

GCI'16 Documentation

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A.A. 2016/17

Contents

| | | |
|----------|--|-----------|
| 1 | Software requirements document | 3 |
| 1.1 | Functional model | 3 |
| 1.1.1 | Use case diagram | 3 |
| 1.1.2 | Cockburn tables | 4 |
| 2 | Testing document | 23 |
| 2.1 | System Testing | 23 |
| 2.1.1 | Performs login test | 23 |
| 2.1.2 | Researches contract test | 24 |
| 2.1.3 | Alters contract test | 25 |
| 2.1.4 | Deletes contract test | 26 |
| 2.1.5 | Adds contract test | 27 |
| 2.1.6 | Reports errors in bills test | 28 |
| 2.1.7 | Deletes injunctions test | 29 |
| 2.1.8 | Confirms bill test | 30 |
| 2.1.9 | Resends bill test | 31 |
| 2.1.10 | Confirms injunctions test | 32 |
| 2.1.11 | Resends injunctions test | 33 |

1 Software requirements document

1.1 Functional model

1.1.1 Use case diagram

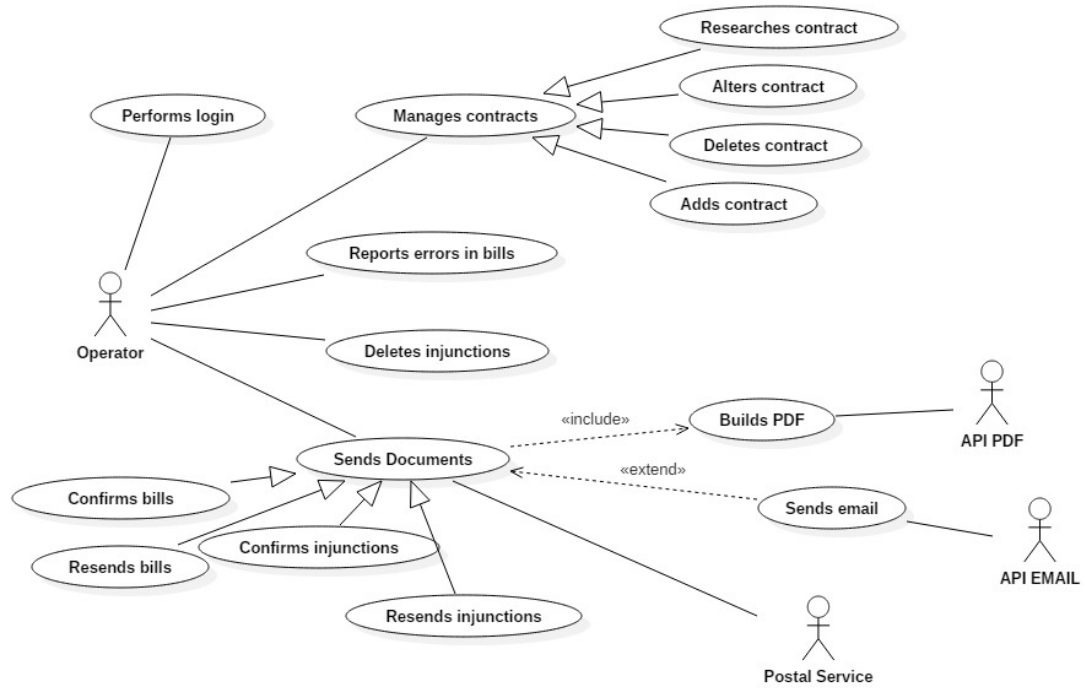


Figure 1: Use case diagram

1.1.2 Cockburn tables

| | |
|------------------------------|---|
| Use case | Performs login |
| Goal in context | The operator wants to authenticate |
| Preconditions | The goal is to let the operator log into the system inserting the right credentials |
| Success end condition | The operator gets access to the system |
| Failed end condition | The operator can't access to the system |
| Operator | Operator |
| Trigger | The operator can't access to the system |

