



Auditing by Computer Specialist Group

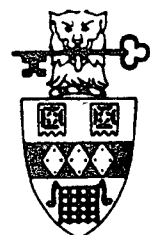
The Sweeper

The Quarterly Journal of The Auditing By Computer Group

Spring 1990

Volume 1, Number 1

THE BRITISH COMPUTER SOCIETY



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EDITORIAL - IN THE BEGINNING

The value in being a member of a group with the aims and resources of the Auditing by Computer Group comes from the dissemination and exchange of information. We find people to search for answers with and people to share ideas with. Until now this has been mainly achieved by Group meetings. Now we have an extra channel of communication through this journal.

This perhaps seems an appropriate time to launch a new 'publication' in computer auditing. We live in 'interesting times'. As auditors we face increasing uncertainty about our legal liabilities, and new sources of audit risk appear as we get to understand and manage known risks.

Last month the House of Lords decided that the auditors of a public company's accounts owe no duty of care in carrying out the audit to shareholders in that company or to members of the public who rely on the accounts in deciding to buy shares in the company. The ruling reduced the range of people to whom auditors owe a duty of care. This is seen as a useful clarification of a much debated issue but is unlikely to reduce firm's exposure to claims since in most cases it is the company that brings an action for negligence. Hot on the heels of this decision comes the draft Fifth Company Law Directive which aims to restrict auditors' eligibility to audit plcs by putting a maximum of 12 years on the length of their appointment, and specifically providing for their liability to the company, to shareholders and to third parties for any damage resulting from wrongful acts committed in the course of carrying out the audit. The definition of 'wrongful act' is likely to include negligence on the part of the auditor. Interestingly the draft directive does allow limitation of liability by law or through contracts between auditors and their client companies. But since this draft has been facing opposition from various sources since its publication in 1972 it may be some time before we are considering its practical implications in these pages....?

This new quarterly journal will bring news and articles that I hope will be of interest to you. Each issue will contain Group notices and material about computer audit. There will also be a regular column from our Chairman.

This issue contains descriptions of the presentations given at two recent group meetings; these can only be pale substitutes for attending the actual events. Hopefully you will get some idea of what you have missed and resolve to come along next time.

Mr Peter Wong, Senior EDP Auditor at Salomon Brothers has written about an enquiry technique using SAS and VMS panels that they have developed there. Perhaps you have something useful like this you could tell the rest of us about?

A round up of news about seminars, both past and future, is planned. Reports on seminars attended are invited for this. Just a copy of the programme marked with your comments could be the basis for a short report that will be of interest to other Group members.

I have included a very short listing of articles that I have seen recently which may be of interest. If you see an article somewhere that you think might be of interest to the rest of us please give me the reference and I will include it. For some articles reprints here may be possible. This section could be expanded. What else would you like to see entries about?

In future editions there will be a letters page; please write in with news, views and comments.

The journal is in a state of evolutionary development. In my short spell as editor I have discovered that it is possible to do almost anything with DTP software but that the most complex isn't necessarily the best to look at! I am still experimenting with layout and fonts, please let me know what you think of it. When I get the proper printing sorted out there will be photographs too!

In searching for a name I was reminded that when I started auditing we were 'tickers and plonkers'; but that was back when we generally audited 'around' the computer. We ran through a number of other possible titles before settling on 'The Sweeper' as a suitable description of the job. Is it apt?

My thanks to everyone who has written contributions to make this issue possible.

The deadline for our summer issue will be mid-May; contributions please.

Simon B. Jant

CHAIRMAN'S CORNER

G'DAY

Welcome to the trial run of your quarterly journal. We are still experimenting with format and content, but my thanks to Ginny for putting the whole thing together so quickly and professionally.

This particular column will appear in each issue and one of the advantages of a quarterly publication is that it enables me to "meet" you at least four times a year. Oh, I know that it's a bit one sided, but that's what I mean by advantage; mine! Just think of it. I can sound off on any particular issue that I like and then wait to read the nice responses in the next issue's letter column. Such remote control correspondence is extremely pleasant for me and totally frustrating for you, but life is ever fair and you will just have to lump it. Unless of course you get yourself elected as Chairman at the next AGM.

THE AGM

AGM day is fast drawing near and you will find the official notice and call for nominations for office elsewhere. You will notice that we are going to be a few bodies adrift for next year, due to career moves. Why not put yourself forward for election? You are bound to succeed. We don't blackball anyone! If you are masochistic enough to give it a go we will welcome you with open arms. If you fancy doing a job that is already filled, don't be put off. The existing incumbent will probably only be too willing to throw in the towel and that includes yours truly. On the positive side you make some really useful contacts for the future.

The really nasty jobs to take on, if you're that way inclined, are those of Treasurer and Secretary. This doesn't mean that the other positions are a bed of roses, but on balance I think that these two jobs are probably the worse ones.

Don't forget that this year we are having a wine tasting after the AGM. This was an idea that I pinched from the EDPAA. Will it work I wonder? Please come along and support the AGM and then swap a few ideas on how to do that difficult audit job over a few glasses of vino afterwards.

GETTING TO KNOW US

For those of you who cannot get along to the monthly meetings and meet your Committee personally, we have decided to provide you with details of Committee members in each issue, complete with mug shots where possible, so that if you see them in the street you can quickly move to the other side of the road.

LOGOMOTION

Now I know that you will be interested to know the winner of the design a logo competition which I mentioned last December. Well, the winner is no-one! Harry Branchdale was so underwhelmed with responses that he had the embarrassing task of telling us at the last Committee meeting that **NOT ONE OF YOU BOTHERED TO RESPOND!** So much for the Salvador Dali's of the computer audit underworld. I have therefore declared that we will design the damn thing by committee and drink the champagne ourselves. In fact we will probably drink the champagne first and then design the logo.

SURVEY NON-RESULTS

I did say in December that we would be publishing the results of the members survey and our interpretation of what it all means. Well, what with other things, such as organising the annual conference, we still have not had time to fully evaluate it, but we do have it scheduled for our next committee meeting.

