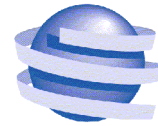




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INTERNEWS

e-Gov Project

SYSTEM DESCRIPTION

FOR

DEVELOPMENT OF SOFTWARE APPLICATION FOR

e-SUBMISSION OF ANNUAL ACCOUNTS

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1. INTRODUCTION

The e-submission of annual accounts will enable submission of the annual accounts through a Web portal using a digital certificate or other method of e-identification.

The core objective of the e-Gov Project is to create, design and implement an online service for e-submission of the annual accounts of all companies and legal entities in the Republic of Macedonia, which now are manually submitted to the Central Register. In order to achieve this, e-Gov Project will work closely with the Central Register on the current software solution for processing of the annual accounts and prepare new web solution for e-submission of the annual accounts. The e-Gov Project and the Central Register will implement interface between the Central Register and the end-users – entities submitting the annual accounts.

This on-line system will reduce the administrative cost both for the Central Register and for the entities that submit annual accounts; as well it will reduce the time needed for the processing of the annual accounts. The software application and the system will incorporate all necessary security measures.

The system will be used in the Republic of Macedonia. All references in this document to legal text refer to the relevant legislation in the Republic of Macedonia.

2. CURRENT SITUATION

The Central Register has one central office located in Skopje, and 30 district offices across Macedonia. The Central Register has the mandate to collect and process the annual accounts.

At the moment, there is a mini-desktop application for e-submission of the annual accounts, which offer a possibility to submit an annual account in electronic form, either on floppy or CD. The entity submitting the annual account must come personally to the offices of the Central Register. This cause double work for both parties: the entity submitting the annual account is filling in the paper form, and after the annual account is submitted, the clerk of the Central Register is re-entering the data again, now into the annual accounts database. Beside that, there is always a possibility for typing errors when re-entering the data in the annual accounts database.

After submission of the annual account, the process of control and approval is handled by:

- **Clerks** – who receive and enter (or import) annual account data;
- **Officers** – who validate the annual account data using the existing software application at the Central Register.

Today, only very few companies are using this mini-desktop application to submit the annual accounts, and most of the legal entities are still submitting them in paper form. However, this mini-desktop application shall still be used in the future, and all legal entities should be able to choose one of the following submission options: paper form, floppy or CD or online submission of the annual accounts.

The solution for e-Submission of Annual Accounts should be closely integrated with the existing system (mini-desktop application) used by the Annual Account department within the Central Register.

The mini-desktop application with implemented logical and arithmetical controls can be a very good start for the implementation of the software solution for submission of the annual accounts through the Web.

3. CENTRAL REGISTER LEGAL FRAMEWORK

3.1. Law on Central Register (Official Gazette no. 50/01 and 49/03): Regulates the establishing, organization and scope of work of the Central Register, the relations between this Register and other basic registries and their users, relations with other entities, as well as issues related to entry, processing, keeping and distributing relevant data from the Central Register databases to the data users.

3.2. Law on One-Stop-Shop System and Maintaining of Trade Registry and Registries of Other Legal Entities (Official Gazette no. 84/05 and 13/07): Regulates the one-stop-shop system, keeping the Trade register and the registries of other legal entities in paper and electronic form, as well as the take over of the Trade registry, court registry, register of the water funds, register of the water supply units, NGO registry and registry of chambers from the authorized courts.

3.3. Company Law (Official Gazette no. 28/04 and 84/05): Regulates all issues related to establishing and operating a company, including the preparation and submission of the annual accounts and financial reports (articles 476-477).

3.4. Rulebook on the Form and Content of the Annual Account (Official Gazette no. 113/06): Regulates the form and content of the Balance Sheet and Income Statement that are part of the Annual Account for the entities that keep the accounts in accordance with the Company Law.

3.5. Other rulebooks that define the form and content of the annual accounts for entities other than the companies (e.g. state institutions, NGOs etc.).

4. REQUIRED BUSINESS PROCESS

The e-Submission System should respect the following business process required by the Central Register:

4.1 User account registration

Prior to using the system, each user must create its own account. When entering data about persons or legal entities "shadow" registers of the Central Register must be used (registers containing company's identification data). This assumes interface with the databases of the One Stop Shop and the "shadow" database of persons (registers containing citizen's identification data).

4.2. Submission of annual account

At the moment there are 7 different forms used by the legal entities to submit the annual accounts. It is the Ministry of Finance that prescribes the forms based on the International Accountancy Standards. Based on what type of legal entity and how it was categorized by the Central Register in the previous year (calculated according to parameters from the annual account submitted in the previous year), the entity submitting the annual account selects the appropriate form for data submission, which must be offered by the system in a form of drop-down menu.

All the journal information registered for each submitted annual account should have the same structure as the one used by the existing mini-desktop application that the Central Register uses.

