern CASG members - not least the issue of falling standards in relation to software licensing - and contributions from all group members will be welcome.

Computing

If there is one issue which swells my postbag more than any other it is the delivery - or rather the non-delivery of the weekly newspaper Computing. BCS members' rights in respect of Computing are fairly easily stated - all members are entitled to free delivery, at an address of their choice without regard to their grade or employment status. The only requirement is that members must complete a registration card when requested, showing certain minimum information.

The rights of BCS members in relation to Computing stem originally from the contract under which the Society sold the title some years ago, and they are fully accepted by the current owners, VNU. Unfortunately their distribution system seems less easily convinced! To be fair, VNU does despatch 20,000 copies to BCS members each week but it's clear from my mail that a significant number of members experience real difficulty in securing a reliable delivery.

It was against this background that I met with the senior management of VNU recently in order to discuss the need to improve their distribution system to ensure that members' rights are honoured. The necessary improvements have now been promised and I hope to be in a position to publish further details in the September edition of the Computer Bulletin.

ISM 3

The new version of the Industry Structure Model, mentioned in this column in the spring 1996 edition, goes from strength to strength. Market reaction has been excellent and sales so far have very substantially exceeded our expectations. Members also seem to like the new version although a number have commented that the current pricing puts it beyond the reach of most individual members. We should not, of course, lose sight of the fact that the development of ISM3 involved considerable investment and, if we are to continue to maintain and current pricing strategy is designed to cover that investment.

However, the suggestion that members should be able to buy a copy at a substantial discount is one for which I have considerable sympathy and I am currently looking at ways in which this might be achieved.

Senior Professional Recruitment

The recruitment of senior professionals is a particularly important part of the overall BCS membership drive and we have recently introduced new admissions procedures designed specifically for those senior members of the profession. Those new arrangements do not, of course, reduce the entry standards for professional membership; they are intended simply to reduce the processing bureaucracy for those who are very clearly eligible, by virtue of their experience, training and current responsibilities.

Senior professionals admitted to membership under these arrangements usually enter at the Member grade but, for the most eminent candidates, Membership Committee may recommend direct entry to Fellow.

Full details of this new senior route, including a full guidance note, is available from the Marketing Department at Headquarters or from me by e-mail: cthompson@bcs.org.uk.

And Finally

Although there is formal response from the Privy Council at the time of writing (late May) we have had correspondence which suggests that the end of the process could be in sight. I know that a number of CASG members are interested in proposed Companion grade and I will write to all those who have expressed an interest, as soon as we have news. Anyone interested in the new grade who has not yet signalled an interest should write to me at Headquarters or e-mail the address shown above.
# Membership Application

*(Membership runs from July to the following June each year)*

I wish to APPLY FOR membership of the Group in the following category and enclose the appropriate subscription.

<table>
<thead>
<tr>
<th>Membership Category</th>
<th>Subscription</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORPORATE MEMBERSHIP (Up to 5 members)*</td>
<td>£75</td>
</tr>
<tr>
<td>* Corporate members may nominate up to 4 additional recipients for direct mailing of the Journal and attendance at our meetings (see over)</td>
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<tr>
<td>INDIVIDUAL MEMBERSHIP <em>(NOT a member of the BCS)</em></td>
<td>£25</td>
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<tr>
<td>INDIVIDUAL MEMBERSHIP <em>(A member of the BCS)</em></td>
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<td>BCS membership number:</td>
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<tr>
<td>STUDENT MEMBERSHIP (Full-time only and must be supported by a letter from the educational establishment).</td>
<td>£10</td>
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<tr>
<td>Educational Establishment:</td>
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Please circle the appropriate subscription amount and complete the details below.

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<td>POSITION:</td>
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<td>1 = Internal Audit</td>
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<tr>
<td>3 = Data Processor</td>
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<td>4 = Academic</td>
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<tr>
<td>5 = Full-Time Student</td>
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<tr>
<td>6 = Other (please specify)</td>
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**PLEASE MAKE CHEQUES PAYABLE TO "BCS CASG"**
**AND RETURN WITH THIS FORM TO THE ADDRESS SHOWN ABOVE**
### ADDITIONAL CORPORATE MEMBERS

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**PROFESSIONAL CATEGORY:**

1 = Internal Audit
2 = External Audit
3 = Data Processor
4 = Academic
5 = Full-Time Student
6 = Other (please specify)

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CASG Editorial Submission Deadlines

Spring Edition 7th February
Summer Edition 7th May
Autumn Edition 7th August
Winter Edition 7th November