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A NEW APPROACH TO AUDIT STRATEGY FOR E-ACCOUNTING SYSTEM WITH SPECIAL RESPECT TO SERVICE ACCOUNTING

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I. INTRODUCTION

E-accounting or online accounting is the application of online and Internet technologies to the business accounting function. Similar to e-mail being an electronic version of traditional mail, e-accounting is "electronic enablement" of lawful accounting and traceable accounting processes which were traditionally manual and paper-based.

E-accounting involves performing regular accounting functions, accounting research and the accounting training and education through various computer based /internet based accounting tools such as digital tool kits, various internet resources, international web-based materials, institute and company databases which are internet based, web links, internet based accounting software and electronic financial spreadsheet tools to provide efficient decision making.

Online accounting through a web application is typically based on a simple monthly charge and zero-administration approach to help businesses concentrate on core activities and avoid the hidden costs associated with traditional accounting software such as installation, upgrades, exchanging data files, backup and disaster recovery.

E-accounting does not have a standard definition but merely refers to the changes in accounting due to computing and networking technologies. Most e-accounting services are offered as SaaS;'software as a service', i.e. as a cloud service.

Meaning of E-Accounting System

"A computer program that helps a company deal with its accounting needs. For example, accounting software may list accounts payable, account balances, and so forth. If information is entered accurately, it eliminates calculation errors. A company may buy accounting software, develop its own, or buy a program while making its own modifications."

Advent of computer has been clearly the most significant and exciting development on the business scenario of our country in the last few years. Growing availability and popularity of computer technology has spurned many organizations to computerize their systems. The pace of corporate functioning has quickened manifold and, more significant, a confident manager can arrive at rational decisions in a shorter span of time with the help of Management Information Systems which have become meaningful. Not lagging behind are the governments

and administrators. To keep up with the pace of developments in business environs, they too have gone in for converting their system on to the electronic platform, significant being finance and accounting systems. The pace of "implementation in every field forced as many organizations to take recourse to hiring "specialist concerns" for converting their system to electronic systems. Nevertheless, as the level of computer applications increases steadily and widens its scope day - by - day, there is a grave possibility, that laymen and priests-of-the-marvel-machine, alike will become so awed with its capabilities that the over-look its weaknesses.

II. AUDIT CONCERNS

Increasingly, auditors have to control with computer-based systems in order to obtain audit evidence to support an opinion on the financial statements. Though audit objectives remain same in both manual and electronic environs, the methods of obtaining evidence are very different. This complexity raises many questions and concerns for the auditors examining computer-based accounting system. The main areas of concern are (1) the storage of accounting data in computer read able form, and (2) the virtual elimination of audit trails in computer based systems.

Most significant among others being the inherent limitations of a computer-based system-"a computer will do only what it is told to do" and the data you get out is only as good as the data you put in". Like a cancerous growth, these can develop themselves unseen within a system and could lead to wholly unforeseen and complete disaster. Data security is the means necessary to guarantee the quality and safety of data kept within a computer system. But do the computer centers guarantee quality and safety of their data? If this guarantee were given, it would be a fit case to raise one's evebrows. Computer experts are usually very good at building in checks on the validity of digits and letters and at providing check results. But it is difficult for them to see the potential problem areas in terms of missing document, different sources of the same document, etc. In such situations establishing management's responsibility in ensuing data security also adds on the audit's concerns. The second significant audit concern is system controls. As the members of development team are usually completely computer-oriented and are not familiar in-depth with the possible sources of error in the area under consideration, building in controls into the system as designed by the team who implement the system, is often a major area of weakness. The definition of audit controls to be incorporated in a computer system is a management responsibility. It is not something to be delegated to computer professionals. Often this area is ignored by the management.

Audit approaches to computer-based system with such complexities inherent in computer-based system, what approaches are available to audit ? When does the audit adopt a specific approach? Let us answer these questions. The approaches available to audit are "Around the computer approach and "through the computer" approach which approach to adopt is primarily decided by

1) Availability of in-built controls
2) The extent of reliability of built-in computer controls
3) Factors relating to the system being audited
4) The extent the system ensures and answers the concerns mentioned previously in this article
5) Procedures available in the system to correct a given faulty situation,
6) Procedures available for audit of the system itself and
7) Extent of management's involvement in the development and operation of the system.

Audit strategy

To decide the strategy to be adopted, one has to understand the audit process in computerized environment. The tasks, processes, and decisions to be made by auditors examining computer based systems can be best explained.

Review of general and application controls

Perusal of the flow chart reveals that the first step is to determine whether the application system existing is all encompassing or not. If the extent of computer-based accounting application is significant, the auditor must proceed with a preliminary review and assessment of general and application specific controls.

General controls refer to general / administrative / management controls adopted to promote operational efficiency and encourage adherence to prescribed managerial policies. When related to computer based accounting system, these are viewed as those, which facilitate effective management of data centres. General controls generally, are (1) segregation of duties at data centres, (2) system development procedures - user requests, appropriate management's approval, testing of system, documentation, etc. (3) System charge procedures-approval, testing of changed modules, updating of documentation etc, and (4) Physical sage guards for the data centres - fire / flood safety and data file security controls - backup / recovery procedures.

