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## Article

# Developing an online collaborative system within the domain of financial auditing

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**BEST PRACTICES****DEVELOPING AN ONLINE COLLABORATIVE SYSTEM  
WITHIN THE DOMAIN OF FINANCIAL AUDITING****Pavel Năstase<sup>1</sup> and Lucian Cristian Eni<sup>2\*</sup>**<sup>1)2)</sup> *The Bucharest University of Economic Studies, Romania*

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**Abstract**

The research paper, focused on a rather technical approach, has the goal to design a system that brings together diverse audit stakeholders and investigates how an audit database available online can be implemented in SharePoint, as part of an on-line audit system which is collaborative and national. The online audit database covers various information needs for both financial auditors and the employees of the Chamber of Financial Auditors of Romania. For rapid deployment, we used various tools: Microsoft SQL Server 2008 R2, SharePoint Server 2010, SharePoint Designer 2010 and various implementation features: external content types, external lists, business data web parts etc. In this paper, we use two research methods: the first one is empiric, based on formulating a questionnaire and the interpretation of the results, while the second is the analysis of the implementation process by using a step-by-step approach. The online audit database stores information about the results of previous audits, the opinions issued as result of audits, the results of online electronic inspections, audit firms, audited entities, risks identified etc. The conclusion was that the online database, which is updated through Internet, is feasible to implement in SharePoint, for multiple audit stakeholders including financial auditors who can sell their financial audit services benefiting from the transparency that the system provides.

**Keywords:** online collaborative system, online database, Microsoft SharePoint, audit firms, financial auditors, oversight body

**JEL Classification:** M42, C81, C82, C88, D85

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**Introduction**

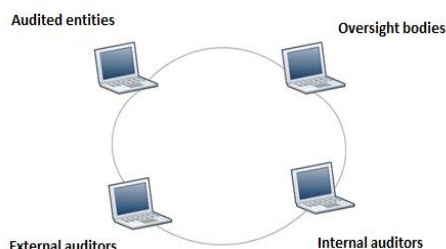
The on-line collaborative audit system has been designed and described within the research papers entitled “Considerations regarding the design of an online collaborative audit

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system” (Eni, in pres) and “Online collaborative audit system for financial audit stakeholders” (Eni, 2014). This paper continues the work carried out in the previous articles, which have introduced a new concept: on-line collaborative audit system defined as an inter-organisational system which uses the methods of collaborative intelligence among the stakeholders of the audit process (audit firms, auditees, supervision bodies) in a given geographical area (e.g.: city, region, country) and which is based on networked computers technology or Internet (Eni, 2014).

This research article investigates whether an online audit database with multiple and heterogeneous users (financial auditors, the employees of Chamber of Financial Auditors of Romania – CAFR etc.) could be implemented as part of a system which is national, online and collaborative (figure no. 1). The online collaborative audit system has three main components: an online audit database, online audit component and e-archive component.



**Figure no. 1: Entities which could be connected to audit network using computers (online collaborative audit system)**

In this paper we analyze the implementation of the first component: the online audit database and the results obtained from the application of a questionnaire for financial auditors on the development of an online collaborative audit.

New networks connect diverse stakeholders with different needs. Although, lately the audit has experienced a steady increase in the use of tools and computer-assisted audit techniques, they did not provide the necessary transparency of audit results. In fact, most audit tools are focused on delivering quality audit results without having regard to the information needs of audit stakeholders. The system presented in this paper attempts to fill these information gaps of audit stakeholders by having a more general approach (at national level).

The online audit database satisfies various needs for Romanian audit stakeholders (audit firms, authorised individual registered auditor, audited firms, supervision bodies):

- record data concerning the electronic inspections performed by the employees of oversight body (using the electronic inspections the employees of oversight body can audit the financial auditors regarding the quality of their work);
- record data concerning the audit missions results;
- records of audited entities, audit firms, individual registered auditors, oversight bodies etc; facilitating the sale of audit services through the online publication of contact details;

- records about employees of oversight body;
- records about the fees paid by the financial auditors as individual auditors or employees of the audit firms (members of the same professional organisation or supervision body: CAFR);
- access of an auditor to the work of the former auditor when the mandatory rotation occurs through the shared online database.