HALF-PRICE MAGAZINES

You may remember that last December I bemoaned the fact that Elsevier Science Publishers had tried to charge me the full amount for their two security publications when I should have received a 50% discount. All is now well. It appears that it was an isolated incident and that no other members were affected. They were just unlucky in picking on me.

ANNUAL CONFERENCE

Now this year's annual conference is our 25th anniversary event and once again we are looking into the future. Don't miss the opportunity to take advantage of the priority booking for this event which your membership entitles you to. A form is included for your convenience.

THE MONTHLY BINGE

Finally, please make an effort to get along to our monthly meetings. Don't forget that the April Meeting is not as shown on the Annual Programme card, but will in fact be Ragnall Craighhead of British Gas on the subject of Controlling End User Computing. A subject which is becoming of greater importance each month.

John Mitchell

**THE
ANNUAL GENERAL MEETING
OF THE
AUDITING BY COMPUTER SPECIALIST GROUP
OF
THE BRITISH COMPUTER SOCIETY**

**Will be held on Tuesday 15th May 1989
at the Charing Cross Hotel (adjacent to Charing Cross Station)
at 4.30 p.m.**

AGENDA

- 1. Approval of the minutes of the AGM held on 16th May 1989**
- 2. Chairman's Report**
- 3. Treasurer's Report**
- 4. Election of Officers**
- 5. Election of Committee**
- 6. Election of Auditor**
- 7. Plans for 1990/91**
- 8. Any Other Business**

NOMINATIONS FOR THE MANAGEMENT COMMITTEE

As usual at this time I am asking for nominations for the Group's Management Committee.

We tend to hold about 8 committee meetings a year at a London location. The meetings start at 5.00pm and we try to finish them by 7.00pm. Each committee member is usually allocated a specific task, but we have no hard and fast rules on the matter and if you wish to join the committee 'without portfolio' as it were, just to get a feel of what goes on, then please do so.

The committee is definately not 'cliche' and we genuinely welcome new people, new ideas and lots of enthusiasm!

I list below the officers and committee members who will be standing for re-election, plus the vacancies that we are

trying to fill. If you fancy one of the posts that is already 'filled' (including mine) just put yourself forward and the AGM can vote on it. No one on the Committee will be put out by such a display of interest!

If you would like to discuss any of the posts on the committee then please contact either myself (0707 54040), Ragu Iyer (01-236 8000), or any Committee member that you already know (their telephone numbers are on the March management committee list at the back of the magazine.)

Remember this is your Group and you should use this opportunity to have your say.

John Mitchell

THE MANAGEMENT COMMITTEE FOR 1990/91

Chairman	John Mitchell	Consultant
Secretary	Ragu Iyer	Peat Marwick McLintock
Treasurer	A J Thomas	Consultant
Membership Secretary	Peter Martin	E D & F Man Ltd.
Member's Meetings	John Bevan	Consultant
Member's Meetings	VACANT	(Note - we need to have 2 people for our member's meetings)
Annual Conference	Brian Kearvell-White	Grant Thornton
Discussion Groups	Stephen Crowe	Ernst & Young
Marketing	Harry Branchdale	British American Tobacco
Publications	Peter Murray	Herts County Council
Magazine Editor	Ginny Bryant	City University
Long Term Planning	VACANT	

ADVANCE NOTICE OF THE ANNUAL CONFERENCE

1990's - A NEW DECADE

19th June 1990

The International London Press Centre
76 Shoe Lane, London, EC4a 3JB

We are now entering into a new decade, where not only will equipment and systems tend to develop and improve, but also business horizons will vastly extend. System development aids will continue to improve, with the consequent continued expansion of the scope of systems. The power of microcomputers has already greatly increased, and the trend to bring them into central systems will become more extensive. Controls will need more automation and more sophistication. Databases will come into even more widespread use.

This conference aims to look forward at audit concerns and opportunities, developing from the present situation on the use of microcomputers, development aids, databases and on-line systems, and try to probe an initial view

of how audit should respond to these developments.

Speakers have been drawn from commerce and the audit profession, and there will be ample opportunity to raise questions, including a panel session at the end of the day.

The conference, which is the 25th Anniversary Conference for the Group, will take place on Tuesday 19th, 1990 at The London Press Centre, 76 Shoe Lane, (entrance in Printer Street), London EC4A 3JB. Tickets will cost £120 for members of the Group or of the British Computer Society, and £155 for non-members (which will include a year's membership). For enquiries about the conference, or application forms, please contact Raghu Iyer's Secretary on (01)236 8000 Ext. 5615.

The programme for the conference is;

TIME	TOPIC	SPEAKER
0900 - 0930	Registration	
0930 - 0945	Introduction	John Mitchell Chairman ABC Group
0945 - 1030	Communications in the Future	Timeplex Ltd
1030 - 1100	Coffee	
1100 - 1145	After 4GL's	Stuart Senior, Senior Partner C&L Deloitte
1145 - 1230	Micro Computing - Macro Problems	Neil Mausley Corporation of London
1230 - 1400	Lunch	
1400 - 1445	External Audit Exposures from Technological Change	Willie List, Computer Audit Partner Peat Marwick McLintock
1445 - 1530	The Internal Audit Response	Alan Oliphant Standard Life Assurance
1530 - 1600	Panel Session	

1990 CONFERENCE - ADVANCE BOOKING FORM

To: Mr A J Thomas

**3 Kings Court
The Maltings
Great Dunmow
Essex
CM6 1UX**

**Please reserve me the following places on the annual conference
"1990's - A new Decade".**

**Name:
Position:
Company/Organisation:
Address:**

**Name:
Position:
Company/Organisation:
Address:**

**Name:
Position:
Company/Organisation:
Address:**

Fees: BCS or ABC Group Members £120 (including VAT)

Non Members £155 (including VAT)

I enclose a cheque for £..... made payable to "BCS/ABC".

THE GROUP'S CONSTITUTION

1. NAME

The Group shall be called the Computer Audit Specialist Group of the British Computer Society. (NB - previously known as the Auditing By Computer Specialist Group).

