PRACTICES, STANDARDS, INVOLVEMENT, THE USAGE OF THE COMPUTER IN EDP AUDIT: A SURVEY

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ABSTRACT

This paper describes the results of a survey that focuses on practices of the EDP audit effort by CPA firms.

It surveys 15 firms through 34 responses, arriving at the conclusion that there is widespread usage of the computer in EDP audit. Most respondents used some type of Generalized Audit Software (GAS). This software was equally likely to have been developed internally or purchased from another source. Auditors were substantially involved in most stages of application and facility review—both through generalized audit questionnaires, as well as through participation of normal corporate efforts.

This is the second paper of a two part series. The first paper focused on the organization and career patterns of EDP auditors.

INTRODUCTION

This second part of the survey of computer-assisted auditing dimensions concentrates on EDP audit uses, practices, and involvement.

It first explores the usage of standardized questionnaires and audit programs by the profession. It then focuses on the actual use of the computer in auditing. Its third and last part deals with the involvement of all parties in different application and facility review tasks.

The reader should examine the first article of this series to understand the methodology used, and sample obtained in this study.

Standardized Questionnaires

Table I describes the responses concerning the use of standardized questionnaires in the EDP audit procedure. These are broken down by facility and application review.

Table I
Use of Standard Questionnaires
(mean values/sample)

	Faculty Review	Applications Review
How extensive? (number of pages)	21.41/27	16.37/26
Hours necessary to administer.	17.8/27	22.22/26
Are different questionnaires used based on level of user DP sophistication?	NO: 29 YES: 1 /30	NO: 28 YES: 1 /29
Is there a standard audit program?	NO: 23 YES: 9 /32	NO: 23 YES: 9 /32

Most organizations seem to use standardized questionnaires, but do not have a standard audit program. The facility review questionnaires are more extensive but require less time to administer. There seems to be only one standard questionnaire to be used at all levels of user DP sophistication. Only one respondent indicated different questionnaires for more advanced computer users.

Use of the Computer in Auditing

The next set of questions relates to the use of the computer in auditing. Responses were coded from 4 (always) to 1 (never). Table II presents these results giving the mean (m), the mode (M), the frequency of the mode (F), and the sample (S) in the form m/M/F/S. A mode is the response with higher frequency. The responses indicate the current usage and the perception by the respondent of desired (planned) utilization.

Table II Use of the Computer in Auditing	Current	Desired Planned
Overall use of the computer for auditing	2.76/3/20/33	3.07/3/21/27
To audit the client's records	2.82/3/19/33	3.19/3/20/22
To text the client's programs	2.18/2/21/33	2.52/3/16/27
To do analytical reviews	2.30/3/15/33	2.74/3/19/27
For sampling purposes	2.82/3/25/33	3.07/3/22/27
Write-ups	1.37/1/21/27	1.48/1/14/23
Preparation of Confirmations	2.64/3/23/33	2.89/3/20/27
Parallel Simulation	1.82/1/15/33	2.08/2/11/25
Online Audit	1.53/1/17/32	1.8/3/15/25
ITF (Integrated Test facility)	1.44/1/19/32	2.19/2/14/26

Table II indicates extensive and pervasive use of the computer in the audit function. It also indicates that most respondents intend to increase their utilization of the computer in the future. Most firms use the computer frequently in auditing the client's records, performing analytical reviews, sampling, and in the preparation of confirmations. Less frequent usages of the computer in the audit process include the testing of client's programs, writeups, paralleled simulation, online audit and ITF's.

A few additional topics are of interest in the use of computers for audit purposes. 8.8% of the respondents always used special programs for audit purposes, 67.6% often used these, 20.6% seldom used these, and 2.9% never used it (mean = 2.82, mode = 3, frequency of mode = 23, sample = 34). In addition, respondents were asked to state the percentage of these special computer programs that were written in (a) a general purpose language (mean = 23.7%), (b) in a general utility language (mean = 17.79%), and (c) in a computer audit language (mean = 55.56%). Among the users of a computer audit language, 14 respondents indicated obtaining the software from outside sources, 14 respondents indicated internal development, and 2 respondents indicated internal development with the acquisition of outside-developed modules. They were also asked the number of days required to train an auditor in the general purpose audit software (GAS). The mean of the responses was 6.10 days, but figure 1 shows the distribution of the answers.