We should emphasize that this research paper takes rather a technical approach in order to design a system which reunites various audit stakeholders.

The process of implementing the online database has 6 steps:

- Phase 1 Conceptual and logical design of the audit database;
- Phase 2 Create the external content types using SharePoint Designer;
- Phase 3 Defining supported operations, parameters and filters;
- Phase 4 Create the external lists for each external content type;
- Phase 5 Create associations between external content types;
- Phase 6 Obtain the online reports for financial auditors and the employees of oversight body.

### 1. Review of the scientific literature

Professional literature defines these three steps to design a database: conceptual design of a database; logical design of a database; physical design of a database.

*Conceptual design* is a process of building an information model used for an area of interest, independent of all physical considerations. To this end, it is important to define: types of information, categories of information required by the system, the rules specific to a domain, constraints imposed, types of reports generated, the main purpose of all the information etc.

*Logical design* is the process of establishing an information model used in modelling an area of interest based on some specific data model (e.g. relational model), but independent of any physical considerations. The professional literature proposes the following steps to create a logical model (for relational model):

- To define the tables based on the requirements specific to a domain that you model (as determined in the conceptual model)
- Determining the relationships between tables
- Determining the content (columns) for each table
- The normalisation of the tables by at least normal form (NF) three
- Determining the primary keys (PK)
- Determining the specific values of each column

Physical design is the process of describing the implementation of the database on secondary storage media. It describes the storage structures and the access methods used to achieve efficient access to data (for example indexing the columns in order to have more rapid access to data).

The research conducted by Țarțavulea (2010) investigates a solution for implementing a computer system using SQL server and Visual Basic.Net development environments. The users of the computer system are the financial auditors of one audit firm. Compared with Țarțavulea's system (offline database), the online database proposed in this paper has multiple users who are the financial auditors of different audit firms and also members of the same professional organization: CAFR.

From a technical point of view, the literature provides details about the steps to configure external content types, operations, filters or external lists in SharePoint (Reza Alirezaei, 2011; Wright, 2011; Rizzo, 2012; Coventry, 2012). Nevertheless, any of the bibliographic references do not offer a complete case study which should provide the detailed steps to build an online database. The article will cover the gap within the current literature regarding a case study which should illustrate the process of online collaborative auditing.

There are several studies which analyse from a theoretical and/or practical perspective the use of online auditing (Tung-Jung Sung, 2007; van der Aalst et al., 2011). Moreover, teleworking could play an important role within audit work as highlighted by several researchers (Năstase and Cretu, 2011). Nevertheless, we have little evidence that researchers have focused their attention on interorganizational online systems for auditing while there is clear evidence from a practice point of view that companies have implemented these software solutions (Swiss Auditor, 2013). Therefore, it is clear that we need to improve our understanding of these digital networks for auditing.

## **2. Methodology**

We have used various research methods in order to design and implement the online audit database. First of all, we started with the review of professional web sites regarding SharePoint platform and we also investigated the literature as regards SharePoint environment. This study takes the form of an experiment (a case study) where we made use of several software tools: Microsoft SharePoint Server 2010 Enterprise Edition, Microsoft SharePoint Designer 2010, Microsoft SQL Server 2008 R2, Windows Server 2008 R2 (64 bit). Naturally, we predicted that the system is feasible to implement in Microsoft SharePoint. The experiment goes through the process mentioned in introduction (6 phases). We have reviewed the legislation concerning the financial auditors and the activity of financial auditors in Romania.

