

Development of software for automation of EDS

Alexander Koroban



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01

INTRODUCTION

Functional units





Main functional units of electronic reporting

- Internet Connection
 - Software
 - Report
- Digital Key

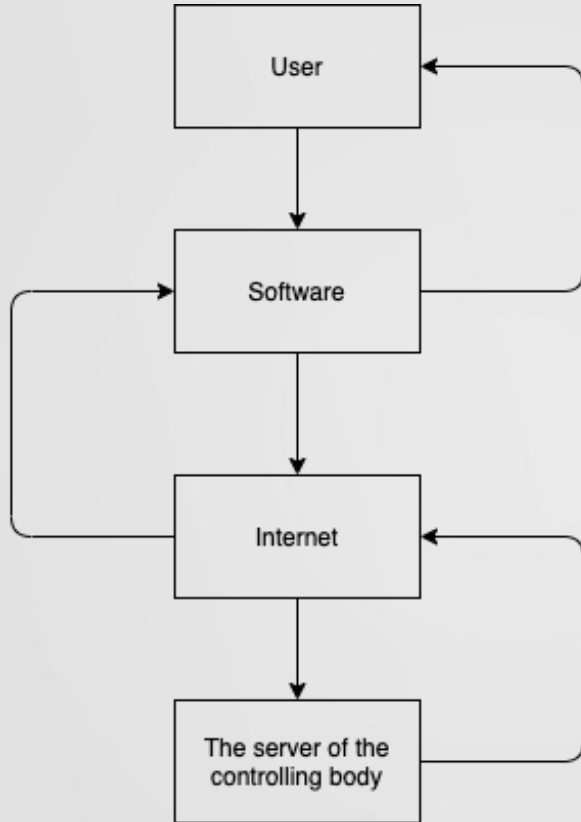




02

STRUCTURAL SCHEME

Main Components



Main components of the structural scheme of the electronic reporting system

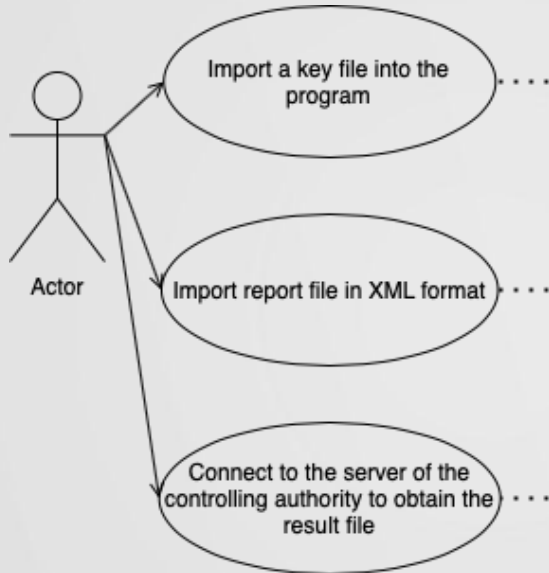
- User
- Software
- Internet
- The server of the controlling body