2. OBJECTIVES

- a) To encourage research into the audit of information technology and promote the development of auditing and control techniques to reflect changes in technology, legislation and society.
- b) To provide a forum for the development of awareness and competence in information technology audit.
- c) To promote the efficient, effective and economical use of audit and control within information technology.
- d) To represent the interests of the Computer Audit Specialist Group to other bodies.
- e) To be the primary focus for audit and control matters within the BCS.

3. CONSTITUTION

The Computer Audit Specialist Group shall consist of:

- a) The Officers, being Chairman, Secretary and Treasurer, all of whom should normally be members of the BCS.
- b) Other officers to represent sub-groups or to perform other tasks which may be determined from time to time.
- c) Individual fee paying members.
- d) Corporate fee paying members, viz Companies, Groups or other organisations wishing to support the purpose of the Computer Audit Specialist Group.

4. ELECTED OFFICERS

- a) The officers shall be elected by the Annual General Meeting (AGM) and shall serve from their time of appointment until the end of the AGM following.
- b) A vacancy occurring during the term of office may be filled by an appointment by the Management Committee.
- c) Other officers may be nominated to fill any other

posts created by the Management Committee.

5. MANAGEMENT

- a) The affairs of the Group shall be managed (subject to the control of the AGM) by a Management Committee comprising:

- 1) Elected officers

- 2) Co-opted officers

- 3) Elected members

- b) Co-Option: the Management Committee may co-opt members as required.

- c) Meetings: The Management Committee shall meet at least four times in its year of office and frequently enough to properly carry out the business of the Group.

- d) Notice: At least 14 days notice of the place, date and time of meeting shall be given to each member of the Management Committee.

- e) Quorum: The business of the Management Committee may be transacted by not less than four members.

- f) In the absence of the Chairman, the committee shall elect one of its number to take the chair for the meeting.

- g) Voting: In determining a question by vote at a Management Meeting a simple majority will be sufficient. The chairman of the meeting shall have a second or casting vote if necessary.

- h) Sub-Committees: The Management Committee may appoint at any time sub-committees with appropriate terms of reference, each responsible to the Management Committee and under the Chairmanship of a Management Committee member, to assist in carrying out the business of the Group.

- i) Working parties: The Management Committee may set up at any time working parties responsible to the Management Committee which shall appoint a Chairman and provide appropriate terms of reference.

- j) Branches: The Management Committee may set up at any time branches responsible to the Management Committee which shall appoint a Branch Chairman

and provide appropriate terms of reference.

6. ANNUAL GENERAL MEETING

- a) Each year the Group shall hold an AGM in May.
- b) Notice: The Secretary shall send notice of the date, time and place of the AGM to all members of the Group at least 28 days before the Meeting.

For this purpose a notice printed in the Programme Card of the Group and complying with the above requirements shall be considered sufficient notice.

- c) All members of the Group have the right to attend the AGM, for which there shall be no attendance charge.
- d) Agenda: The following items shall be included:
 - 1) Minutes of the previous AGM
 - 2) Minutes of any Extraordinary General Meeting held since the previous AGM
 - 3) Chairman's Report
 - 4) Statement of Accounts
 - 5) Proposals for alterations to the Constitution
 - 6) Proposals for alterations to Fees
 - 7) Election of Officers
 - 8) Election of Auditors

e) Nominations: Any member is entitled to nominate a person for any elected office on the Management Committee. Such nominations may be proposed and seconded at the meeting if not previously received by the Secretary.

f) Voting: Every question at an AGM shall be decided by a simple majority of the votes cast. Individual members of the Group each have a single vote. The accredited representative of each corporate member also has a single vote. The chairman shall have a casting vote if necessary.

7. EXTRAORDINARY GENERAL MEETING

- a) An Extraordinary General Meeting (EGM) shall be convened on a resolution of the Management Committee or within five weeks of receipt by the Secretary of a requisition signed by no less than twenty members (Corporate members having only a single vote) stating the business to be transacted at the meeting.
- b) An EGM shall transact only such business as is

specified in the resolutions or requisitions convening it.

8. FINANCE

- a) Bank account:

In accordance with BCS Guidelines, the Group shall have at least one Account (Account A) at Lloyds Bank, Langham Place Branch, used for normal running expenses. Other accounts at that branch or other places as approved by the Management Committee, may be used for special events or for investment funds.
- b) The Group shall follow the BCS Financial Guidelines as issued from time to time.
- c) The financial year shall start on 1st May each year.
- d) The Treasurer is responsible to the BCS for submitting draft budgets, recording ongoing expenditure and capital expenditure separately for each by 30 November in the preceding year.
- e) The Treasurer is responsible for making available to the BCS a revenue statement at the end of every financial year (30th April) in respect of the Group's normal operations and special events, this statement to be included in the BCS annual accounts subject to audit by the BCS auditors.
- f) All cheques drawn on the Group's bank accounts must be signed by any two of Chairman, Secretary and Treasurer. In the event of such signatories being unavailable, then the Management Committee may appoint a member of the Committee to act as second signatory, together with one of the nominated signatories.
- g) The accounts of the group shall be audited each year by an auditor elected at the AGM.

h) All income and property of the Group from whatever source derived shall be applied solely to the promotion of the objects of the Group.

9. DISSOLUTION

In the event of the winding up or dissolution of the Group any surplus assets remaining after discharge of liabilities shall automatically rest in the BCS.

In the event of an authorised officer of the Group not being available to conduct the transfer of any assets, then an appropriate officer of the BCS shall have the required power.

10. BRITISH COMPUTER SOCIETY

- a) The Group shall be governed by the rules of the BCS as these apply to Specialist Groups of the BCS. Where it is considered that a rule of the Group is in conflict with a BCS rule governing Specialist Group activities, the BCS rule shall apply.
- b) The Chairman of the Group must be a Fellow, Member or Associate Member of the BCS.
- c) Other elected officers of the Group should normally be members of the BCS.
- d) The Chairman, or other elected Committee Member of the Group, is ex officio a member of the BCS Specialist Groups Management Committee.
- e) The Group must advise the Chairman of the Specialist Group's Management Committee of the names of any elected officers who are not members of the BCS.
- f) All members of the Group's Management Committee shall abide by the Code of Conduct relating to members of the BCS.
- g) The Group may use the BCS name to enhance the reputation of their own activities, but must not bring the BCS into disrepute.
- h) No member of the Group may speak on behalf of the BCS without proper authority from the BCS.