SharePoint 2010 platform is build on SharePoint Foundation which has its structure based on Microsoft.NET Framework 3.5, ASP.NET and Internet Information Services (IIS) and has many components/features such as: Business Connectivity Services, Web Parts, Web Pages, Lists, Libraries, Content Types, Field Types, Sandboxed Solutions, Site Templates and Definitions etc

SharePoint is also built on SQL Server, which can be installed before the SharePoint Server is installed. There are two types of SharePoint Server: Standard and Enterprise. For this experiment, we have used Enterprise edition of SharePoint although the features described

in this paper could be implemented also in standard edition of SharePoint. To install SharePoint server, we completed all the steps mentioned in professional literature (Reza Alirezai, 2011). Basically, we installed and configured, in this order, the following servers on computer: Windows Server 2008 R2, SQL Server 2008 R2, SharePoint Server 2010 Enterprise Edition.

Among the other things the study is based on a questionnaire containing 17 questions that are addressed to financial auditors, members of the Chamber of Financial Auditors of Romania, in order to obtain the views of the statutory auditors on the implementation of an on-line collaborative system between the stakeholders of the audit process.

### 3. Results and discussions

#### 3.1 Interpretation of the results obtained for the questionnaires

Today audit community faces new challenges (problems) that must be addressed such as the loss of information when the mandatory rotation of auditors occurs in respect of the risks identified during the audit engagement or the high costs for the audit missions resulted from travel and accommodation expenses or those from collection/analysis of data. Furthermore, from the perspective of the oversight body, this is experiencing high cost of travel and accommodation regarding inspectors who are responsible for auditing the auditors (quality control). As auditors and auditees are located at long distances from each other there is a growing need for auditors to have remote access to auditees' data (electronic audit evidence).

"The fragmentation of the audit community leads to high costs and nowadays improving information transparency among all audit market partners is a necessity. When the mandatory rotation of auditors occurs, we are witness to a loss of information from one audit mission to another. The oversight bodies do not have access to the work results of audit firms and these have high costs to achieve the quality inspections. The risks identified by auditors for companies are not transparent." (Eni, 2014). Today unfortunately the purchase of granular hardware and software audit solutions do not provide transparency to audit engagements results.

The main contribution of this research is a model of an online collaborative system for Romanian auditing market that is organized as a digital network which gathers multiple audit stakeholders. In a broader context, this model can be used in other countries which have similar oversight bodies. The novelty of the research consists in the "think big" strategy of the prototype system which is inter-organizational, collaborative, online and dynamic. Furthermore, the prototype system gathers large number of auditors and tries to respond to the problems identified above.

To the questionnaire applied to financial auditors we have received a total of 210 responses of which most belong to managers auditors (44/3%), partners auditors (20.5%) and financial auditors seniors (21.9%). Most of them are working within a small audit firm (60%) of an audit firm organized at the level of county / area (25.2%) and an audit firm organized at national level (10.5 %). We have also received nine responses from auditors managers / partners working in international audit firms (Big 4). For the latter, the net turnover of customers is in average over 1,000,000 euro while individual audit offices have mostly (63%) the turnover below € 50,000. The audit firms organized at national level have

customers whose turnover ranges from 50,000 euro to turnover of over 1,000,000 euro. Most audit firms organized at county/area (75%) have customers whose turnover is up to 500,000 euro.

Most of the respondents (51.4%) specify that audit firms where they are working using an audit software. The more the national coverage and the customer turnover is bigger the more we observed an increased use of audit software. Small audit firms are those that use the least the audit software and they have to some extent a computerization of the audit process.

When asked *"To what extent do you think is opportune to create a collaborative online system which has as users the financial auditors?"* the respondents fully agreed with a rate of 60.5%. The agreement for this assertion was expressed in a proportion of 29% while 10.5% of respondents are neutral. There were no answers to express disagreement with the statement that it is opportune to create the system. The results of the present study demonstrate that the need to develop a national system that maximizes the existing technical potential of current systems is perceived as important by auditors who are the main beneficiaries of the system. The existence of digital networks of financial auditors will enable better management of audit electronic documents / the quality assurance within the domain of auditing and also will facilitate the access of audit stakeholders to these documents.