03

PRECEDENT DIAGRAM

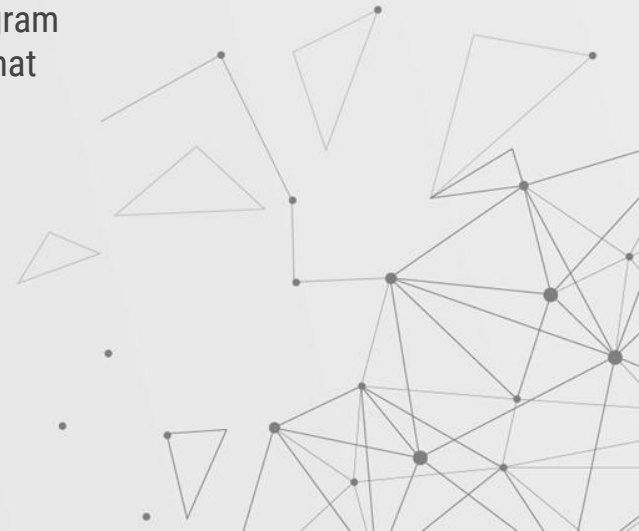
Main modules of the diagram



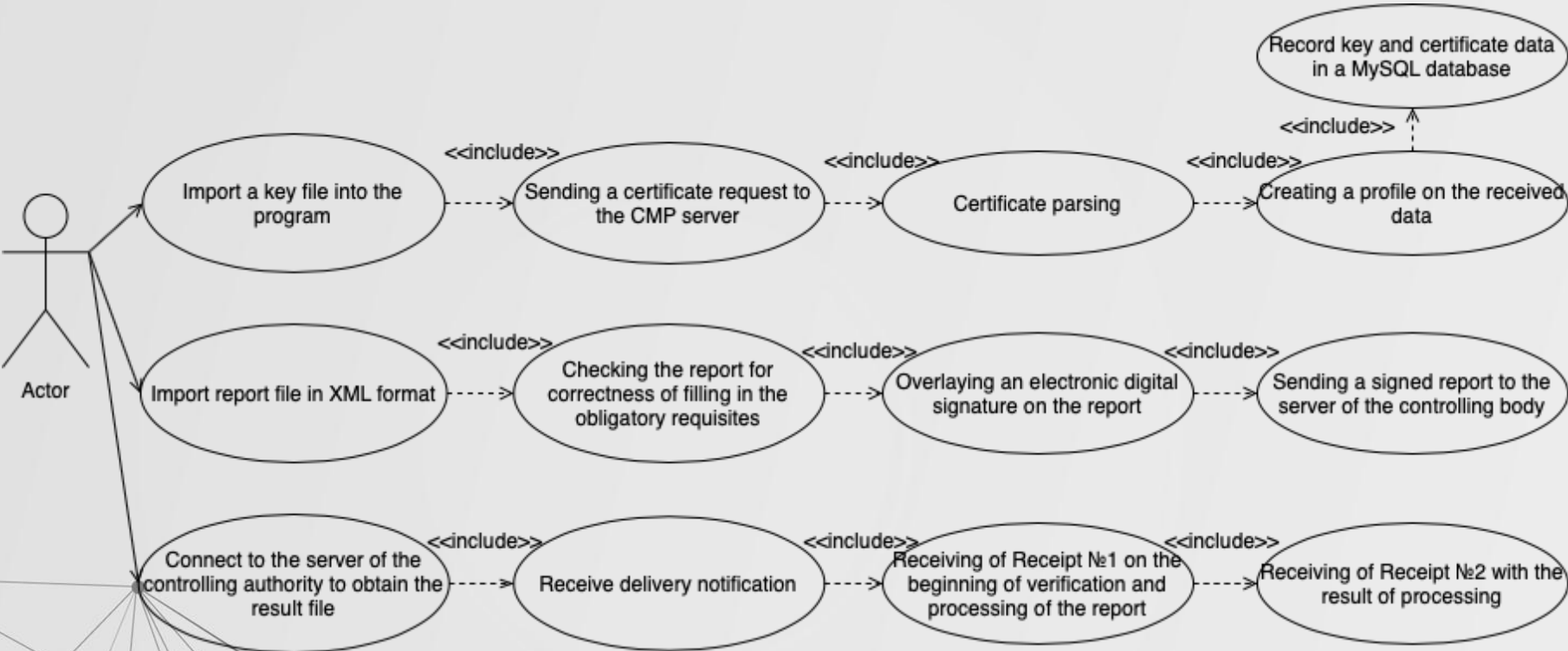
Precedent diagram consists of three main modules

- Import a key file into the program
- Import report file in XML format
- Connect to the server of the controlling body

The full diagram is shown on the next slide.