MAIN SCENARIO

| Step n. | Operator | System |
|---------------|--|---|
| MAIN SCENARIO | | |
| Step n. | Operator | System |
| 1 | The operator starts the program | |
| 2 | | The system shows the "Login" mockup |
| 3 | The operator fills all field in the "Login" mockup | |
| 4 | | The system enables the "Login" button in the "Login" mockup |
| 5 | The operator presses the "Login" button in the "Login" mockup | |
| 6 | | The system shows the "Home" mockup |
| EXTENSION n.1 | | |
| Step n. | Operator | System |
| 6.1 | | The system shows the "Login - error" mockup |
| 7.1 | The operator presses the "ok" button in the "Login - error" mockup | |
| 8.1 | | Go to step 3 |

| | |
|------------------------------|---|
| Use case | Researches contract |
| Goal in context | The operator can be able to read information about the contract researched |
| Preconditions | The operator must be logged in and he has compiled almost one field in the “Registry management” mockup |
| Success end condition | The operator reads the informations about the contract researched |
| Failed end condition | There aren’t contracts in the system |
| Primary actor | Operator |
| Trigger | The operator clicks on “Search” button in the ”Registry management” mockup |

MAIN SCENARIO

| Step n. | Operator | System |
|----------------|--|---|
| 1 | The operator clicks on “Search” button in “Registry management” mockup | |
| 2 | | The system shows in the table the details of the contracts founded. |

EXTENSION n.1

| Step n. | Operator | System |
|----------------|--|---|
| 2.1 | | The system shows the “Registry management – Error” mockup |
| 3.1 | The operator clicks on the “Ok” button in the “Registry management – Error” mockup | |

SUBVARIATION n.1

| Step n. | Operator | System |
|----------------|-------------------------------------|---|
| 1.2 | The operator leaves all field blank | |
| 2.2 | | The system shows details of all contracts present in the system |

| | |
|------------------------------|--|
| Use case | Alters contract |
| Goal in context | Modify a pre-existing contract |
| Preconditions | The operator must be logged in, he has searched a contract and he has selected it from the table in the "Registry management" mockup |
| Success end condition | The operator has modified a pre-existing contract |
| Failed end condition | The operator fills the fields with invalid characters The operator cancels the operation and system shows the "Registry management" mockup |
| Primary actor | Operator |
| Trigger | The operator clicks on the "Alter holder" button in the "Registry management" mockup |

| MAIN SCENARIO | | |
|---------------|--|--|
| Step n. | Operator | System |
| 1 | The operator clicks on the "Alter holder" button in "Registry management" mockup | |
| 2 | | The system shows the "Alter holder" mockup |
| 3 | The operator edits one or more fields | |
| 4 | | The system enables the "Alter" button associated with the field edited |
| 5 | The operator clicks on the "Alter" button | |
| 6 | | The system shows the "Alter holder – Success" mockup |
| 7 | The operator clicks on the "Ok" button in the "Alter holder – Success" mockup | |

| EXTENSION n.1 | | |
|---------------|---|---|
| Step n. | Operator | System |
| 6.1 | | The system shows the “Alter holder – Error” mockup with the reference to the form that contains the error |
| 7.1 | The operator clicks on the “Ok” button in the “Alter holder – Error” mockup | |
| 8.1 | | Go to step 2 |
| EXTENSION n.2 | | |
| Step n. | Operator | System |
| 3.2 | The operator clicks on the “Back” button in the “Alter holder” mockup | |
| 4.2 | | The system shows the “Registry management” mockup |

| | |
|------------------------------|--|
| Use case | Deletes contract |
| Goal in context | The operator wants to delete a contract |
| Preconditions | The operator must be logged in and he has selected a contract from the table described in mockup “Registry management” |
| Success end condition | The operator deletes the selected contract |
| Failed end condition | The operator can't delete the selected contract The operator cancels the operation |
| Primary actor | Operator |
| Trigger | The operator clicks on the “Delete” button in the “Registry management” mockup |