Application specific controls relate to individual computer based procedures and comprise : (1) transaction, organisation and approval procedures (2) data validation controls - code test, data test, etc, (3) computer processing controls - error procedures, and (4) output controls - distribution log, etc.

The purpose of this review is to understand the current status of the control framework, as a pre-requisite for identifying those controls which can be relied upon, which need to be subsequently tested. The review of application specific controls must be carried out only if general controls appear to be reliable. Clearly, no auditor would like to pursue the review of application controls in the light of deficient general controls. It must be understood that, unreliable data centre taints the reliability of entire system, as most of the systems are served by data centers. If general controls cannot be relied upon, the auditor is confined to using analytical review procedures and must perform extensive test of balances in order to obtain

necessary audit evidence. If the preliminary review reveals that controls can be relied upon, the auditor may proceed with tests of application control during the audit.

Testing general and application specific controls

General controls are typically tested in a way that does not involve computer assistance. Fro example, physical access to Data Centre can be checked from access entry system. Tests of application specific controls, however, require the use of computer audit techniques. Computer audit techniques used to test computer audit techniques used to test computer based controls are : (1) test data (2) Integrated Test Facility (ITF) and (3) Embedded Audit Modules (EAM). The "test data" technique involves creating a sample of transaction that simulates a variety of conditions in order to test the operation of programmed controls. The ITF involves setting up of dummy entries and initiating transactions against the dummy entrees at random during varying points of time in a year thus facilitating the auditor to test controls on a "surprise basis". The EAMs are the code added to the application programmed. The EAMs capture information about control violations on a continuous basis.

Test of transactions and balances

In a large organization, testing each transaction and balance would be extremely time consuming and thus auditor has to employ a variety of sampling procedures to select few of the many transactions for detailed testing of documentary evidence in support of this transaction. some large audit firms abroad have developed their own software, referred to as "Generalized Audit Software (GAS)", which is used to test transactions and Balances,

Audit strategy

The discussion above reveals that the auditor first tests the controls, and then based on the results of these tests, determines degree of reliance placed on the controls. If controls are found to be unreliable, the extent of substantive test of transactions and balances cannot be reduced. However, if controls are found to be reliable, the auditor can substantially reduce the extent of detailed tests of transactions and balances.

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Factors affecting the reliability of computer based controls.
Auditor's choice of strategy, as discussed

Table 1 : Factors affecting the reliability of computer controls

Activity	Factor causing control to be unreliable	Factor causing controls to be reliable
System development	Quick and dirty patchwork Methodology	Planned development approach
Programming	Ad hoc, unstructured	Modular, structured
Documentation	Poor/non-existent	Good/extensive
Testing	Minimal	Extensive
Corrective maintenance	Extensive / frequent	Minimal/rate
Preventive and perceptive Maintenance	infrequent / irregular	frequent/regular
Physical security	Uncontrolled access to application/non protection against "acts of God"	Clearly laid down access protocols/ protection against acts of God.

Above, depends mainly on the degree of reliability of computer-based control. The factors that affect the reliability of controls in computerized environs are given in Table-1.

System development methodology
If the system development effort lacks planning and new applications are being developed on a "quick and dirty" patchwork basis, the risk of application errors is high and computer controls would be less reliable. On the other hand, if the organization adopts a planned application development approach when new system development projects are carefully monitored, computer controls more likely to be reliable.

Programming methodology. If the Programme are developed in the haphazard manner such that only the programmer knows exactly how the program works, the reliability of programmed controls in such application is in doubt.

Programme documentation
Documentation generally consists of narrative description, flow charts, data-flow diagrams, comment lines inside programs etc, such documentation is the primary means by which the auditor can understand the functions performed by the application and the built in controls. Lack of adequate documentation seriously hampers the auditor's ability to understand the system.

Programme testing
Testing is the means by which the "bugs" within applications are fixed. There exists a direct correlation between the extent of programme testing and post implementation errors. Thus extensive pre-implementation programme testing would very likely result in increased the reliability of system as a whole.

Corrective maintenance
Extensive corrective maintenance is one indication that the application is very unstable and provides less assurance that the application and the controls therein are functioning as desired by end users. Thus, extensive programme changes would likely to result in computer controls being less reliable than when programme changes are only minimal.

Perceptive maintenance
Perceptive maintenance relates to routine operational maintenance intended to make programmes run smoothly and efficiently. Thus, unlike corrective maintenance which is indicative of sever problems, perceptive maintenance is desirable. If perceptive maintenance is frequently being undertaken, computer controls are likely to be more reliable.

Thus, there are two audit strategies the auditor may chose in computerized environment (1) when controls are reliable, extensive review and testing of computer controls to support a reduced level of review of transactions and balances, or (2) when controls are unreliable; minimal (if any) tests of controls and extensive tests of transactions and balances.

III. CONCLUSION

So far we have seen the computer audit process comprising of preliminary review of controls already existing, and testing transactions and balances. We have seen the factors related to systems development and programming adopted that would affect the reliability of computer based controls. An appropriate audit strategy is suggested as a function of the degree of reliability of computer based controls. The auditor may choose to rely on computer-based controls and. reduce the extent of transaction checking or not rye on controls and perform extensive tests of transactions and balances.

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