Some noteworthy results have been obtained to the question *"What features do you think that an online collaborative system should provide? (Multiple answers possible)"*. Most of the auditors (24.4%) consider that it is important the feature of the new auditor to access information on the risks identified by a former auditor of an audited entity, when auditor rotation occurs (the access to information is governed by the confidentiality principle). In the next place, in order of importance, it is the system facility to enable the collaboration among the audit stakeholders, facilitate which was chosen by a percentage of 22.1% of all auditors. 21.3% of the auditors consider important the facility of electronic communication between the stakeholders of the audit process. Ability to conduct online audit by offering business intelligence facilities (e.g. calculating the financial ratios online) within the system or connect to databases of the audited entity is a system functionality considered important by 17% of respondents. Furthermore, 89% of the financial auditors consider that business intelligence facilities within the collaborative online system can help auditors in carrying out financial audits. The possibility that each auditor or audit firm to have its own website within the online collaborative system is endorsed by 13.8% of respondents. Since the question regarding the system facilities has allowed to develop their own responses we received proposals that the system to include plans / audit programs, access to common audit software for audit firms, statistics, questions and solutions to particular problems etc. When asked *"What should be the role of the website created within the system for each firm/financial auditor?"* we obtained the following percentages:

- 30.6% have considered collaborating with the audit team members through the site;
- 25.7% would like the storage of audit electronic documents on the web site;
- 22.1% choose online marketing to promote audit services;
- 21.1% choose to make a planning of audit resources on the website.

Then we wanted to analyze the perceptions of the financial auditors on audit documents which might be stored within an electronic archive to which access should be differentiated according to the role it plays the stakeholders of the audit engagement. In this respect, we observe that on the first place, within the options of financial auditors, there are the programs under the Guidance on Audit Quality (Sections A to U) with a percentage of 14.2% of respondents followed by the option for the audit report (14.1 % of respondents), the risk assessment worksheets (12.1% of respondents), the plan and the financial audit program (11.5% of respondents) and the summary of the audit process (10.3% of respondents). Some financial auditors express the opinion to store documents and worksheets on activities necessary for the planning of the financial engagement (e.g. due diligence activities) or the procedures used within the engagement of the financial audit, audit evidence, sampling and documentation audit (audit file). The main advantage resulting from the digitization of documents is the conservation and the transparency of audit results.

Regarding the security measures within the online collaborative system the financial auditors have chosen mainly for an authentication within the system based on username and password (36.7% of respondents) or based on a security token, similar to those used in the banking system (26.6% of respondents). It is not ignored the option for the use of electronic signature of documents and the use of system permissions, to enforce the principle of confidentiality, each having a share of 18.3% of respondents.

As predicted, the majority of financial auditors (members of CAFR) consider that the proposed facilities within the on-line collaborative system are important. As shown in the table no. 1, the creation of a digital community in auditing that takes the form of an integrated platform that maintains the confidentiality of audit data is supported by the majority of financial auditors. We can see from the table above that answers "Strongly Disagree" and "Disagree" are the least frequent.

**Table no. 1: Benefits of an online collaborative system**

	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
The creation of a digital community within the auditing domain	44,3%	38,1%	16,2%	0	1,4%
Maintaining an audit history that allows reviewing the predecessor auditor's working papers, respecting the confidentiality principle and in accordance with international auditing standard 510.	35,7%	44,3%	16,7%	2,4%	0,9%
The facility to share electronic audit documents and reporting within the system among audit stakeholders.	31%	42,9%	22,4%	3,3%	0,5%
Electronic communication with audit stakeholders	37,6%	45,7%	13,8%	1%	1,9%
Business intelligence facilities through websites	34,8%	40%	22,4%	1,8%	1%
Each auditor/audit firm will have its own website	31,4%	32,4%	33,3%	2,4%	0,5%
The possibility to connect to databases of the audited entity and to conduct in this way a remote audit through the system.	34,3%	39,5%	15,2%	6,7%	4,3%