| MAIN SCENARIO | | |
|---------------|--|--|
| Step n. | Operator | System |
| 1 | The operator clicks on the “Delete” button in the “Registry management” mockup | |
| 2 | | The system shows the “Delete contract” mockup |
| 3 | The operator clicks on the “Yes” button in the “Delete contract” mockup | |
| 4 | | The system shows the “Delete contract - Success” mockup |
| 5 | The operator clicks on the “Ok” button in the “Delete contract - Success” mockup | |
| 6 | | The system shows the mockup “Registry management” mockup |

| EXTENSION n.1 | | |
|---------------|--|---|
| Step n. | Operator | System |
| 3.1 | | The system shows the “Delete contract - Error” mockup |
| 4.1 | The operator clicks on the “Ok” button in the “ Delete contract - Error ” mockup | |
| 5.1 | | Go to step 6 |
| EXTENSION n.2 | | |
| Step n. | Operator | System |
| 3.2 | The operator clicks on the “No” button in the “Delete contract” mockup | |
| 4.2 | | Go to step 6 |

| | |
|------------------------------|---|
| Use case | Reports errors in bills |
| Goal in context | The operator wants to report errors in bills |
| Preconditions | The operator must be logged in and he has selected a bill in the bills' table of the "Bills queue" mockup |
| Success end condition | The operator reports and error in a bill |
| Failed end condition | The operator clicks on the "Cancel" button |
| Primary actor | Operator |
| Trigger | The operator clicks on the "Report error" button in the "Bills" mockup |

MAIN SCENARIO

| Step n. | Operator | System |
|---------|---|--|
| 1 | The operator clicks on the "Report error" button in "Bills" mockup | |
| 2 | | The system shows the "Report error" mockup |
| 3 | The operator fills the "Report's specifications" field in the "Report error" mockup | |
| 4 | | The system enables the "Send" button |
| 5 | The operator clicks on the "Send" button | |
| 6 | | The system shows the "Send " mockup |

EXTENSION n.1

| Step n. | Operator | System |
|---------|--|--------------|
| 3.1 | The operator clicks on the "Cancel" button | |
| 4.1 | | Go to step 8 |

| EXTENSION n.2 | | |
|---------------|--|--------------|
| Step n. | Operator | System |
| 5.2 | The operator clicks on the “Cancel” button | |
| 6.2 | | Go to step 8 |

| | |
|------------------------------|---|
| Use case | Deletes injunction |
| Goal in context | The operator wants to delete an injunction that has the “non-issued” state |
| Preconditions | The operator must be logged in and has selected an injunction from the injunctions’ table in “Injunctions queue” mockup |
| Success end condition | The operator deletes one or more injunctions from the injunctions’ table in “Injunctions queue” mockup |
| Failed end condition | The operator doesn’t delete the injunction from the table |
| Primary actor | Operator |
| Trigger | The operator clicks on the “Delete” button in the “Injunctions queue” mockup |

MAIN SCENARIO

| Step n. | Operator | System |
|---------|--|---|
| 1 | The operator clicks on the “Delete” button in the “Injunctions queue” mockup | |
| 2 | | The system shows the “Delete Injunction - Success” mockup |
| 3 | The operator clicks on the “Ok” button | |
| 4 | | The system shows the “Injunctions queue” mockup |

EXTENSION n.1

| Step n. | Operator | System |
|---------|--|---|
| 2.2 | | The system shows the “Delete Injunction – Error” mockup |
| 3.2 | The operator clicks on the “Ok” button | |

| | |
|------------------------------|---|
| Use case | Confirms bills |
| Goal in context | The operator wants to confirm a single or a group of bills |
| Preconditions | The operator must be logged in and he has selected a bill/s in the bills' table of the "Bills queue" mockup |
| Success end condition | The operator confirms a bill |
| Failed end condition | The operator cancels the operation |
| Primary actor | Operator |
| Trigger | The operator clicks on the "Confirm" button in the "Bills queue" mockup |

