AMERICAN JOURNALS
Open Access, Peer Reviewed Journals

American Journal of Business Management, Economics and Banking
ISSN (E): 2832-8078 Volume 23, | April - 2024

TRANSFORMATION OF AUDIT SERVICE

Guzal Yashinovna Babaeva
Tashkent State University of Economics
Associate Professor of the Department "Banking Accounting and Audit"
babaeva-guzal @mail.ru
+99893 563 40 83

Sagdiana Doniyor qizi Namozova
Tashkent State University of Economics, 3rd Year, Group BIA-40
19wolf30@gmail.com
+998 90 067-19-10

A B S T R A C T

In this paper, the authors attempt to formulate a new definition of the concept of modern audit as a process in which internal auditors use information and communication technologies (ICT) in conjunction with analytical procedures to collect electronic evidence, interact with the auditee, and prepare a report on the reliability of financial data and internal control systems regardless of the auditor's physical location. Based on research on virtual teams and analysis of internal audit activities, we present a research framework that defines the areas in which ICT and automated audit analytics allow auditors to work remotely, reduce travel expenses and wait times, and improve efficiency and coverage.

K E Y W O R D S

Audit innovation, remote audit, continuous audit, internal audit: communication; evidence, virtual teams, information and communication technologies (ICT).

Introduction

Auditing has been a constantly changing discipline since its inception over 100 years ago. But how much have the challenges facing accountants changed in the last decade?

Today, auditing continues to face a number of unresolved issues, such as: the need to keep pace with different business models; the emergence of new technologies that are constantly changing the way we live and do business; the increase and tightening of regulatory requirements with a comprehensive impact on all sectors.

Such a change in business and regulatory circumstances has significant consequences. Auditors are faced with the task of not only deciding how to implement these changes into their own business and activities, but also considering how the news will affect their clients or those with whom they do business.

Audit as a complex process

The audit is a multifaceted and complex process aimed at achieving high-quality results and work efficiency (i.e., minimizing audit risk). Auditing activities are the entrepreneurial activities of audit organizations to provide audit services. [1] Being entrepreneurial by definition, the activities of auditors and audit firms always strive to minimize costs. It is obvious that it is not possible to achieve both minimum costs and minimum audit risk at the same time. Since a decrease in audit risk is inevitably associated with an increase in the sample size (an increase in labor costs) or with the involvement of more experienced specialists (an increase in cost).

Thus, the auditor faces the task of optimization: to minimize the costs of conducting the audit at an acceptable level of risk, or to minimize the audit risk at acceptable labor costs. To approach the optimal option for conducting an audit, it must be properly planned. Therefore, we can say that the goal of planning is to ensure that the audit is carried out in the best (optimal) way from the point of view of the ratio of possible audit risk and audit costs.

Remote audit as a new approach

Audit practitioners are gradually introducing communication and analytical technologies to scale, change timelines, and reduce the cost of audit processes. These efforts were mainly episodic and did not have a holistic theoretical positioning. A significant part of the research literature is devoted to audit automation, however, less attention is paid to one of the main advantages of technologies in auditing - the ability to reduce the amount of on-site audit work and shift it to remote employees. While continuous auditing expands the scope of auditing, allowing procedures to be carried out on an ongoing basis and on demand, remote auditing reduces the location requirements for auditors, allowing them to distribute audit tasks between on-site and remote audit team members. Adding a remote internal audit component is not just a side benefit of audit automation, it is a driving force for the use of technology and an opportunity to rethink the approach to auditing.

We define the term "remote audit" as follows: a process in which auditors use information and communication technologies (ICT) and data analytics to assess the reliability of financial data and internal controls, collect electronic evidence, and interact with the auditee. [2]

The two main elements of remote auditing - ICT and analytics - provide the basis for future research on the technical and behavioral aspects of remote auditing. Figure 1 illustrates these elements. Both on-site and remotely, audit team members use ICT to interact with both process managers and each other. Auditors also use automated tools to extract and analyze data from the audited organization's systems to verify internal controls and transactions.

Conclusion

As the cost of technology and internet access continues to decline and budget pressure mounts, more and more internal audit groups are using remote audit technologies. Additional motivations for organizations to conduct remote audits include improving audit quality, increasing client contact time, increasing auditor contact time, expanding audit coverage, and reducing travel and entertainment expenses.