4.3. Processing of annual account

After submission of the annual account, all the data should be sent to the existing system for further control and approval process. Officers in the Annual account department should use the existing software applications for checking and approval or rejection of each individual account.

4.4. Confirmation

When the officer approves or rejects the annual account, the entity that has submitted it should receive confirmation e-mail.

5. E-SUBMISSION SOFTWARE MODULES

This chapter describes how the e-submission of annual accounts services system shall operate. The design of the e-submission system for annual accounts is modular and it is composed of separate software modules. The following software modules are foreseen for the system:

5.1 Module 1: Identification / User Management / Fees

5.1.1. User Registration and fee for the services

Users should register before they start using the system. The registration procedure must be simple and with very few steps. If one person/accountant/legal entity is authorized to submit annual accounts for several companies/legal entities, prior the registration he/it must submit authorization from each company/legal entity.

Only registered user can access secure part of the application.

The system must provide a functionality, which the entities submitting the annual account will use in order to prove that they have paid the required fee, prior to submission of the annual account. There are several possible options how this could be done, but the bidder is encouraged to come up and propose a solution that is deemed as the most appropriate for this online system.

5.1.2. User Management

System Administrators should be able to access the user profile of the company or the legal entity submitting the annual account and to enable/disable access to the e-submission system for that particular user.

5.1.3. User Profile

Registered users should be able to access at any time their own user profile and to update their contact information and submit any information requested by the Central Register.

5.2 Module 2: Form Designer

Web-based form designer module should allow system administrators from the Central Register to modify existing forms, or to create new according to the legal framework. The forms should be used for electronic submission of the annual accounts or collection of other relevant data regarding the entity submitting the annual account.

The form designer should be able to create "active" forms meaning that logical and arithmetical controls must be incorporated into the form. Logical and arithmetical controls are further specified in chapter 6. Forms designing.

The form designer will design draft forms that should be approved by relevant person within the Central Register. It must consequently be possible to transfer drafts from one workplace to another within Central Register.

The form designer should be compatible with the interim database. IT Department of the Central Register will be responsible for administration of that database.

5.3 Module 3: Data filing and submission

The system must be user friendly for the companies and other legal entities and should provide necessary information and guidance regarding the process of filing and submitting the data.

Solution should provide two ways of data submission:

- **Filing data through a web form;**
- **Uploading of file created with the existing mini-desktop application.**

It is necessary to implement logical and arithmetic validation of the data submitted through the web form in order to avoid possible errors. If any error occurred, the system shall return error report to the entity submitting the annual account, but the submitted annual account will be stored in the interim database until the requested correction is done. If within a period of 3 working days the annual account is not corrected it will be deleted from the interim database and deemed as it was never submitted.

Confirmation by e-mail should be sent to the company or legal entity when the submission has been accepted.

5.4. Module 4: Data transfer

The system shall store submitted data into the interim database, prior to their processing and approval. During the storage into this interim database, the authorized persons from Central Register should be able to check and approve/reject

the submitted data. After the checking and approval is done, the data should automatically be stored into the central database.

Central Register will prefer all process of data validation and approving of each annual account to be done by existing enterprise solution that Central Register is using. That means that it will be necessary to make close integration with the existing software solution.

5.5. Module 5: Reports and other services for submitted annual accounts

This module should provide information for each submitted annual account separately and allow the companies and other legal entities to view their own submitted annual accounts on line. This means they should be able to view already entered data, without having a possibility to make changes. The company or legal entity should also have a possibility to print their annual accounts.

Confirmation for approved or rejected annual accounts should be automatically e-mailed to the entity that has submitted it.

This module should be flexible enough to accept further enhancement by adding other services when developed by the Central Register.

5.6. Module 6: Administration

This module is intended for the system administrators and should include functionalities needed for the maintenance of the system.

This module should provide monitoring and error reporting regarding transactions and operating of the system (WEB interface, databases).

This module should provide the following options:

- Possibility to manage rules for both e-submission solution and the existing system;
- Possibility to assign rule to each field from web form created by form designer. Rules for data validation will be provided by the Central Register to the selected developer;
- Possibility of activating and deactivating web forms. All activated forms will be accessible and usable through public part of the web solution.

6. FORMS DESIGNING

The software developer shall be provided with all legally determined forms in order to be able to generate the electronic forms by using the form designer. Every form should have unique reference number according to the number determined with the law.

The system should maintain history of the forms created for future reference.

Logical and arithmetic controls prepared by the Central Register will be provided to the software developer.

7. INTERIM DATABASE ORGANIZATION

The data collected through the e-submission system should first be stored into an interim database. The software developer, in cooperation with the IT department of the Central Register, shall create database tables related to the forms and design data exchange protocols between the interim and the production database.

Since all the controls and the approval process will be done by the officers of the Central Register through the existing application, the interim database should have a structure which should be compatible with the existing applications.