MAIN SCENARIO

| Step n. | Operator | System |
|---------|---|---|
| 1 | The operator clicks on the "Confirm" button in the "Bills queue" mockup | |
| 2 | | The system shows the "Build PDF" mockup |
| 3 | The operator clicks on the "Send PDF" button in the "Build PDF" mockup | |
| 4 | | The system shows the "Send PDF" mockup |
| 5 | The operator clicks on the "Ok" button | |
| 6 | | The system shows the "Bills queue" mockup |

EXTENSION n.1

| Step n. | Operator | System |
|---------|---|--------------|
| 3.1 | The operator clicks on the "Cancels" button in the "Build PDF" mockup | |
| 4.1 | | Go to step 6 |

| EXTENSION n.2 | | |
|------------------|--|---|
| Step n. | Operator | System |
| 4.2 | | The system shows the “Send PDF” mockup in which the field “Log address’ Error” is visible |
| 5.2 | Go to step 5 | |
| SUBVARIATION n.1 | | |
| Step n. | Operator | System |
| 1.3 | The operator clicks on the “Confirm” button in the “Bills queue” mockup after he has selected multiple rows from the table or has clicked on the “Select All” button | |
| 2.3 | | The system shows the “Build PDF - Multiple” mockup |
| 3.3 | The operator clicks on the “Send PDFs” button in the “Build PDF - Multiple” mockup | |
| 4.3 | | The system shows the “Send PDF - Multiple” mockup |
| 5.3 | Go to step 5 | |

| | |
|------------------------------|---|
| Use case | Resends bills |
| Goal in context | The operator wants to resend a bill that has the “Issued” state |
| Preconditions | The operator must be logged in and he has selected a bill in the bills’ table of the “Bills” mockup |
| Success end condition | The operator must be logged in and he has selected a bill in the bills’ table of the “Bills” mockup |
| Failed end condition | The operator cancels the operation The PDF interface is not available |
| Primary actor | Operator |
| Trigger | The operator clicks on “Build PDF” button in the “Bills” mockup |

| MAIN SCENARIO | | |
|---------------|--|---|
| Step n. | Operator | System |
| 1 | The operator clicks on the “Build PDF” button in the “Bills” mockup | |
| 2 | | The system shows the “Build PDF” mockup |
| 3 | The operator clicks on the “Send PDF” button in the “Build PDF” mockup | |
| 4 | | The system shows the “Send PDF” mockup |
| 5 | The operator clicks on the “Ok” button | |
| 6 | | The system shows the “Registry management” mockup |

| EXTENSION n.1 | | |
|---------------|--|--|
| Step n. | Operator | System |
| 3.1 | The operator clicks on the “Cancel” button in the “Build PDF” mockup | |
| 4.1 | | The system shows the “Bills” mockup |
| EXTENSION n.2 | | |
| Step n. | Operator | System |
| 4.2 | | The system shows the “Send PDF” mockup in which the “Log address’ error” form is visible |
| 5.2 | Go to step 5 | |
| EXTENSION n.3 | | |
| Step n. | Operator | System |
| 2.3 | | The system shows the “Build PDF – Error” mockup |
| 3.3 | The operator clicks on the “Ok” button in the “Build PDF – Error” mockup | |
| 4.3 | Go to step 6 | |

| | |
|------------------------------|---|
| Use case | Confirms injunctions |
| Goal in context | The operator wants to send the injunction to the customer |
| Preconditions | The operator must be logged in and he has selected an injunction from the table described in “Injunctions queue” mockup |
| Success end condition | The system creates and sends the PDF |
| Failed end condition | The operator cancels the operation The PDF interface is not available |
| Primary actor | Operator |
| Trigger | The operator clicks on the “Confirm” button in “Injunctions queue” mockup |