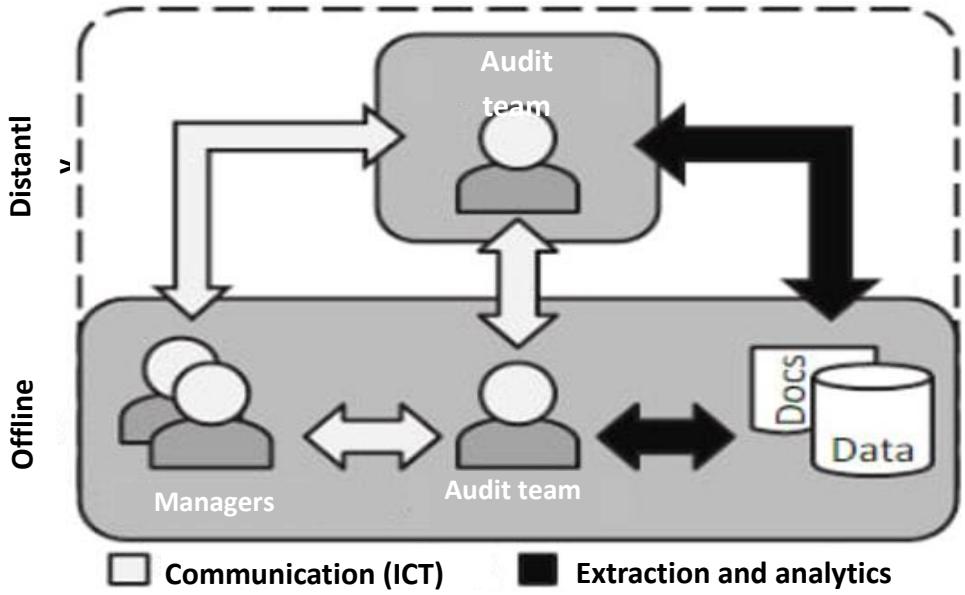

Figure 1. Components of Remote Auditing

Research questions remain open before the remote audit component, which concern both technical design and behavioral effects. For example:

- To what extent can the audit process be extended using ICT? How will auditors form their virtual teams?
- Will employees be deterred from committing fraud if they are aware of the existence of remote auditing?

As for the last question, we expect that a more intense deterrent effect will be observed when remote auditing is combined with continuous monitoring, as shown in Figure 2, comparable to that observed when surveillance cameras are installed in retail stores.

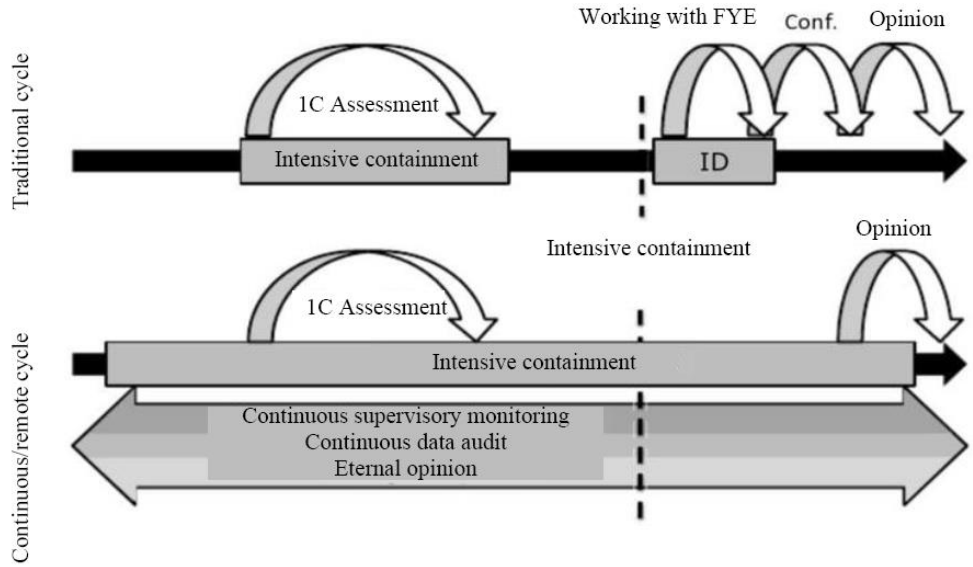

Figure 2. The Effect of the Deterrent Effect of Violations in Traditional and Remote Auditing

Similar to how General Motors' OnStar system allows for monitoring the condition of a car and providing assistance in between garage visits, remote auditing allows auditors to track operations and communicate with business process owners throughout and after the conduct of official audit tasks. Similarly, when continuous audit systems alert auditors to potential internal control deficiencies, fraud, or errors, auditors can respond to them remotely to help management resolve these issues. Other potential benefits of remote auditing were discussed earlier. Audit efficiency can be achieved by reducing latency, which takes up labor and capital. Delays occur in all business processes, particularly in the audit process, as shown in the figure.