NEXT DISCUSSION GROUP MEETING

Stephen Crowe who organises the Discussion Group meetings has booked a room at the Westminster Centre in Central London for the next bash. The date is Wednesday 16th May (the day after the AGM) and Stephen is currently requesting information regarding who will attend and more importantly what issues you would like to discuss. Space limits this to a select 25 members who will be charged £25.00 each for the day. This fee includes coffee, lunch and tea. If you are interested in attending and making a contribution to this one day event please contact Stephen on 01 928 2000 to book your place and make your discussion requirements known.

THE FIRST TWENTY-FIVE YEARS

Fred Thomas, Group Treasurer

In 1964, the idea of a group to study problems related to computer audit work was raised, and the late Eric Hinchcliff (who was then Internal Auditor with the National Coal Board) spearheaded the proposal to establish such a study group under the auspices of The British Computer Society. He held discussions with Cecil Marks who was then President as to the best ways of achieving such a widening of interests

As a result, a Study Group of the BCS covering "Auditing by Computer" was set up in 1965, and met at Hobart House, Grosvenor Place, with Eric as Chairman and J. Miller Ross as Secretary. Much later Miller also became Chairman of the Group. The following year the BCS started Specialist Groups within its structure and the ABC Group became one of the first of the Specialist Groups, and has remained such ever since.

Since 1965 a regular series of monthly meetings has been organised using a variety of meeting places in Central London. Many well known speakers have addressed the Group on topical computer audit and associated matters.

Once established as an authoritative discussion centre on computer audit, the Group detected a need for specialist publications, and set about developing and writing these. The first was the well received "Audit of Database Systems", which incorporated the work of three different study panels. The Group later went on to produce a publication on the audit of mini-computer systems, and later still a series on the requirements in relation to different types of software packages. Currently the wheel has turned full circle, and there is now a joint study group which incorporates representatives from two other Specialist Groups of the BCS and is busy producing a revised book on Databases and Audit.

In the late 1970's the Group further developed its international connections and organised the first U.K. International Conference on Computer auditing, which spent three days discussing papers and ideas on computer audit. It worked in liaison with the C.I.P.A. of the United States, The Chartered Accountants of Canada, and the Accountants of Holland, to provide a wide and representative panel of speakers. Delegates to the conference also came from Europe and North America.

Since 1980, the Group's own Conference has become a regular annual one day feature, and usually has a current dominant audit problem as its main theme. Originally the Conference occurred in November, but it is now held in June. It usually attracts 80 to 100 delegates.

The most recent new feature has been the arrival of Discussion Group days, in which members can get together to develop a specified topic or problem, hearing a limited number of speakers and then participating in discussion or workshops related to that theme.

Membership of the Group is widespread and reaches as far as Hong Kong. It includes internal auditors, external auditors, computer department personnel, lecturers, advisers, consultants, academics, managers and security managers.

The pattern of the Group's activities is organised by a Management Committee, which has a policy of evolution and of keeping in step with developments and current problems. On one hand the stability of the Group is demonstrated by the fact that the 25 years have produced only four Chairmen, viz: Eric Hinchcliff, J. Miller Ross, Willie List and now John Mitchell. On the other hand the Committee membership is subject to some change almost every year, and young blood and new ideas are introduced.

Over the years the Group has enjoyed the support of a consistent and increasing band of membership drawn from all over the country, but naturally with the highest concentration being within the London commuter area. Currently there has been about 175 subscriptions paid, which after allowing for Corporate Membership means that nearly 300 auditors support the Group. As a number of auditors spend a short part of their career specialising in computer audit work, there is always a continual change in part of the membership list, and the topics selected for meetings programs try to take some recognition of this fact.

At the end of its 25th anniversary year, the Group is changing its name and constitution to enable it to more easily meet the wider needs of modern computer auditors, but the connection and continuity will be maintained and be evident.

Each member of the Management Committee takes on a particular responsibility for a part of the workload, and we must be grateful for their efforts and acumen in keeping things going on a pattern which continues to be of interest to members. The gradual change in the make-up of the Committee creates a continuing need for new volunteers to lead the way to the next 25 years.

COMPUTER VIRUSES

The annual joint meeting between our group and the Home Counties group of the IIA was on the topical subject of computer viruses. Over 130 people attended a tripartite presentation on the subject from Alan Soloman of Data Recovery Ltd, Paul Rowan of BAT Industries Plc and Fred Hart from Touche Ross.

Alan Soloman gave a valuable practical demonstration of a virus actually in action on a micro computer in order to demonstrate how they worked and how they could be identified. He was at pains to highlight the differences between a virus, a worm and a trojan horse and also to point out that many so called viruses are often nothing more than poor packages, or network controller software.

Paul Rowan then showed how a large multi-national conglomerate had responded to the threat in a controlled way. Paul offered no hard and fast solutions, but lots of practical common sense.

Fred Hart followed on by examining the topic from the viewpoint of how standard development and control methodologies could reduce the threat of virus attack.

INTERNAL AUDIT/EXTERNAL AUDIT - A GOOD WORKING RELATIONSHIP

John Machin BSc, ACA
Senior Manager Computer Audit Consultants
KPMG Peat Marwick McLintock

Introduction

The talk covers some personal practical experience of working both in and with internal audit. The views expressed in this paper are those of the author and not necessarily those of KPMG Peat Marwick McLintock.