| MAIN SCENARIO | | |
|---------------|---|---|
| Step n. | Operator | System |
| 1 | The operator clicks on the “Confirm” button in “Injunctions queue” mockup | |
| 2 | | The system shows the “Build PDF” mockup |
| 3 | The operator clicks on the “Send PDF” button in “Build PDF” mockup | |
| 4 | | The system shows the “Send PDF” mockup |
| 5 | The operator clicks on the “Ok” button in the “Send PDF” mockup | |
| 6 | | The system shows the “Registry management” mockup |

| EXTENSION n.1 | | |
|---------------|--|--|
| Step n. | Operator | System |
| 3.1 | The operator clicks on the “Cancel” button in “Build PDF” mockup | |
| 4.1 | | The system shows the “Injunctions queue” mockup |
| EXTENSION n.2 | | |
| Step n. | Operator | System |
| 4.2 | | The system shows the “Send PDF” mockup in which the “Log address’ error” form is visible |
| 5.2 | Go to step 5 | |
| EXTENSION n.3 | | |
| Step n. | Operator | System |
| 2.3 | | The system shows the “Build PDF – Error” mockup |
| 3.3 | The operator clicks on the “Ok” button in the “Build PDF – Error” mockup | |
| 4.3 | | Go to step 6 |

| | |
|------------------------------|--|
| Use case | Resends injunctions |
| Goal in context | The operator wants to resend an injunction that has the “Issued” state |
| Preconditions | The operator must be logged in and he has selected an injunction in the injunctions’ table of the “Injunctions” mockup |
| Success end condition | The operator resends an injunction that has the “Issued” state |
| Failed end condition | The operator cancels the operation |
| Primary actor | Operator |
| Trigger | The operator clicks on the “Build PDF” button in “Injunctions” mockup |

| MAIN SCENARIO | | |
|---------------|--|---|
| Step n. | Operator | System |
| 1 | The operator clicks on the “Build PDF” button in “Injunctions” mockup | |
| 2 | | The system shows the “Build PDF” mockup |
| 3 | The operator clicks on the “Send PDF” button in the “Build PDF” mockup | |
| 4 | | The system shows the “Send PDF” mockup |
| 5 | The operator clicks on the “Ok” button in the “Send PDF” mockup | |
| 6 | | The system shows the “Registry management” mockup |

| EXTENSION n.1 | | |
|---------------|--|--|
| Step n. | Operator | System |
| 3.1 | The operator clicks on the “Cancel” button in “Build PDF” mockup | |
| 4.1 | | The system shows the “Injunctions” mockup |
| EXTENSION n.2 | | |
| Step n. | Operator | System |
| 4.2 | | The system shows the “Send PDF” mockup in which the “Log address’ error” form is visible |
| 5.2 | Go to step 5 | |
| EXTENSION n.3 | | |
| Step n. | Operator | System |
| 2.3 | | The system shows the “Build PDF – Error” mockup |
| 3.3 | The operator clicks on the “Ok” button in the “Build PDF – Error” mockup | |
| 4.3 | | Go to step 6 |

| | |
|------------------------------|--|
| Use case | Adds contract |
| Goal in context | Create a new contract |
| Preconditions | The operator must be logged in and clicks on the “Registry management” button from the “Home” mockup |
| Success end condition | The operator adds a new contract |
| Failed end condition | The operator doesn’t fill all fields - The operator cancels the operation |
| Primary actor | Operator |
| Trigger | The operator clicks on the “Add” button in the “Registry management” mockup |

| MAIN SCENARIO | | |
|---------------|---|--|
| Step n. | Operator | System |
| 1 | The operator clicks on the “Add” button in the “Registry management” mockup | |
| 2 | | The system shows the “Add holder” mockup |
| 3 | The operator fills all fields and clicks on the “Add” button in the “Add holder” mockup | |
| 4 | | The system shows the “Add holder – Success” mockup |
| 5 | The operator clicks on the “Ok” button in the “Add holder – Success” mockup | |
| 6 | | The system shows the “Add holder” mockup |

| EXTENSION n.1 | | |
|---------------|---|--|
| Step n. | Operator | System |
| 4.1 | | The system shows the “Add holder – Error” mockup with reference to the field that contains the error |
| 5.1 | The operator clicks on the “Ok” button in the “Add holder – Error” mockup | |
| 6.1 | | Go to step 2 |
| EXTENSION n.2 | | |
| Step n. | Operator | System |
| 3.2 | The operator clicks on the “Back” button in the “Add holder” mockup | |
| 4.2 | | The system shows the “Registry management” mockup |