3. Task procurement, audit planning, internal control resource assessment, compliance with internal control requirements, and substantive testing - all these processes experience significant intra- and inter-process delays during the execution of audit tasks and meetings with auditors. Delays in decision-making and obtaining results occur when making audit decisions and compiling reports, as auditors work with managers to solve problems. Reducing delays in any of these subprocesses can free up resources, especially auditors' labor costs, for use in other areas.

Ultimately, internal auditors themselves will determine what benefits they will get from remote auditing: whether they will lean towards the field option or will conduct more procedures using telework and virtual teams, using a larger number of automated and continuous audit tools.

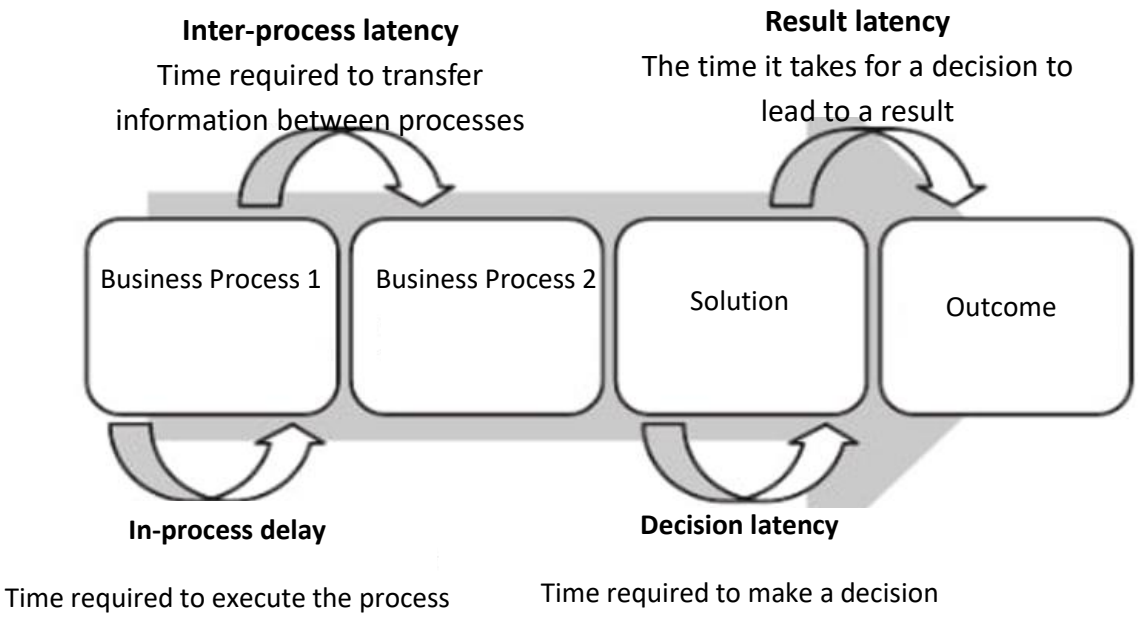

Figure 3. Types of delays in the audit process

Virtual teams are typically defined as "groups of geographically and/or organizationally separated employees who come together using a combination of telecommunications and information technologies to perform various critically important tasks." These specialized teams consist of people connected by ICT and form dynamic relationships for coordination and delegation of responsibility. Increasingly, virtual teams are formed in organizations that strive to optimize business processes and stimulate collaboration between employees, such as software developers and traders trading risks and positions. They allow for the effective use of geographically distributed experience and provide economic benefits such as a 24-hour workday.

Internal auditors already collaborate and coordinate their actions with team members at (potentially) large distances to complete an audit. In cases where the internal audit function is outsourced or performed within a large, global company, virtual audit groups become the norm in an attempt to reduce operational costs and increase efficiency. There is extensive literature studying the dynamics of the development of virtual teams and organizations and addressing issues such as trust and communication.

Virtual teams are an important precursor to remote auditing. In remote auditing, a virtual team coordinates the work of auditors who are physically present at the audit site, and auditors who are in other locations, such as the company's headquarters. Collaboration between the virtual team and business process owners ensures timely completion of the audit. While trust and communication are key elements of virtual teams, the audit environment may present unique challenges, such as the role of professional skepticism needed to ensure objectivity, and the level of communication required to provide assurances regarding internal control.

