

# Issues Regarding Implementation of Computer Information Technologies into Auditing Practices

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**Abstract** - Use of computer information technologies in audit is caused by need to increase working performance of auditors and to improve quality of an audit procedure itself. Carrying out an audit using computer information technologies has some peculiarities that concern different stages of an audit procedure. In the publication hereof main issues concerning implementation of computer information technologies into auditing practices are determined, as well as there are pointed out ways to solve those issues.

**Keywords** - audit, International Standard(s) on Auditing (ISA), economic security, data protection, computer information technologies.

## I. INTRODUCTION

The purpose of maintaining accounting and financial statements is to provide users with complete, faith, and unbiased information about financial situation, performance, and cash flows of economic entity in order to make decisions. Correct conclusions about enterprise activity can be drawn only upon availability of the reliable financial statements, which requires carrying-out a high-quality and objective audit.

Present day auditing is tightly connected with information technologies. Automation systems allow an auditor to use powerful methods of contemporary information technologies while analyzing accounting data of an economic entity, whereas the enterprise can practically implement recommendations, which are provided by auditing companies.

Nowadays issues regarding implementation of computer information technologies into an audit are considered by the specialists of several knowledge areas, such as information systems specialists, accountants, managers, auditors. Those researches become complicated since it is necessary for the researchers to be competent both in audit and modern information systems and technologies. Therefore very few scientists and experts, e.g. S.V. Ivakhnenkov, P.V. Ivanyuta, are engaged in studying issues of implementing computer information technologies into audit practices.

Among issues which are considered by scientists and experts the following can be mentioned:

1. Impossibility of complete formalization of an audit process;
2. Variety of branch specialization of auditing companies clients;

3. Specific character of field check execution;
4. Application of different software by economic entities;
5. Low probative value of electronic working papers and final documents of the auditor;
6. Possibility of information loss or damage during power supply disconnection;
7. Infection of audit information system by computer viruses;
8. Information protection from unauthorized access etc.

For the moment the hereinabove problems have not been solved yet, whereas implementation of information technologies into auditing practices only begins to develop. Some issues and ways of solving them are considered in our research.

The aim of this paper was determined by the necessity of extending theoretical, organizational, and methodical elaborations in solving problems of implementing computer information technologies into auditing practices, which can increase working performance of auditors and improve quality of the auditing procedure.

## II. SPECIFICS OF CARRYING OUT AN AUDIT USING COMPUTER INFORMATION TECHNOLOGIES

Under the conditions of economic reforms the sense of audit is changed and its organizational and methodical aspects are being significantly corrected. The quality criterion while conducting an audit today is performance by the auditors of International Standards on Auditing requirements. However, strict observance of these norms is concerned with increase in labour costs of auditors, necessity of acquisition of additional information, documentation of the verification process, and execution of complex calculations. All the abovementioned requires the optimization of information processing, improvement of information display forms by using the computer information technologies.

Let's consider requirements, which are provided by ISA, that concern carrying out an audit using computer information technologies.

Namely, on the stage of drawing an audit schedule, according to ISA "Planning", there has to be accounted an automation level of processing accounting data of an economic entity, presence and specifics of data, soft, and

techware, ways of data transfer and storage, peculiarities of organizational form of data processing, including usage of network or local systems.

While carrying out an audit, officer has to know about mathematical support, technical, soft, and other computer ware, as well as about system of processing economical information. In case of lack of such knowledge, the auditor has to appeal to an expert for cooperation. Management and control over the work of the IT expert while converting data, fulfilling nonstandard analysis procedures, drawing up essential working papers have to be executed by the auditor and need to meet requirements of ISA "Using the work of an expert".

In the event that the auditor is working in the computer environment of an economic entity, where the source of getting audit evidences are data in the form of tables, bills, and ledgers, it is necessary to follow requirements, which has been stated by ISA "Audit Evidences" and ISA "Analytical Procedures".

Using computers during gathering audit evidences allows conducting the following procedures:

- a) Testing account transactions and balance in a computer database;
- b) Analytical procedures with the purpose of discovering deviations from the commonly accepted parameters in computer database;
- c) Testing database of the economic entity that is subject to audit;
- d) Testing data, soft, and techware, as well as mathematical support of the economic entity that is subject to audit.

Control procedures, which are executed by an auditing company using computers, can be as follows:

- a) Control of the data sequence, which are audited, where data are subject to several stages of processing;
- b) Control of former data;
- c) Forecasting and planning the results of data checking and comparing them with audit data for individual transactions, as well as according to types of activities in general;
- d) Confirmation of compliance with the present requirements of the soft and techware for auditing practices while carrying out an audit using computer;
- e) Confirmation of compliance with an applicable legislation etc. of the used software of the economic entity that is subject to audit.

The execution of audit procedures has to be shown in working papers. At that auditor has to evaluate computer system capabilities and draw them up in the working paper:

- Flexibility of reacting to the changes in economy, tax or other legislation in the context of adjusting software;
- Drawing up accounting reports and other internal managing statements;

- Executing analytical procedures;
- Expandability.