The creation of an online collaborative system at national level requires that all audit stakeholders share data. The attitude towards creating a website within an on-line collaborative system for financial audit is neutral for most of the auditors. Certainly, the implementation of the system will enable higher levels of information integration to facilitate compliance with the provisions, monitoring and auditing. By keeping audit history and sharing it with stakeholders will increase the transparency and the flexibility of audit system in Romania. By accessing audit data from on-line databases available at national level will facilitate better cooperation and communication between audit stakeholders. In this sense, the authors wished to obtain the financial auditors' opinion on the data that should be stored within the system. The financial auditors have indicated with priority that should be stored in the system the following: the opinion of the audit report (17% of respondents), the applicable financial reporting framework (16.9%), the name of the audited entity (16.4% of respondents) and the findings and the results of the audit mission - short description (16.1% of respondents). The start, end and acceptance date of the audit engagement were indicated by the financial auditors within a percent of about 9% of respondents for each and the NACE codes of audit firms, in which we can verify the compliance with the CAFR decisions, were mentioned the least with a percent of 6.6%. An auditor also mentioned the possibility to store questions and answers from the financial auditors, users of the system. It is obvious that by facilitating access to these online databases, we could increase the quality of audits - stated aim of supervision bodies.

Also the authors wished to examine the perception of financial auditors on actual costs which will be reduced thanks to the implementation of a on-line collaborative system at national level. The financial auditors have indicated firstly the reduction of travel and accommodation expenses necessary for auditor's travelling to the audited entity for the application of procedures that can be implemented within the electronic environment, using the information system (22.1% of respondents). 21.3% of respondents mentioned also the reduction of costs with consumables because most of the documents resulted from the audit process will be stored within the electronic environment thus reducing a great number of back-ups. Also the financial auditors anticipate a reduction of accommodation and transport costs necessary for travelling of the auditor to the former auditor of the audited entity to review the worksheets - the audit history (21% of respondents) and also a reduction of expenditure with other audit systems which have similar functionalities with the online information system for financial audit (20.3% of respondents). Implementation of an online collaborative system will stimulate interactivity, will reduce the time associated with the audit process, saving time for auditors and cutting costs with transport and accommodation. These benefits will increase the satisfaction of the financial auditors and it will facilitate access to the audit information.

Regarding the expenditure with the implementation of an on-line collaborative system at national level, they can be supported by the audit firms depending on their size and geographical coverage area. The data seem to suggest that a larger audit firm is willing to cover more of these expenses. Thus 70.5% of respondents consider that the company where they work, most of which are small audit firms, would be willing to pay up to 300 euro of expenditure. 22.4% of respondents that are working in small audit firms, companies at county level and companies at national level prefer to support costs between 300 and 1,000 euro. Some companies organized at national and international levels as well as those at the county level (5.2% of respondents) prefer this expenditure to be in the range of 1,000 to 3,000 euro. Three respondents from two international firms (Big 4) and one at national

level, representing 1.4% of the statistical population, prefer a range of costs between 3,000 euro and 10,000 euro. One company organized at national level would be willing to spend more than 10,000 euro for a collaborative online system.

According to financial auditors the following should be considered as a priority when designing a collaborative online system:

- The principle of confidentiality stipulated within the Code of Ethics for Professional Accountants (indicated by 36.5% of respondents);
- CAFR legislation (indicated by 30.4% of respondents);
- International Standards on Auditing (mentioned by 32.1% of respondents);
- Other (1% of respondents) specifying the following elements by auditors: data theft, access only for auditors, access security and security of information stored, the acceptance of the audited entity or the worksheets.

Regarding the obstacles to implement an online collaborative system we received the following answers:

- a feeling that the confidentiality principle of data cannot be met within the system and the ownership right of the data stored will be lost, was nominated by 48.6% of respondents;
- high costs of implementation (24.8% of respondents);
- the security measures of the system will prove inadequate (13.3% of respondents);
- I do not think there are impediments (13.3% of respondents).

Moreover, the financial auditors think that when designing an online collaborative system must be considered the time period of loading / unloading documents from a database content (39.9% of respondents), the need for frequent maintenance or modification of websites (33.6% of respondents) and also the loading time of web page (24.6% of respondents).