What are the trade-offs between trust and skepticism during a remote audit? Will incomplete trust increase the volume of the audit?

Will auditors working remotely face an increased volume of ambiguous communication, typical for virtual teams?

How will they handle redundant information?

The transition of the audit group from fully periodic on-site work to a combination of on-site and remote work will require a broader use of ICT and an increase in competence in this area, as well as training in the use of technologies, group processes and, in some cases, cross-cultural awareness. In many cases, technology opens up opportunities for reorganizing the audit process itself to increase efficiency and expand coverage. Understanding how technologies affect the development and use of audit procedures will require further research.

Remote auditing provides an opportunity to innovate the internal audit process. The responsibilities of internal auditors include a "systematic, disciplined approach to assessing and improving the effectiveness of risk management, control, and governance processes". Internal auditors develop new methods to combat fraud and errors, monitor internal control resources, test process effectiveness, and consult management to improve business operations. They conduct financial, operational audits, compliance audits, investigation audits, fraud audits, information system audits, and other miscellaneous audits to determine how well the organization and its systems are functioning. Placing the audit in communication and analytical frameworks allows understanding which aspects of the audit can really be performed remotely and how to do it.

Currently, most internal auditors are working on-site. Video conferences can replace many typical face-to-face audit meetings, but not those where it is necessary to analyze all the subtleties and nuances of the conversation, for example, an interview with a person suspected of fraud, or interaction aimed at reducing stress between the auditor and the client.

Table 1 shows how different types of audit activities can be performed on-site and remotely. In practice, as we believe, there will be a relationship between fully outbound and fully remote methods, and auditors will have to determine which methodology is suitable for their situation. Further research should give an idea of how much this corresponds to practice.

Table 1. Types of audit activities on-site and remotely.

Audit activity	**On-site audit methodology**	**Remote audit methodology**
Procurement for audits	Auditors conduct lunch meetings and office visits	Auditors also use email and telephone to organize audits, meet with management in web conferences, and conduct follow-up meetings via email
Audit planning	Audit teams meet physically to define audit objectives and delegate tasks	Virtual audit teams meet in web conferences to discuss audit details. Tasks are assigned automatically in the electronic document system
Evaluate internal controls and verify compliance with regulatory requirements	Auditors interview process owners, evaluate paper and digital documentation, run test control setups, or evaluate data on their laptops. Using the laptop, auditors locally extract sample transactions and check for anomalies.	Auditors interview process owners via videoconference, connect to the client system over the network, and run analytical tests through a terminal. They also check audit logs. On a laptop, auditors receive a sample of transactions over the network and check them for anomalies. In continuous mode, automated systems perform full sample testing and provide the auditor with a list of exceptions for follow-up.
Audit decisions and reporting	Auditors meet with process owners for follow-up activities. Reports to management, audit committee and/or external auditors.	Same but via web conferencing.

Since remote auditing implies the creation of virtual teams, the assessment and modification of audit procedure formulations will help audit managers distribute responsibilities between on-site and remote team members, as well as determine the technology and audit methodology necessary for coordinating their efforts. Many procedures will necessarily be restructured in such a way that remote auditors can take on the role of a permanent proctor, notifying the auditor of failures occurring within or outside the periodic audit.

ICT has already had a significant impact on the methods of work of enterprises and auditors, providing decentralization. Many companies use email, web conferencing, online document storage, real-time collaboration tools, and telepresence to develop new products and interact with colleagues in other regions. To a large extent, auditors also use some of these tools to coordinate actions with each other.

Throughout the entire evidence collection process, interpersonal interaction affects the efficiency and result of the audit. As with virtual teams, remote auditing has the additional problem of limited sensory perception when the auditor is not physically present during tests, interviews, etc. The influence of trust and cooperation in virtual teams is well documented and is the basis for using ICT for electronic communication.

To conduct a remote audit, it is necessary to expand the currently used ICT (for example, email), including additional technologies that facilitate remote communication, centralized evidence

collection, and coordination of audit team actions. These are the main tasks of web conferencing and teleworking.

The concepts of web conferencing and teleworking are designed to "help groups in communication, collaboration, and coordination of their activities". Ellis et al. define the basic philosophy of group software to improve group communication in conditions of dispersion in time and space. Starting with message systems, they move on to discussing computer conferences, intelligent agents, and coordination systems, which were the precursors of the modern scheme of email, video conferencing, artificial intelligence, and planning applications used for remote auditing.