Outline of talk

- * Personal Background
- * Internal audit objectives and scope
- * External audit objectives and scope
- * Common ground
- * Practical examples
- * Personal Background

I'm a senior manager in the Computer Audit Department of KPMG Peat Marwick McLintock's London office. After qualifying in 1984 I joined computer audit and from that time I have done a number of secondments to organisations such as the Greater London Council, carrying out various EDP audit assignments, The Department of Trade & Industry, managing their computer audit department for 18 months and also London Regional Transport, advising them on various computer audit matters. My present clients are many and varied and include among them several public sector and

inevitably banking and finance clients. I also manage 3 bank audits. I have worked with and in some instances against, the internal computer auditors from a variety of different backgrounds and with varying resources available to them.

Like most relationships the internal audit/external audit relationship is one that has to be worked at, and personalities and politics obviously play a large part in this process. Ever the optimist, I would like to think that a good working relationship can have benefits to both sides and can only be of benefit to the organisation concerned. This is because I feel that the organisation gets a better coverage of EDP matters and therefore obtains value for money from its auditors, both external and internal. If these two parties can work together then there should also be some cost savings along the way too. However, there has to be a distinction between cost and value i.e reduction of audit cost is no guarantee of improvement in audit "value".

Objectives

Let's first look at the respective objectives of the two sets of auditors.

Internal Audit

Definitions from IIA Standards and Guidelines for the Professional Practice of Internal Auditing.

Nature

Internal auditing is an independent appraisal activity established within an organisation as a service to the organisation. It is a control which functions by examining and evaluating the effectiveness of other controls.

Objectives

- * "to assist members of the organisation in the effective discharge of their responsibilities", by
- * "providing analyses, appraisals, recommendations, counsel and information concerning the activities reviewed", and
- * "includes promoting effective control at reasonable cost"

i.e it is a fairly pro-active role.

Scope

- * Evaluation of the adequacy and effectiveness of internal controls
- * Reviewing reliability and integrity of financial and operating information
- * Reviewing systems established to ensure compliance with those policies, plans, procedures, laws and regulations which have a significant impact on operations and reports.
- * Reviewing means of safeguarding assets and verifying existence
- * Appraising the economy and efficiency of the use of resources
- * Reviewing results versus objectives and goals set.

How many internal audits however have a clear Charter or "Mission statement"? Of these how many actually extend specifically to cover EDP audit? I'm sure that if we did a quick poll we would be able to come up with a fair consensus of some of the areas that internal EDP auditors should be addressing. However, I'm also sure that there would also be a number of organisation specific areas depending on the type of business and it's culture etc. That is, an internal audit department is really only what an organisation has defined its role to be and this extends to EDP audit too.

In an ideal world though the scope for internal, as

compared to external, EDP audit is boundless. The thing that does form the boundaries are of course resource constraints:- money, manpower, skills, access to technical material etc..

This is where external auditors can often play their part with the resources that they have available to them.

External Auditor

From the perspective of the statutory audit and ignoring any special assignment work that we may be asked to carry out.

Nature of external audit

The primary nature of the external auditor's work is to report to members (shareholders) of a company in the terms required on their financial statements.

Objectives

Normally our work culminates in an expression of opinion on the financial statements, and whether they have been properly prepared, within a framework of recognised accounting policies.

Scope

- * Evaluation of the adequacy and effectiveness of internal controls
- * Reviewing reliability and integrity of financial information
- * Reviewing systems to assess if reliance upon them is possible/cost effective
- * Reviewing means of safeguarding assets and verifying existence

The audit process

This can be broken down into a number of steps:

- a) A review and assessment of the internal control of an organisation. Following our examination we will decide whether we wish to rely on internal control to any extent for audit purposes and if we can adopt a compliance approach to our audit. Should we find that internal control is such that we cannot rely on it, or for economic or other reasons, then we will adopt a substantive route to our audit.
- b) The compliance audit therefore is concerned to a high degree with assessing systems and the controls over them for reliability and acceptability. Please note however that the external auditor is not allowed to

abandon the substantive route under the terms of the auditing standards published by the combined institutes. We must always therefore carry out certain routine transaction checking. In order to adopt the compliance route we must be prepared to come to grips with very complex systems involving all aspects of modern computing. This can be a time consuming and difficult exercise but can also be a rewarding one both for us, as EDP auditors and also for our clients.

- c) The substantive route requires us to put less effort into recording and assessing the detailed systems of our clients but conversely greatly increases the volume of our checking.

One of the paradoxes of modern computer systems is that the compliance route is very costly to pursue and the use of the computer itself as an audit aid may make the substantive route more attractive. However this is potentially a blinkered position because the auditor will get involved in systems only after implementation and may well detect errors which could have been prevented by an earlier assessment.

The scope of the external computer auditor's work may therefore range:-

- from in the *minimum* looking at the computer environment to assess whether proper accounting records are being maintained and the ability of the organisation to survive on a going concern basis in the event of a prolonged computer breakdown. We would assess the general security of data for accounting and reporting purposes and also the impact of the computer on our audit procedures (absence of audit trail or general lack of security consciousness etc.).

- to in the *extreme* placing reliance on the operation of specific computer applications by identifying specific EDP controls within defined "information streams". Simply KPMG's audit methodology considers information streams as flows of data through from the outside world (or the "boundary" with the organisation, say a suppliers invoice or cash receipt etc.) ultimately through to the general ledger and financial statements, with associated control points over completeness (population) and accuracy along the way. Where these are dependent on the operation of specific programs then we isolate and test the EDP controls which we consider as :-

- * Logical access
- * Systems development and program change
- * The manual follow up elements of EDP controls (such as the follow up of computer produced excep-

tion reports).

Obviously the decision to place reliance is a question not just of the practicalities of this approach but also the costs. Remember cost versus value.

The subject of external auditors placing reliance on systems tends to go in cycles. It is coming more to the fore in banking and finance environments with the requirements of the Banking Act 1987 and Bank of England supervisory notices (such as BSD/1987/2) where we are being asked as reporting accountants to take a look at systems by the Bank of England in our Accounting and other Records and Internal Control systems (AORICS) reviews. We are asked to look at and indeed comment on:-

- development and maintenance risks
- detection of errors
- business interruption risks
- fraud and unauthorised access to information.

These are clearly departures from some of our more traditional role. For Building Societies we are even asked to comment on the adequacy of the documentation of computer controls.