PRECEDENT DIAGRAM



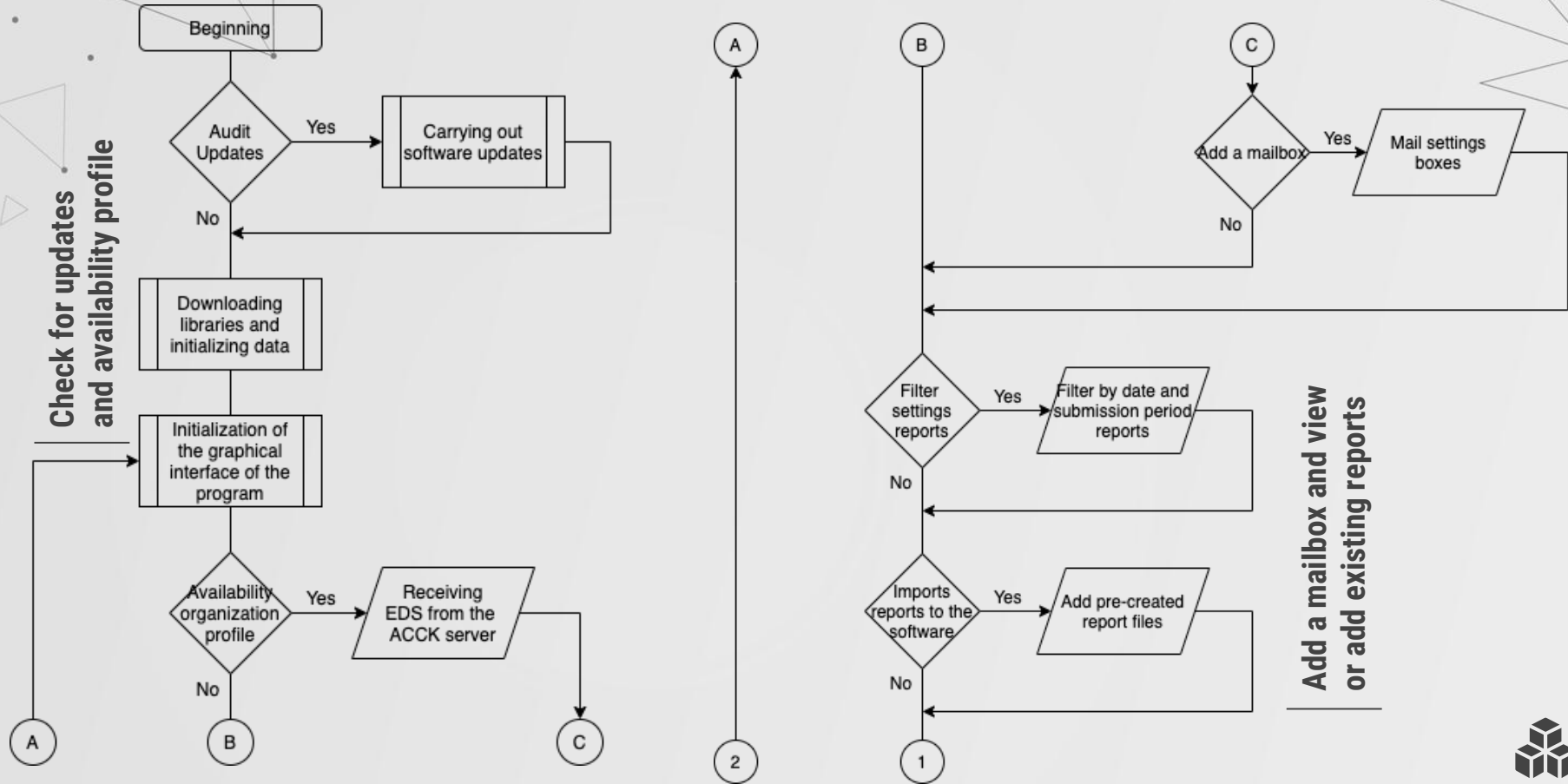
04

ALGORITHM OF THE SYSTEM

The full algorithm shown in two slides

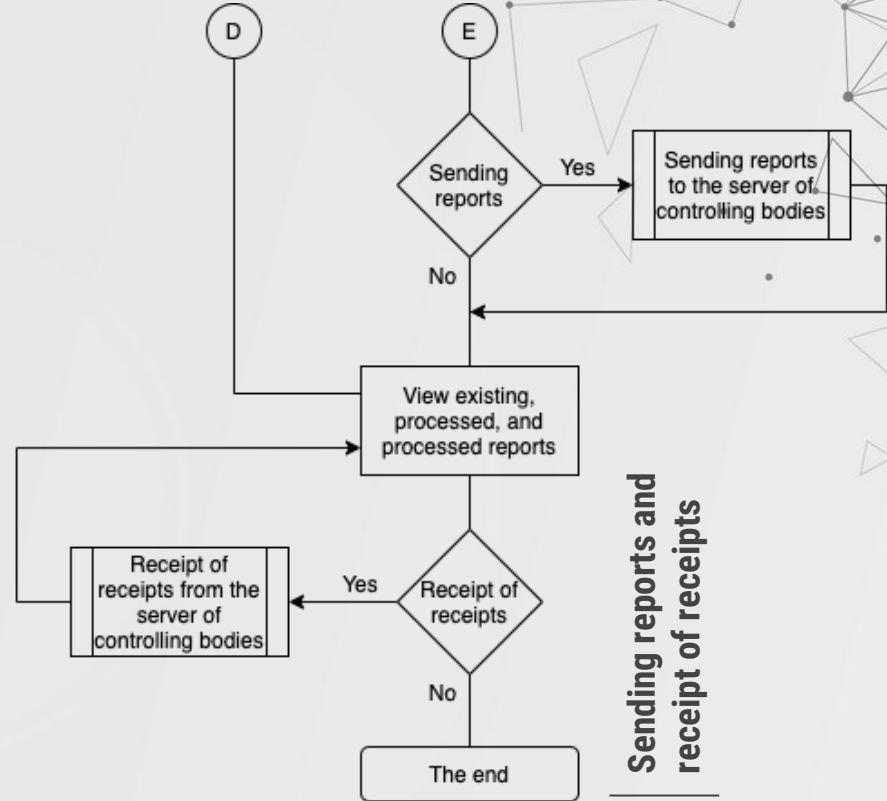
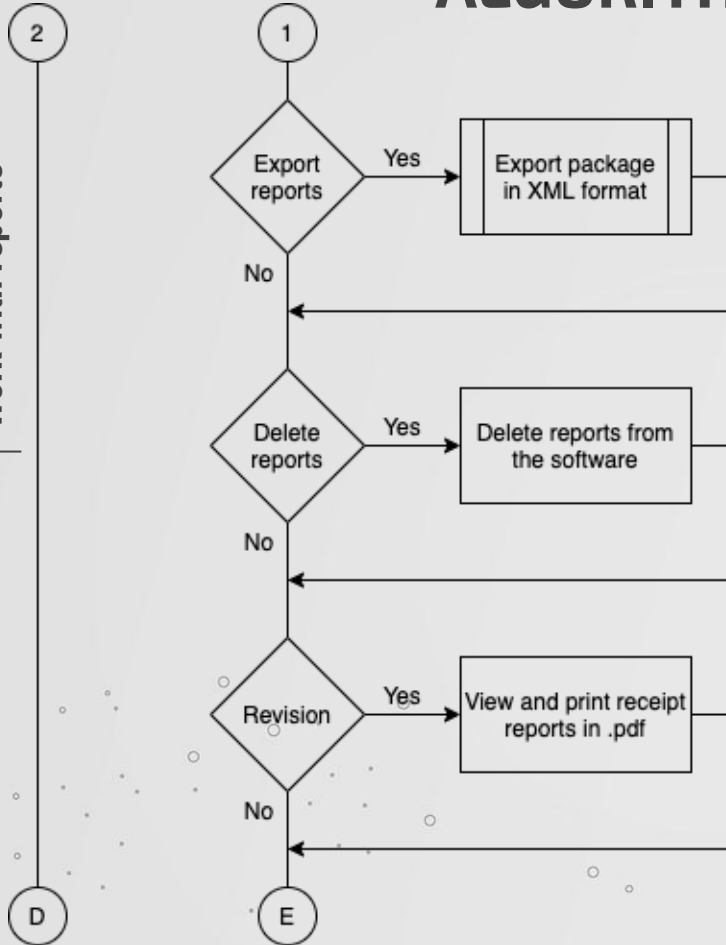


ALGORITHM OF THE SYSTEM



ALGORITHM OF THE SYSTEM

Work with reports



Sending reports and receipt of receipts



05

AUTO IT

A programming language



```
C:\Program Files (x86)\AutoIt3\Examples\GUI\Advanced\msgboxwizard.au3 - SciTE-Lite
File Edit Search View Tools Options Language Buffers Help
GUICtrlSetState(-1, $GUI_DISABLE)
GUICtrlCreateGroup("", -99, -99, 1, 1) ;close group
GUICtrlCreateGroup("Timeout", 230, 450, 200, 50)
$idTimeout = GUICtrlCreateInput("", 240, 470, 100, 20, $ES_NUMBER)
GUICtrlSetTip(-1, "Optional Timeout in seconds. After the timeout has elapsed the message box will be automatically closed.")
GUICtrlCreateGroup("", -99, -99, 1, 1) ;close group
$idBTNPREVIEW = GUICtrlCreateButton("&Preview", 10, 510, 100)
GUICtrlSetTip(-1, "Show the MessageBox")