The IT departments of many organizations have implemented tools for conducting web conferences to help managers and process owners communicate with suppliers and clients. Depending on the security policy of the organization, access to many of these services can now be obtained directly through a web browser. These services provide computer-mediated communication, supplementing voice with visual cues (using live bidirectional video streams) and joint viewing of information (using screen and application sharing). Two problems hindering the implementation of these technologies are the uncertainty inherent in using new technologies, and the need to change processes for more effective use of technologies.

From a behavioral point of view, remote auditing can be understood by considering the prevalence of teleworking, where employees can choose from several physical workplaces and use electronic communication to perform their tasks. Many of the same issues of motivation and productivity that apply to teleworking apply to remote interaction between internal auditors and business process managers. In Table 2, we present some of these open questions of behavioral research.

Behavioral problems, if not resolved, will reduce the potential benefits of remote auditing. For example, ICTs are beneficial only if the auditor is trained, feels competent, and effectively performs their tasks. Inadequate use can also prompt the audited person to hide fraud, divert the threat of control, or distrust the auditor. Future research needs to determine to what extent these problems exist and affect the implementation of remote auditing.

Electronic working papers (EWP) are specifically designed for auditing. EWP systems are based on electronic document management systems (EDMS) and contain tools and workflows that help collect and analyze audit data. In the context of remote auditing. EWP contains evidence collected at the request of the auditor, as well as data related to operations, extracted and generated by an automated system.

Many accounting firms are implementing more complex database-oriented systems with varying degrees of success. However, the current state of systems is aimed at simulating a history-oriented audit, not creating a real-time snapshot of the internal control system's operation. Moreover, many internal audit departments and some large CPA firms limit themselves to the capabilities of desktop productivity software and reject the enormous potential value of a modern EWP system. For example, process analysis is used to evaluate enterprise resource planning (ERP) logs and obtain information about the steps people take in performing their duties. As data is increasingly consolidated into ERPs, the application of technologies such as process analysis will not only provide context for this data but also help auditors gain a more complete understanding of failures from any network device.

Online EWPs facilitate centralized data collection during an audit. Specific monitoring events can initiate automatic data collection from ERP systems or EDMS, so auditors can focus their efforts on tracking the problem, not on manual evidence collection. With the centralization and synchronization

of online EWPs, any member of the audit team can access and view the work of the audit team, thereby reducing data and effort duplication.

Remote auditing uses ICT to create a richer audit experience. However, according to Vasarhelyi and Kuenkaev, internal audit departments typically use auxiliary technologies to simply repeat existing procedures, rather than adapt them to provide more reliable assurances regarding new data and information flows[1]a. An auditor may use a spreadsheet for visual sample evaluation, a macro for analysis, email to obtain information from the audited person, or a laptop to store audit evidence, but if they have to travel from Atlanta to Dayton to conduct tests when data is easily accessible on the Internet, they are not using all the advantages of available technologies for conducting a more interactive audit, for example, using monitoring platforms and collaboration tools. This reflects Hammer's thesis that process reengineering, not simple automation, should be the result of a new process conceptualization.

Enterprise Resource Planning (ERP) systems allow authorized users to collect and analyze disaggregated data and provide reports on many issues, ranging from key performance indicators to customer behavior. While evidence has traditionally been static and labor-intensive to collect, the progressing availability of real-time data allows for the automation of audit analytical procedures, continuous process monitoring, and automatic evidence collection across all business processes, customers, and suppliers. Financial and non-financial data are constantly coming in, allowing internal auditors to expand the scope of their checks, including the entire set of current, relevant operations[2]. This may include alarm signals triggered by control system failures and the subsequent response of management and auditors. In many cases, internal auditors work with IT departments, management, and consultants to determine the amount and types of evidence that need to be collected. Table 2 provides examples of on-site and remote audit methodologies that can be used to obtain data for specific audit procedures.

Checking paper documents, for example, requires the auditor to physically extract samples of authorized forms and check for signatures and their compliance with authority lists. While many companies are gradually implementing electronic documents and signatures, remote auditing depends on access to electronic data, which is provided by the reengineering process. For such documents as invoices and credit applications, reengineering involves the implementation of devices and procedures for scanning documents, analyzing characters and signatures, and storing them online. Ideally, this data should be recorded directly in the ERP module and follow the approved workflow. As consultants, internal auditors will work with business process owners in cases where reengineering is needed.

ICTs can improve interpersonal communication, knowledge sharing, and project management, especially within virtual audit teams.