In view of the results we can easily realize that the existence of a common database at national level to provide information on the results of the financial audit is required for both the financial auditors and the supervision body. The financial auditors noted as a positive point their much easier access to audit work and emphasizes the need that the predecessor auditor to provide the new auditor with such information.

### 3.2 Presentation of the prototype of online collaborative system

As regards the implementation of the prototype system, the six distinct stages of the experiment are detailed below:

*Phase 1 Conceptual and logical design of the audit database.* The relationship diagram obtained within the development environment Microsoft SQL Server 2008 allows the implementation of relations “more to more” by using link tables. An example of a relationship “many to many” is between audit and auditors: within an audit engagement can participate many auditors while an auditor might have multiple audits.

On the one hand, the purpose of the system is, from the point of view of financial auditors, to keep data on audited clients and to record the main results of the audit engagement which can then be shared with stakeholders and, on the other hand, from the point of view of the oversight body, to obtain a reasonable assurance on the quality of audits through inspection of electronic documents stored by the financial auditors. Moreover, according to the authors, this system might be useful in monitoring of other obligations of the financial auditors in relation with the Supervisory Body such as: the legal requirements of CAEN codes of audit firms, contributions paid etc.

Some tables will be updated by auditors (e.g. auditees, audits), and another part will be updated by the supervisory body or employees of the Council (e.g. electronic inspection CAFR departments etc.). By integrating the audit opinion and a brief description of the findings and results of the financial audit missions, it can be stored data on the risks of audited companies which can then be shared with the financial auditors in accordance with the confidentiality principle and intellectual property rights.

*Phase 2 Create the external content types using SharePoint Designer.* External content types are entities of external data that allow storage of connection data and also the definition and the methods of data. Together with the external lists, this functionality allows transposition of external database within the online environment.

*Phase 3 Defining supported operations, parameters and filters.* It shall be defined in SharePoint Designer the operations supported by the external system through the web interface. In this respect, the authors have implemented CRUD operations (C-create R-read, U-update, D-delete). In this stage we can define the elements that can be viewed within the web interface and we can configure some parameters of operations and configure the filter parameters. The filters can be used to limit the number of external elements which are returned from an operation carried out on the external data source

*Phase 4 Create the external lists for each external content type.* Once we have defined external content types and the operations (methods) supported by the external system we will create external lists which are designed to expose data in a web interface through a SharePoint list. This is done by selecting "Create Lists & Form" ribbon menu of SharePoint Designer. For each external content type will be created an external list: entities address, individual auditor, applicable financial reporting framework, type of auditor, contacts, contacts position occupied, fees paid, departments of CAFR, departments of the Council, details audit mission, audited entities, financial year, audit firms, position, code CAEN, code CAEN audited entity, code CAEN audit firm, electronic inspection, audit mission, audit mission auditor AP, audit mission audit firm.

At this point we have all the data contained by the tables within the online environment, where they can be edited or entered into the system by using the forms templates (Items Menu - Edit Items) and moreover, using these form templates we can introduce new items in the list (Items Menu - New Item) and thus updating SQL Server database automatically.

*Phase 5 Create associations between external content types.* Business Connectivity Services (BCS) allows two types of relationships: based on foreign key and those which are not based on foreign key. Based on foreign key relationships are types of associations such as "one to many" or reflexive associations based on foreign key (Microsoft Corporation, 2012).

Regarding the associations that can be created in BCS, we will need to implement an association between external content type “audit missions” and the external content type “electronic inspection”. In a similar way, we can create an association between the external content type “Contacts” and the external content type “Departments CAFR”. Basically, for each “one to many” relationship present in SQL Server diagram it can be created an association with Microsoft SharePoint Designer application. To create the associations between the external content types, we identify those tables which contain foreign keys and for these will be created the associations (source tables).