8. SECURITY REQUIREMENTS

The e-submission system works with highly sensitive data that must be secured. The solution should be based on open and well-established standards in security and privacy, providing for flawless integration with the overall annual account system.

The system should support a variety of authentication and encryption mechanisms.

8.1. Possible Authentication mechanisms

These three types of authentications are mandatory for the system:

- Digital Certificates
- Smart Cards
- Username / Password

The bidder is encouraged to propose other authentication mechanisms as well and to elaborate their implementation. Different authentication mechanisms could be acceptable for different groups of users.

8.2. Data transfer protection

- **Authorize transmission:** Authentication mechanism that the software application will use, should control access privileges for specified online transactions.
- **Verify integrity:** Authentication mechanism must ensure that the message or data the certificate "signs" has not been changed or corrupted in transit online.
- **Ensure privacy:** Encryption method should be used to protect information being intercepted and read during Internet transmission.

8.3. Security and audit trail

The system should log all events, transactions and access and should provide a module for automated processing of system logs, offering the capability of generating reports on user/system events both for the purpose of security and providing statistics. Such reports should be able to highlight illegal activities, like change of data and accessing confidential information. Only specifically authorized persons should be able to have

access to some parts of the information. Central Register should assist in specifying different groups of access.

8.4. Security of uploaded data

The solution should provide the following security checks:

- Virus check – this validation should be performed on uploaded files by using the existing data virus protection software at the Central Register;
- Data corruption check;
- Digital signature verification.

9. Performance and Scalability

The solution should be scalable to support growing numbers of users while adhering to performance requirements.

The e-submission system must be able to interact with existing applications within the Central Register.

10. Backup and Recovery

The e-submission system is 24/7 system where the business continuity is crucial and the software developer will have to cooperate with the Central Register on defining and testing the back-up and recovery procedures for the developed system. The backup should be done on hard disk drives and tape media and in accordance to the standards defined by the Central Register.

11. Quality Assurance

The e-Gov Project considers Quality Assurance as a critically important component of this project. While it is recognized that the recipient organization will be conducting tests to verify the acceptability of the software, this should not be seen as a substitute for verification of the deliverables by the developers prior to submission.

The developer should plan and execute white box and black box testing at their development site before it is delivered and installed at the production site of the recipient.

White box testing will be performed according to a plan of the developer's own design. It should include unit testing of each module as well as integration testing between modules, and overall system testing. The developer shall send a confirmation letter to the e-Gov Project certifying that white box has been completed. This letter is considered part of the deliverable.

The list of functionalities and criteria to be used for black box testing will be provided to the developer by the e-Gov Project and will be sent to the developer before the commencement of testing. The developer shall be responsible for conducting two rounds of black box testing:

- one in the laboratory environment at the development site
- one in the production site of the recipient organization

A third round of black box testing will be conducted by the recipient organization following or coinciding with the training to be provided by the developer.

The developer shall fix all issues found during any of the testing phases and send a final testing report to the e-Gov Project. This final testing report is considered to be part of the deliverable and will be required before the e-Gov Project can issue the acceptance letter.

12. Language

The language that should be displayed on the e-submission system will be Macedonian. For the Macedonian language the Cyrillic alphabet must be used in Macedonian code-page standard.

For the interfaces used by the authorized users for submission of the annual accounts Macedonian language should be used, as described above.

13. ICT Infrastructure

Operating system of the web server is Windows 2003 Standard edition.

Web page should be developed in ASP.NET technology

Interim database should be Microsoft SQL 2000 or 2005 standard edition.

14. Reporting

Advanced reporting system shall be developed for all users, that shall include, but not be limited to:

Annual accounts register department should be able to generate reports crucial for their day-to-day work. Concise list of such reports will be provided by the Central Register to the selected software developer.

Companies or other legal entities that submit annual accounts should be able to get specific information for submitted annual accounts. In that respect, printable version of the annual account, which clearly shows that it has been accepted by the Central Register, shall be made available on user's request.

15. Training

The timing of the training shall be agreed between the Central Register and the selected software developer. Ideally, the training should take place after the testing of the software application and be, at latest, completed at the end of September 2007.

The training shall be organized at the premises of the Central Register, using their computers and classroom. However, bidder may propose different training location, including its own classroom, if available.

The training should be organized for 2 groups of internal users: first group will consist of system administrators from the IT Department; and the second group of specialists from the

Annual accounts register department. Central Register will identify the participants per course. Each group will have between 5 - 8 participants.

The training shall also incorporate form designing about which the System Description provides more detailed information.

The training for the specialists from the Annual accounts register department shall be organized in a "train the trainers" manner and should cover all modules that these system users will use.

A refreshment course shall be conducted for the users of the system within the Central Register in December 2007.

The user manuals and guides, both hardcopy and electronic, presented in an instructive way, should be available at the time of training. The manuals and guides should be written in Macedonian language.