31

Figure 1
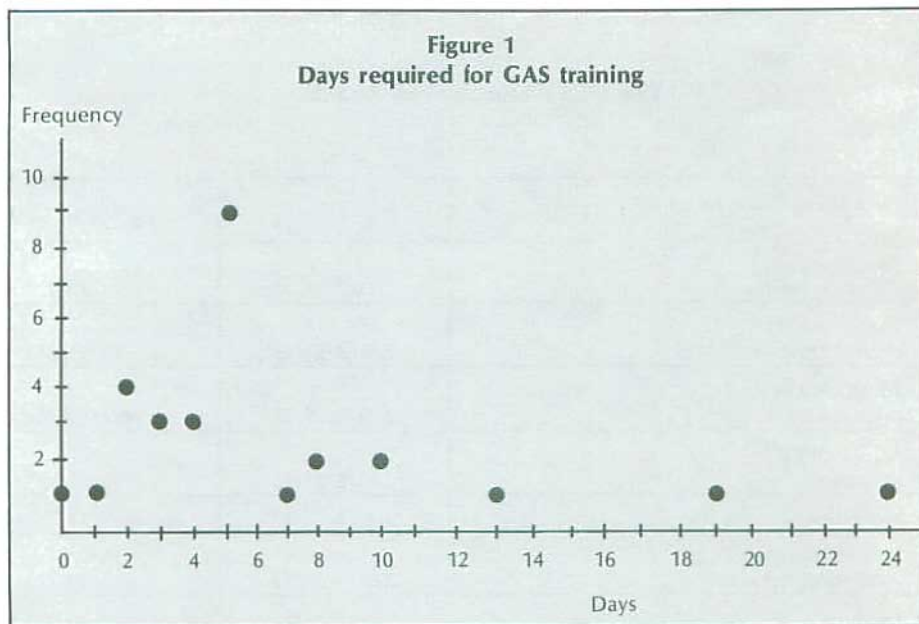## Days required for GAS training

Figure 1 indicates a bimodal distribution where most firms use a 2 to 5 days training course in EDP audit software while a few use longer courses. Table III shows the percentages of professional audit personnel trained and/or experienced in computer audit software use.

Table III		
Percentage of Professional Audit Personnel Trained in GAS Use		
	Trained in Computer Audit Software	Experienced in Audit Software
Partner's Principals	27.72%	17.04%
Manager/Supervisor	33.25%	26.60%
Seniors	34.15%	32.04%
Staff Assistants	26.13%	20.34%

Based on the data in this section, it may be concluded that a surprisingly high percentage of respondents use GAS's, considerable percentages of their staff is trained and/or experienced in their usage at all ranks and they are about evenly distributed in the source of the GAS used.

EDP Audit Involvement

The last set of questions in the questionnaire explored tasks and involvement of different parties in potential EDP audit-related tasks. These responses are tabulated in Tables IV and V, relating application and installation tasks to work in regular audit work, special computer Audit Projects, and Internal Auditor Involvement.

Table IV
Auditor Involvement
in Application-Related Tasks

Applications	Regular Audit Work	Special Computer Audit Projects	Internal Auditors' Involvement
1. Participate in Systems development	1.5/1.5/15/32	2.29/2/19/28	1.53/2/12/22
2. Participate in Setting Systems Specifications	1.71/1/14/31	2.18/2/19/28	2.36/2/12/22
3. Test Systems before Implementation	1.58/1/15/31	1.93/2/17/28	1.58/2/13/31
4. Check on Systems development signoffs	1.97/2/19/31	2.18/2/18/31	2.38/2/12/21
5. Review application maintenance procedures for adequacy of controls	3.13/3/18/32	2.71/2/15/28	2.36/2/11/22
6. Review documentation standards	3.25/3/20/32	2.77/2/11/27	2.45/2/10/22
7. Prepare documentation standards	1.71/1/15/31	2.04/2/20/28	1.73/2/14/22
8. Review systems documentation	3.28/3/21/32	2.81/3/11/27	2.45/2/10/22
9. Recommend changes in documentation	2.97/3/21/32	2.85/3/15/26	1.55/1/18/31
10. Prepare systems documentation	1.55/1/18/31	1.75/1.5/22/28	1.86/2/13/22
11. Review adequacy of application controls	3.31/3/20/32	2.81/3/11/27	2.5/3/11/22
12. Request additional application controls	2.97/3/22/31	2.62/3/13/26	2.5/3/11/22
13. Test application controls	3.03/3/19/32	2.57/2/12/28	2.5/3/11/22
14. Test Computer files	2.94/3/24/32	2.70/2/12/27	2.5/3/11/22