$idBTNCOPY = GUICtrlCreateButton("&Copy", 120, 510, 100)
GUICtrlSetTip(-1, "Copy the generated AutoIt code to the Clipboard")
$idBTNEXTIT = GUICtrlCreateButton("&Exit", 230, 510, 100)
GUICtrlSetTip(-1, "Quit the program")
$idButton = $idOptOK
GUISetState() ; will display an empty dialog box
; Run the GUI until the dialog is closed
While 1
    $iMSG = GUIGetMsg()
    Select
        Case $iMSG = $GUI_EVENT_CLOSE Or $iMSG = $idBTNEXTIT
            Exit
        Case $iMSG = $idOptOK
            $idButton = $idOptOK
            GUICtrlSetState($idOptFirst, $GUI_CHECKED)
            GUICtrlSetState($idOptFirst, $GUI_ENABLE)
            GUICtrlSetState($g_idOptSecond, $GUI_DISABLE)
            GUICtrlSetState($g_idOptThird, $GUI_DISABLE)
        Case $iMSG = $g_idOptOkCancel
            $idButton = $g_idOptOkCancel
            GUICtrlSetState($idOptFirst, $GUI_CHECKED)
            GUICtrlSetState($idOptFirst, $GUI_ENABLE)
            GUICtrlSetState($g_idOptSecond, $GUI_ENABLE)
    EndSelect
EndWhile
```