*Phase 6 Obtain the online reports for financial auditors and the employees of oversight body.* Once we have created an association between two external content types, we can view the associations in the user interface of SharePoint site, in several locations:

- External list forms. We can select a CAFR department to associate it with a specific contact using the tool “external item picker”. In the case for an external content type we have created a filter type “wildcard”, then we have the option to search in the list for a specific word.
- Profile page. (Once the association is defined, we can view the data stored in a tuple by accessing the profile page.)
- Business Data Web Parts. (The components “business data list” and “business data related list” are web parts which facilitates the visualization of associations and creates different scenarios to obtain the data necessary for analysis and interpretation.) For the online collaborative computer system for financial audit, we can design various scenarios in order to benefit from the associations created between different tables. We enumerate some of the proposed scenarios that can be implemented using business data web parts in the form of online reports which show: the number of entities audited by an audit firm or an individual financial auditor; the audit mission details for an audited entity; the audit missions carried out by an audit firm; the audits carried out by an individual auditor; the individual auditors who have been subject to electronic inspection (it will be considered also the electronic marks awarded following the electronic inspections); the audit missions that have been undergone to electronic inspection by the employees of the Monitoring and Professional Competence Department; the fees paid (fixed and variable) by an individual auditor or the audit firm; the history of positions occupied by individual auditors within the same audit firm or different audit firms; CAEN codes held by an audited entity; CAEN codes held by an audit firm (verify their conformity with the law regarding CAEN codes allowed); the audited entities classification according to the applicable financial reporting framework (e.g. IFRS) etc.

We can create a report which allows the observation of audit mission details for an audited entity obtained through the use of business web parts. Concerning the online database, we have introduced 7 data items within each table and we tested whether the data is accessible online via web interfaces (web forms in SharePoint). Moreover we have checked whether the relationships between the tables work. CRUD (create, read, update, delete) operations have been tested on data in order to verify the usability. This was done in order to evaluate and to validate the prototype system.

The type of external content from SharePoint Designer allows the connection to the database of the on-line collaborative audit system or it can be used to connect to the databases of audited entities (accountancy information system) and in this way extracting auditable data within on-line environment which allows financial auditors to perform remote audit.

**Conclusions**

Online collaborative auditing is an innovative way of performing audit tasks by using a web system whose main features are online auditing and collaboration. The 210 answers obtained at the questionnaire used for the foundation of the research prove the usefulness of such a system. The collaboration between audit stakeholders (financial auditors and employees of professional organization) is supported by an online audit database which is designed and developed in this paper. The system proposes creating a specialized digital network in audit domain that requires the complete involvement of all stakeholders interested in audit process.

The research shows that the online audit database is feasible and it can be implemented in Microsoft SharePoint. The online database encourages the transparency and openness of audit results collected by the financial auditors who are members of the same professional organization: The Chamber of Financial Auditors of Romania. In addition, the system allows that the audited entities to search more easily within the online database the contact details of financial auditors who are authorized to carry out audit and advisory missions. Therefore, the audit services are marketed easier by the financial auditors using the online system. Through the system, the financial auditors communicate both with the employees of oversight body and also with other financial auditors. For example, a financial auditor could have access to the results of an audit mission performed by a former auditor for the same audited entity. By respecting the confidentiality principle, the new auditor could benefit from the history of audits and therefore could assess in a better way the risks associated with a particular entity as well as the environment of the entity. The database also records the results of the online inspections performed by the employees of the oversight body against the electronic documents stored within the system by the financial auditors.

The main contribution to the literature in this area is that it provides a model of a web platform which manages information from various audit stakeholders: financial auditors, employees of CAFR etc. When the rotation of auditors occurs, the financial auditors could access from the former auditor information about risks, the specificities of the audit client etc. This facility can be very useful for auditors since they can focus on the risks based on the history of auditing.

The audit database is unique in the sense that it does not include only one audit firm with multiple clients, as we can observe from recent studies, but rather expands the horizon by including multiple financial auditors, multiple audit firms, multiple audited entities, multiple oversight bodies (Chamber of Financial Auditors of Romania and Public Oversight Council of the Statutory Audit Activity). Most of the relationships between the tables are “many-to-many” which increase the complexity of the database and also creates a variety of collaborative scenarios which could help the audit stakeholders in their work.

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