One interesting factor of this work is that we may also be asked to assess and comment on the effectiveness of the internal audit function. This would involve consideration of its scope and terms of reference (for example do these extend to EDP?), its independence from operational management, its reporting regime and also the quality of its staff.

Common Ground between the two

There is clearly a lot of common ground between internal and external auditors and I think that this is going to increase rather than decrease. The presence of a strong internal EDP audit, although it cannot totally replace the external audit role, can assist the external audit process, by allowing us to place maximum reliance on their work. Thereby ultimately increasing the value of the external audit and also reducing its costs too (sometimes). We obviously may have problems in terms of the cycle of coverage of some areas by internal audit, and this is something that needs to be looked at carefully during the planning stages of our audits. The following are some common areas of work:-

- * General and environment controls audit
- * System Development

- * Pre-implementation System Reviews
- * Management control and security
- * Use of automated audit methods

There is clearly a need for specialist knowledge to carry out EDP audit and therefore this is another common tie between the two.

Practical Examples

Let me now give some practical examples of working with and against internal audit.

Example 1

Large organisation with a number of operating companies and fairly disparate EDP resources. Large and experienced internal audit department with central EDP audit capability.

We have to date :-

- a) Provided computer audit personnel as secondees to help them to determine priorities for EDP audit and also to give ongoing advice on the direction of their computer audit work and the resources they require. With increased edp audit resources this is currently being revisited by the client.
- b) Provided a specialist training for a number of staff - (we run 2 courses each year March/April and October/November for internal and external staff). The objectives of these courses are to explain basic EDP principles, and also to establish methodologies and documentation for carrying out installation and pre and post implementation system reviews, to give hands on computer enquiry experience etc.. This means that any work done by internal audit can be used by ourselves as external auditors and vice versa (see below). In fact our documentation has been customised by the internal audit dept so that it integrates with their own systems of review and control etc.
- c) Provided a course for all auditors on system reviews basics of EDP including systems development life cycle and EDP controls.
- d) We have done a variety of installation review work together.

Mainframe. The organisation uses a bureau for a major part of it's processing. This review was a joint exercise and included the use of Computer Asso-

ciates' Examine MVS product for which we have a worldwide license. We ran the software and jointly analysed the findings.

Essentially what this review covered was :-

- * EDP organisation and responsibilities
- * Security policies
- * Implementation of MVS
- * Control Procedures
 - system changes
 - parameter changes
 - programs with special powers (utilities etc.)
 - use of access control software (in this case RACF)
- * Violation reporting

This exercise was obviously a plus as far as internal audit were concerned as they wouldn't normally have had access to such a product as Examine, due to prohibitive licence costs etc. It's use was also a coup as far as the relationship with the bureau was concerned, as they were impressed by the use of specialist software for doing the review.

Although the client had within their agreement with the bureau various access rights for audit purposes these had not previously been exploited due to:-

- i) certain resistance from the bureau, probably due to lack of understanding as to why the review was required
- ii) lack of appropriate software tools to do the job.

The presence of the external auditor also added some credence to the request to do the work and killed two birds with one stone as far as the bureau was concerned.

Numerous other non mainframe sites have also been visited for review by internal audit. In these instances we have provided specialist checklists (CAGN's - Computer Audit Guidance Notes) which are researched and written by KPMG for the review of specific machine environments. These CAGN's provide outline notes plus some of the wrinkles drawn from experience in the review of these environments, plus of course a checklist for review itself.

e) Development of systems

Internal audit and external EDP audit have a common interest in getting involved as early as

possible in the development of systems. This has included looking and commenting on:

- * the controls over the development process (project control, cost benefit analysis carried out etc)
- * the design of and controls within the system (by obtaining and commenting on specifications, attendance at steering committee meetings etc.)
- * specification of information retrieval or other automated audit techniques

In carrying out this work the external auditor can share his experience/knowledge of similar systems/packages gleaned from other client environments. This work has sometimes culminated in pre-implementation system reviews being carried out.

f) Pre-implementation system reviews

Again these have been done jointly in some cases or individually depending on resources and the systems concerned.

Essentially these consist of critical reviews of systems, and cover :-

- * Documentation of the system's
 - input
 - processing
 - output
- * Evaluation of management/user controls proposed, if any
- * Establishing if proper accounting records are maintained (management trial etc.)
- * Book keeping/accounting principles
- * Auditability and suggested audit approach
- * Early warning of perceived weaknesses and recommendations to management for control

These may lead to:-

- * post implementation reviews to update clerical procedures actually in place.
- * development of audit programs and assessment of potential for use of computer assisted audit techniques (which can lead to audit savings)

There are problems with doing this work as far as external audit are concerned in that the costs are not related to immediate audit opinions. Therefore working with Internal EDP Audit we can get the appropriate coverage whilst reducing the external cost to the organisation.

g) Computer Assisted Audit Techniques

We do make extensive use of CAATS for the external audit. These are run for us by internal audit using our audit software, we liaise on changes in parameters etc. This has provided internal audit with tool additional to its existing enquiry capabilities, which it would otherwise not have at its disposal.

h) Fraud

Although as external auditors we do not have any specific requirements to look for fraud ie "we are a watchdog not a bloodhound", we are currently talking on the subject of software design to aid in detection of payroll fraud. Again, we are drawing on experience of similar exercises at other clients.

Summary on example 1

The above has been achieved through continual liaison both formally and informally at all levels. Lengthy discussions at the planning stage have identified areas of common concern for concentration of mutual efforts. We also copy each other on major reports, letters and memoranda etc.

Example 2

Rather unique organisation where we are involved in project cost monitoring work. In this instance although the client has experienced internal audit and EDP resources they didn't at the start of the work have any internal audit resources with computer audit experience.

We have assisted over a lengthy period in the development of an audit approach based on monthly cycles of work. The work involves extensive use of KPMG's proprietary audit software; System 2190 to produce enquiry programs for use by the internal auditors. These programs produce samples, carry out a certain amount of reperformance of calculations and produce exception reports all to specifications set by internal audit.