Here is some peculiarity: those working documents, which are drawn up in the process of audit under the conditions of computer data processing, are absolutely different from usual working papers and can be stored in the auditing company separately in the archive of audit files on machine-readable data media. At that, auditing company has to ensure storage of audit files on data media, their registration and filing in archive.

Reliability of reports of the economic entity when using computer information technologies, as well as in case of executing control procedures manually, has not to be defined absolutely accurately, however regarding all essential aspects in accordance with ISA "Essence in auditing".

When stating the selection scope in the process of carrying out an audit, the auditing company, according to ISA "Audit sampling and other procedures of sampling check", has to evaluate the sampling risk, expected and tolerable errors. At that, ISA "Risk evaluation and internal control" has to be considered as well, since it defines components of audit risk. Specificity of carrying out an audit of accounting statements by means of computer information technologies is occurrence of additional risks, which are caused by the influence of automated data processing.

Special focus should be made on audit of the system of computer data processing, which has to be executed according to requirements of ISA "Audit in computer information systems environment", since use of automation means by the entity results in impossibility of the absolute segregation of duties and responsibilities in the environment of computer data processing and triggers a potential danger of data manipulation and risk of unauthorised access to confidential information.

We should mention that security issue and information protection are extremely important, as far as confidentiality, which is due to necessity of storing papers of the economic entity and nondissemination of data in them to the third parties that is defined by ISA "Objective and general principles governing an audit", is basic principle of an audit.

Ensuring confidentiality of the information should be reached by impossibility of the free access to entity's data that include information about its financial activity, wage rate of the workers, founders, counteragents, clients, and enterprise partners etc. At the same time one should take into consideration that value of information is budget's category, which shows either a specific profit margin when using it, or extent of damage when it is lost.

Guaranteeing economic security of commercial information, auditing companies should solve problems with information protection in order to ensure general economic security of the entity that is subject to audit.

We should remark that risks to storing commercial secret of an entity may be both external and internal. Any

computer, which is accessible via Internet, may be subject to penetration through operating system security or through vulnerable points of some service that works within the system. For solving this problem one should set up security either on the level of network or operating system.

A serious threat to the economic security of the entity, on which the audit is carried on, may also have internal origin. Namely, colleagues, who are dissatisfied with something, may do a significant harm to those systems, which are not protected adequately, e.g. simply steal the secret data.

Ensuring economic security may be reached by means of proper administrative management, planned recourse sharing and limited access to them, as well as stable cooperation between auditors and experts of computer information technologies.

A market of auditing software makes up mainly five completed software products for sale today. They are as follows: "Auditor Assistant" software product, "Auditor Helpmate" software product, "Abacus Professional" software product, "EkspressAudit: PROF" software product, and "IT Audit: Auditor" software product.

More and more severe competition in auditing business forces companies to find new ways and modern means of increasing auditors work productivity. We assume therefore that computerization of auditing activity should consider the development and implementation into auditing practices of such software products that would provide automation of performing tasks while ensuring confidence in different inspection matters and other related services according to the International Standards on Auditing, as well as include the capabilities of expert systems. It will enable carrying-out an audit of financial statements and will help to provide high-quality services, including:

- Carrying-out of analysis of large amounts of financial and operational data by special software in order to confirm them and detect frauds;
- Estimations of client financial indexes and their forecasting using the powerful mathematical apparatus of economic modeling and proper software;
- Verification of computer algorithms of clients' accounting systems and consulting them concerning proper building of those algorithms;
- Assisting client with regard to maintenance of information security of his/her activity etc.

### III. CONCLUSIONS

The quality criterion while conducting an audit today is performance by the auditors of International Standards on Auditing requirements. However, strict observance of these norms is concerned with increase in labour costs of auditors, necessity of acquisition of additional information, documentation of the verification process, and execution of complex calculations. All the

abovementioned requires the optimization of information processing, improvement of information display forms by using the computer information technologies.

Issues regarding implementation of computer information technologies into an audit are considered by the specialists of several knowledge areas, such as information systems specialists, accountants, managers, auditors. Those researches become complicated since it is necessary for the researchers to be competent both in audit and modern informational systems and technologies. Therefore very few scientists and experts are engaged in studying issues of implementing computer information technologies into audit practices.

In spite of expert efforts on solving problems of implementation computer information technologies into audit practices, there are still a lot issues to be discussed, which require consequent scientific researches and thorough study. Therefore, we believe that more precise attention should be put on those issues in the contemporary conditions.

Special focus should be made on audit of the system of computer data processing, since use of automated means by the entity results in impossibility of the absolute segregation of duties and responsibilities in the environment of computer data processing and triggers a potential danger of data manipulation and risk of unauthorized access to confidential information.

Ensuring economic security may be reached by means of proper administrative management, planned recourse sharing and limited access to them, as well as stable cooperation between auditors and experts of computer information technologies.

Computerization of auditing activity should consider the development and implementation into auditing practices of such software products that would provide automation of performing tasks while ensuring confidence in different inspection matters and other related services according to the International Standards on Auditing, as well as include the capabilities of expert systems.

We consider that introduction of new information technologies into auditing practices will improve the level of organizational and methodical provision of auditing, improve audit intellectualization intelligence and scientific ground of its outputs.

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