Autolt and SciTE

- Autolt is a language for automating tasks in Windows. Includes a GUI framework that allows to use simple scripts with typical graphical components in scripts.
- Autolt is distributed with a SciTE-based IDE. The compiler, helper utilities, and reference materials are fully integrated, making the editor the default environment for developers using Autolt.






06

SOFTWARE DEVELOPMENT

Developing and testing all modules of the program



CRYPTOGRAPHIC MODULE



Signed Data Format



ASN.1 AND PKCS # 7

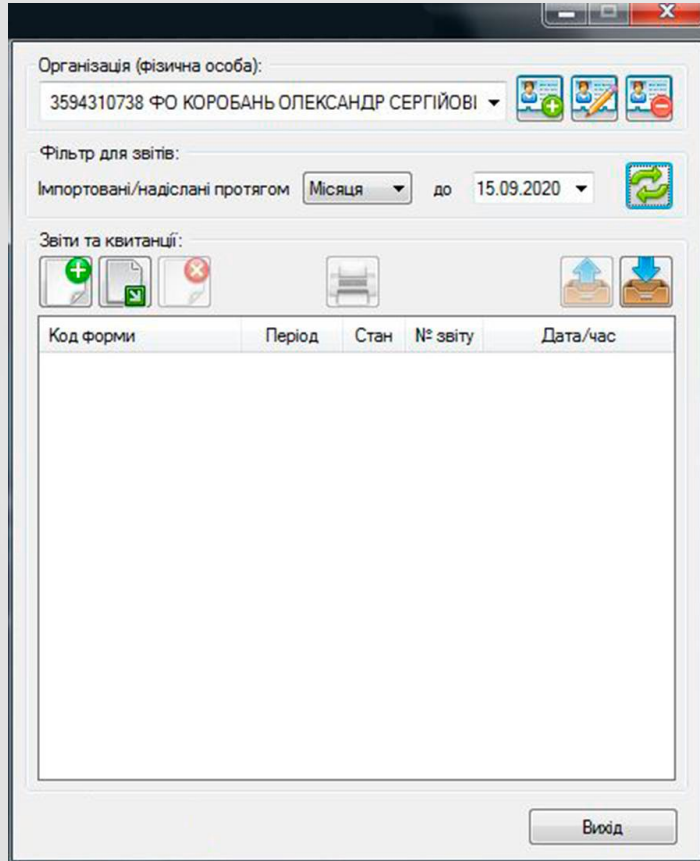
ASN.1 is a standard that describes the structure of messages received using cryptography. The standard p7s file has an ASN.1 structure.

Standard PKCS # 7 / p7b file structure:

- version
- digestAlgorithms
- contentInfo
- certificates
- signerInfos



Alice's message (in CMS)



Main parts of interface

- Work with the profile of the organization (individual).
- Window filter with imported and transmitted reports.
- Functionality for working with reports.



"Notification of receipt of reports"



After the successful transfer of reports to the server of regulatory authorities, the attached report changed color from white to yellow, and an arrow appeared when you click on it to open a tree of messages and received receipts for viewing and saving.

Organізація (фізична особа):
3594310738 ФО КОРОБАНЬ ОЛЕКСАНДР СЕРГІЙОВІ

Фільтр для звітів:
Імпортовані/надіслані протягом Місяця до 15.09.2020

Звіти та квитанції:

Код форми	Період	Стан	№ звіту	Дата/час
✓ F1301802	09.2020	1	1	15.09.2020 15:55:52
➤ Квитанція №1	09.2020			15.09.2020 15:49:32
➤ Повідомлення	09.2020			15.09.2020 15:49:32
➤ F1401802	09.2020	1	1	15.09.2020 15:49:32

Вихід



THANKS

Does anyone have any questions?

CREDITS: This presentation was created by Alexander Koroban.