4 = Always, 3 = Often, 2 = Seldom, 1 = Never

Regular audit work tended to entail reviews of maintenance and application controls in addition to testing of these controls. Tasks of participation in systems development and specifications, review and changes of documentation and of documentation standards were mostly performed as special computer audit projects. Internal Auditors tended to be evenly involved in most activities of outside auditors.

Table V
Auditor Involvement
in Installation-Related Tasks

Applications	Regular Audit Work	Special Computer Audit Projects	Internal Auditors' Involvement
1. Review installation physical security	3.35/3/18/31	2.81/2/9/26	2.83/2/8/23
2. Review emergency backup procedures	3.32/3/18/31	2.62/2.5/16/26	2.57/2.5/16/21
3. Review library and off site file storage procedures	3.39/3/19/31	2.73/2.5/16/26	2.52/2/9/21
4. Review computer operating practices	3.32/4/14/31	2.65/3/11/26	2.43/2/10/21
5. Review of control over changes to operating systems	3.06/3.5/22/31	2.58/2/14/26	2.24/2/11/21
6. Review of controls over production program libraries	3.16/3/14/31	2.76/3/10/25	2.33/2/11/21
7. Review of control over access and changes to data files	3.52/4/17/21	2.76/2/9/25	2.38/2/11/27
8. Review of controls over communication systems and terminals	3.32/4/15/31	2.81/2/11/25	2.38/2/11/21
9. Review of controls over input and output	3.68/4/21/31	2.84/2/9/25	2.71/3/11/21

Table V indicates even involvement of auditors along the listed tasks. The lesser statistics for internal auditors indicate the absence of this function in many organizations and/or their non-involvement on EDP-related reviews.

Examining Tables IV and V, a distinct pattern whereby installation review is part of the regular audit work, while application reviews may be a special computer audit project or part of regular audit work, is revealed. Internal auditors tend to concentrate also on installation review and on the examination of documentation of applications.

Conclusions

In the first part of this survey, substantial differences were detected among the careers of EDP and generalist auditors. Firms tended to have some type of centralized EDP audit support staffs but rely heavily on generalist auditors to perform EDP audit tasks.

The second part of the survey described in this paper, suggested that there is frequent usage of standardized internal control review questionnaires, but infrequent usage of standard audit programs. Most respondents used the computer in audit tasks, particularly to audit client's records, to prepare confirmations, and for sampling. Most firms intended to considerably increase this usage of computers. Most firms used GSA's and had from 20 to 35% of their personnel trained and/or experienced in GAS usage. Smaller but substantial utilization of general purpose computer languages for writing specialized EDP audit programs was also observed. Finally, considerable involvement by auditors in application and facility review was observed.

Due to the small sample and detailed nature of the questionnaire, results may have limited generality. A larger sample, with different sampling method and utilizing a revised questionnaire, may be the next step in this research effort. This new questionnaire should be administered to EDP auditors, auditors and corporate internal auditors for comparison purposes.

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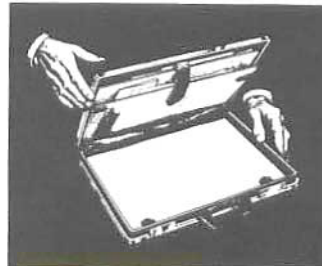
EDP AUDIT PLANNING

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TABLE OF CONTENTS
DESCRIPTION