At the last count we interrogated the following systems with the number of objectives in reports.

System	Objectives	Reports
Cost ledger	19	28
Bought ledger	8	12
Fixed Assets	8	14
Sub Contractors	14	14
Debtors Ledger	4	5
Payroll	3	3
	56	76

The enquiries rely on external data acquisition from one computer environment to another (PRIME to DEC VAX). We have worked closely together with the client's EDP staff to establish the procedures for effective transfer of this data.

Some of the requests for enquiries are fairly convoluted and involve file merging and matching, and quite intricate programming. This has increased our capabilities in the use of S2190. The enquiry development is essentially completed and documented and has now been handed over to the client who have been trained in the use of system S2190 - (which we make available for the use of clients who we have been trained in its operation.).

Summary on example 2

Again the above is a good example of the symbiotic relationship that can exist between external and internal audit. However we do not live in a perfect world and so now I want to consider a few problem areas which I have called politics and personality.

Example 3 - politics

Large multinational organisation, small expert internal audit department including edp audit. In this instance we as external auditors are working to standard audit programs and ICO's drawn up in conjunction with internal audit. The reason for this is that the client have a large number of common systems running around the world and so therefore there is a great benefit gained through this process. Because of the small number of internal auditors we have decided that it is difficult to carry out joint exercises and therefore we divide responsibilities for work at an early stage of the financial year. However, we have to run the client's enquiry software as management will not permit us to use our own, therefore we have to attend specific courses and support alien software. Internal audit do not run it on our behalf as they are quite understandably hard pressed for resources.

This in essence sounds not a bad relationship. However politics have recently had a role to play. We were

carrying out a system review as agreed when Internal EDP auditor arrived on the scene. They had received a draft copy of our findings and found it difficult to accept that external rather than internal audit were reporting the problems. Therefore they also wanted to issue a report. In the final analysis therefore two reports were issued, one internal, one external, both essentially saying the same things. This action although definitely bringing the points home to the client's attention has also detracted from the findings, as the auditee was confused and bemused by receiving two reports. He probably feels that he is not getting a good service from his "auditors" who although both are telling him how to get his act together appear unable to do this themselves.

Summary on example 3

This is a real shame considering that we have worked together so well on other areas such as:-

- use of Examine MVS
- use of DEC VAX/VMS toolkit (functions similar to Examine MVS)
- reviews of systems and computer installations etc

Although we have had "heated" discussions over draft reports before we have always managed to present a combined front to the auditee as far as final audit reports were concerned.

Example 4 - personality

Multinational organisation; London branch operations. KPMG are worldwide auditors. There is extensive use of EDP audit in the head office which is located overseas. The Head of EDP internal audit in the UK has consistently refused to give us permission to use our software because they write all the audit software. KPMG software already exists to do the majority of work. One example of this relates to circularisation. Internal Audit promise each year to produce this but so far have failed to deliver and instead do this manually, taking 10 man weeks.

Summary on example 4

Given that there is fee pressure on us from the client we have not pushed the use of our software. Clearly this is not the most cost effective utilisation of resources from an internal audit viewpoint but is a situation of personality, where logic and common sense often do not prevail.

Example 5 - other pastures

The final example is the experience that I gained working

within Internal Audit which gave me a good perspective on looking at systems other than financial. These could be for example systems recording and supplying various pieces of quite often market sensitive information, statistics etc, where potential political embarrassment of security breaches was one of the risk assessment criteria used to determine job priorities. This time also gave me the opportunity to look at some areas which for example an external auditor does not always get the chance to consider in detail such as:-

- use of SSADM
- computer resource utilisation
- disaster recover planning etc.

These are normally sold as additional services by external auditors or their related management consultancies.

Conclusion

Internal auditing has no boundaries. However internal audit departments have boundaries set on their activities. Some may say that too much emphasis is placed on reviewing the control systems of the Commercial or Financial functions of organisations and too little on the control systems in Personnel, marketing and Technical functions. Perhaps the reason for this is that auditors (internal and external) feel happiest in an environment in which they usually trained. Or that there is insufficient differentiation between internal and external audit because most activities are converted into monetary terms which is the only common measure.

External auditing has fairly tightly defined boundaries and represents one of the costs which impacts on an organisation.

In order to get the best value from the "auditors", both internal and external, including EDP audit we should work as closely together as possible so that we can draw on the relative strengths of each other i.e.:-

- the internal auditor for his inside knowledge of the organisation, its personalities, politics and resources.
- the external auditor for the added 'weight' of his independence, the benefit of his knowledge gained from similar situations at other clients and also his access to technical and other (e.g manpower) resources.

Together they can make a good value for money team and perhaps gain a little or lot of experience in the process too.

USER-FRIENDLY AUDIT INTERROGATION APPLICATION USING SAD

by Peter Wong

Senior EDP Auditor

Salomon Brothers International Limited

The Menu-driven Audit Enquiry System (MAES) at Salomon's

The data interrogation language currently being used in Salomon Brothers internal audit group is the SAS System. This is a powerful and flexible software tool for data analysis. It runs under the IBM MVC Time Sharing Option (TSO) environment.

The use of the SAS language normally requires substantial training and programming skills. Prior to the introduction of the MAES application at Salomon Brothers, the performance of audit interrogation used to be the sole domain of the EDP auditors. The general auditors specified the audit interrogation requirements, but did not take part in the program design and development.

A large majority of interrogation requests concern the general ledger history files or the trade history files. The general ledger history contains past accounting transaction details, and the trade history contains past security transaction details. Both types of files are dumped onto magnetic tape media each month and are available for interrogation using SAS.

This arrangement for data interrogation work to be performed by EDP auditors only was not satisfactory. Routine audit interrogations took up much of the EDP specialists' time and lacked the close involvement of the general auditors. Although the use of data download onto a microcomputer for the general auditors to perform simple analysis (e.g. using DATABASE language) was a possible solution, this was often impractical due to the very large size of the data files. At Salomon Brothers the EDP auditors addressed the problem by designing a menu-driven application package for general use called MAES.