[1] Alles, M. G. Brennan, A. Kogan, and M. A. Vasarhelyi. 2006. Continuous monitoring of business process control: Pilot implementation of a continuous audit system in Siemens. International Journal of Accounting Information Systems 7 (2): 139.

[2] Armbrust, M. A. Fox, R. Griffith, A.D. Joseph, R.H. Katz, A. Konwinski, G. Lee, D.A. Patterson, A. Rabkin. 1. Stoica, and M. Zaharia. 2009. Above the Clouds: Berkeley View of Cloud Computing

Table 2. Audit procedures for obtaining audit evidence.

Procedure	**On-site audit methodology**	**Remote Audit Methodology**
Inspection of records or documents (for example... authorization)	Conduct a sample of purchase orders and verify authorized signatures and compliance with the authorization list.	Evaluate the entire population of Purchase Orders (POs) in ERP and verify that the POs pass through the approval process and have an authorized user stamp.
Inspection of tangible assets (for example, an inventory)	Print inventory list, walk through warehouse, open boxes, etc.	Utilize video surveillance, scales, other metrics.
Observation (for example, observing the execution of a process)	Observing the employee and observing the procedure.	Utilize process analysis to identify operations that do not follow standard workflow.
Interview (for example, written or oral questioning)	Communicating electronically or in person as part of a traditional audit.	Process/Control Monitoring. Automatically identify process owner when exceptions occur.
Confirmation (for example, verification of account balances)	Sending letters or emails to customers, suppliers, etc.	Evaluate related data flows from financial institutions. other enterprises through IDEs. etc.
Recalculation (for example, using CAAT to recalculate figures)	Manually extracting data, running CAATS	Transaction monitoring, automatic settlement execution at standard intervals, process integrity checking, process change monitoring.
Re-performance (for example, aging of accounts receivable)	Manually extract data, run CAATS	Account monitoring, automatic execution of settlements, replication of transactions.
Analytical procedures (for example, scanning and statistics)	Extract data, check for anomalies based on auditor judgment.	Filter real-time data using continuity equations, ratio analysis.

Remote auditing provides internal auditors with the opportunity to use technology and adapt to a changing information environment. If continuous auditing eases the time constraints of auditing, then remote auditing softens the location constraint. The implementation of remote auditing can force auditors to radically rethink their approach to conducting an audit, forming and managing an audit group.

In addition to the requirements, motivations, and technologies associated with remote auditing, the central role is played by the reengineering of audit processes. In the process of audit reengineering, a multitude of questions arise - from the redistribution and reallocation of audit functions to the implementation of more complex analytics. In some cases, remote auditing depends on the reengineering of the business processes themselves. It is unlikely that auditors will stimulate changes, but they must work with managers to cope with new data flows and evidence. The driving forces (and barriers) of remote auditing are not only technological in nature, but also extend to the behavioral sphere. These factors will determine the comfort level of auditors providing assurances based on evidence obtained and analyzed remotely, and potentially changing trust relationships between virtual audit groups and audited entities.

References

1. Law of the Republic of Uzbekistan: “On Auditing Activity” of February 25, 2021 No. ZRU-677
2. Alles, M. A. G. Brennan, A. Kogan and M. A. Vasarhelyi. 2006. Continuous Monitoring of Business Process Controls: A Pilot Implementation of a Continuous Auditing System at Siemens. International Journal of Accounting Information Systems 7: 137-161.
3. Armbrust, M. A. Fox, R. Griffith, A.D. Joseph, R.H. Katz, A. Konwinski, G. Lee, D.A. Patterson, A. Rabkin. 1. Stoica, and M. Zaharia. 2009. Above the Clouds: Berkeley View of Cloud Computing.
4. Bierstaker, J. L., P. Burnaby and J. Thibodeau 2001. The Impact of Information Technology on the Audit Process: An Assessment of the State of the Art and Implications for the Future. Journal of “Managerial Audit” 16: 159-164.
5. Kogan and M.A. Vasarhelyi, 2002. The Feasibility and Economics of Continuous Auditing. Auditing: A Journal of Practice & Theory 21: 125-138.
6. Technical Report No. UCB/EECS-2009-28, Berkeley, California: University of California. Berkeley. Bedard, J. C. M. L. Ettredge and C. M. Johnston. 2007. The Use of Electronic Audit Documentation Systems in Audit Practice: Task Analysis, Training and Resistance. Advances in Accounting Behavioral Research 10:29-53.