The package is designed to give all auditors a user friendly interface to the PSO environment for general audit interrogation. The application is completely menu-driven and does not require the users to have computer programming knowledge. The programs are written using the CAC language with parameter substitution. The IBM Interactive System Productivity Facility (ISPF) is used to design the menus. A panel is used for displaying each menu layout, and parameter substitution

is achieved using the CLIST command procedural language.

The MAES application can be used to perform typical audit interrogation tasks on the general ledger history and the trade history files. Users can access from a dedicated IBM terminal. Or via a local area network terminal emulation gateway (IRMALAN). On achieving access to the main menu of MAES, the user gets a choice of interrogating either general ledger or trade transactions. The user may then specify the selection criteria on one of the following sub-menus:-

1) The General Ledger Enquiry sub-menu will allow the user to select transactions by:

- transaction period
- main account code
- sub account code
- firm code

The generated report will be sorted in firm code, main account, sub-account and date order, with sub-totals for each firm code, main account and sub account.

2) the Trade History Enquiry sub-menu will enable the user to select transactions by:

- transaction period
- firm account
- security type code
- customer account code

The generated report will be sorted in firm account and trade date order, with sub-totals for each firm account.

The MAES programs will validate all input fields and user selections. After the user has specified all the menu options and criteria of the interrogation, a job containing an SAS program will be automatically created and submitted under TSO for processing. A printout of the results will be automatically routed to a designated printer.

A new version of the MAES application is currently being developed which will include more functions and enhancements to enable the user to specify transaction sort orders and select output print fields.

The MAES Systems is now widely used among the auditors of the Salomon Brothers London office. As a general purpose interrogation package, it has provided a user - friendly environment for handling simple data enquiry requests. The use MAES by the general auditors for routine data enquiries has allowed the specialist EDP

auditors more time and resources to tackle the complex audit interrogation tasks that are outside the scope of MAES.

OF INTEREST ?

CHANGE MANAGEMENT - News of an Informative Seminar

by Peter Liles, Manager, User Administration, Mercury Communications Ltd

Mercury Communications' Information Systems Directorate has recognised the need for a change management system. Our problem is that we have a VAX environment with some 3000+ company users for fault logging, network planning and customer provision of service and an IBM environment with some 250+ company users for financial and management accounting and revenue and billing systems. Both our mainframes carry strategic applications so change management is of paramount importance. At the moment we have fragmented systems specific to the two separate environments. In order to gain experience of the 'state of the art' of change management, three managers from our service management division attended a two-day seminar presented by Management and Training Services (MTS) at the Swallow International Hotel on Cromwell Road, London.

Having attended other MTS seminars we knew to expect a pleasant venue and an interesting presentation from an experienced professional. We were not disappointed. The seminar - 'Problem and Change Management' presented an in-depth study of the theories of problem management and change management separately. There were detailed case studies and several 'workshops' for syndicate working and presentation to the combined group.

The workshops were most valuable and covered the topics;

- * Change and its Impact on Problem and Change Management
- * Problem and Change Management Implementation
- * Problem and Change Co-ordinators - Skills Requirements

The advantages of this type of seminar, which attracts professionals from a wide cross-section of manufacturing industry, service industry, private and public sector, is that there is 'added value' provided by the interchange of experience and ideas with fellow delegates. Excellent value for money and to be recommended.

COMPUTER MISUSE BILL

A private members bill outlawing hacking and virus writing should receive Royal Assent this summer. Tory MP Michael Colvin's Computer Misuse Bill follows the main recommendations of the Law Commission's recent report on computer misuse which suggested the creation of three new crimes to fight computer hacking. These are;

Unauthorised entry into a computer system for fun or malicious intent; the proposed penalties are fines up to £2000, with a maximum of six months' imprisonment.

Unauthorised entry into a computer system with intent to commit or assist a crime,

Intentionally, and without authority, altering computer-held data or programs.

The two more serious offences are punishable by up to five years' imprisonment.

The bill has all party support and has been welcomed by commercial users, manufacturers, the CBI and the police. A similar bill failed last year due to lack of time, but it is expected that, since it is near the head of the queue for debate, Colvin's Bill will succeed.

ARTICLES SEEN

"THE HYGIENIC AUDITOR" - 'The lack of legislation on computer crime means that auditors who unwittingly

infect their client's systems could catch more than a bad cold.' This short article explores the law relating to the infection of a client's systems by auditors and vice versa.
S.PAUL B. (1990) Accountancy March p140

HOT SITE STANDBY - "When Does a Headache Become a Disaster?"
BURTLES J (1990) Accountancy Feb p121-123

CRIME: A BUSINESS RISK TO BE MANAGED -
CBI and Crime Concern joint working group.
Sponsored by Midland Bank

RISK MANAGEMENT FOR AUDITORS
An Audit Brief by Emile Woolfe
Published by the Auditing Practices Committee

"Details ways in which risks faced by auditors in their professional work can be kept within acceptable limits."

Emile Woolfe examines how insurers approach risk and uses the sources of past claims to identify risky areas.

The brief;

- * Considers the nature of audit risk.
- * Assists auditors to identify and recognise risk and its relationship with liability.
- * Suggests means whereby such risk may be minimised.

**Internal Audit Made Simple -
A Practical Guide to Successful Auditing**
The Chartered Institute of Public
Finance and Accountancy,
3 Robert Street, London WC2N 6BH
85pp £14.50 p/b

PEOPLE

Raghu Iyer

Raghu is the Secretary of the Group. He is Senior Manager in Computer Audit Consultants Department of KPMG Peat Marwick McLintock in London. He is a Fellow of the Institute of Chartered Accountants in England and Wales and has had extensive experience in audit, computer audit and computer security work. He currently heads the CAG department, and also manages

computer audit and security assignments for a number of large clients. He has carried out security and control reviews of both computer applications and the various Information Technology functions at numerous clients, mainly in the banking and finance, manufacturing and public sector industries.

As secretary of the Group he is responsible for keeping the rest of the Committee informed of what is going on and when !

YOUR MANAGEMENT COMMITTEE

March 1990

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