2 Testing document

2.1 System Testing

2.1.1 Performs login test

| | | |
|--|---|---|
| Test ID | 1 | |
| Test name | Performs login | |
| Test goal | The goal is to let the operator log into the system inserting the right credentials | |
| Note | In this case we consider these credentials: <i>"User1", "Psw1": right credentials (stored into the DBMS), "User2", "Psw2": wrong credentials (non-stored into the DBMS)</i> | |
| Input | Desired Output | Obtained Output |
| The operator fills the form with credentials: <i>"User1", "Psw1"</i> | System shows the "Registry Management" view | System shows the "Registry Management" view |
| The operator fills the form with credentials: <i>"User1", "Psw2"</i> | System shows the error's popup with message "Invalid ID and/or Password!" | System shows the error's popup with message "Invalid ID and/or Password!" |
| The operator fills the form with credentials: <i>"User2", "Psw1"</i> | System shows the error's popup with message "Invalid ID and/or Password!" | System shows the error's popup with message "Invalid ID and/or Password!" |
| The operator fills the form with credentials: <i>"User2", "Psw2"</i> | System shows the error's popup with message "Invalid ID and/or Password!" | System shows the error's popup with message "Invalid ID and/or Password!" |

2.1.2 Researches contract test

| | | |
|--|---|---|
| Test ID | 2 | |
| Test name | Researches contract | |
| Test goal | The goal is to let the operator research contracts using forms | |
| Note | In this case we consider these credentials: <i>"Name1", "Surname1", "ContractID1", "TaxC/VAT1": right credentials (stored into the DBMS), "Name2", "Surname2", "ContractID2", "TaxC/VAT2": wrong credentials (non-stored into the DBMS)</i> | |
| Input | Desired Output | Obtained Output |
| The operator fills the form with credentials: <i>"Name1", "Surname1", "ContractID1", "TaxC/VAT1"</i> | System shows the results into the table | System shows the results into the table |
| The operator fills the form with credentials: <i>"Name2"</i> | System shows the error's popup with message "No result found" | System shows the error's popup with message "No result found" |
| The operator fills the form with credentials: <i>"Surname2"</i> | System shows the error's popup with message "No result found" | System shows the error's popup with message "No result found" |
| The operator fills the form with credentials: <i>"ContractID2"</i> | System shows the error's popup with message "No result found" | System shows the error's popup with message "No result found" |
| The operator fills the form with credentials: <i>"TaxC/VAT2"</i> | System shows the error's popup with message "No result found" | System shows the error's popup with message "No result found" |

2.1.3 Alters contract test

| | | |
|--|--|--|
| Test ID | 3 | |
| Test name | Alters contract | |
| Test goal | The goal is to let the operator alter a contract selected from the table | |
| Note | | |
| Input | Desired Output | Obtained Output |
| The operator fills the form with new credentials | System shows a popup with message "Contract altered" | System shows a popup with message "Contract altered" |

2.1.4 Deletes contract test

| | | |
|--|--|---|
| Test ID | 4 | |
| Test name | Deletes contract | |
| Test goal | The goal is to let the operator delete contracts selected from the table | |
| Note | We consider three cases: " <i>Contract1</i> ": <i>this contract can be removed</i> ; " <i>Contract2</i> ": <i>this contract can't be removed because it has some pendant bills</i> ; " <i>Contract3</i> ": <i>this contract can't be removed because is already closed</i> . | |
| Input | Desired Output | Obtained Output |
| The operator selected the " <i>Contract1</i> " | System shows a popup with message "Contract removed" | System shows a popup with message "Contract removed" |
| The operator selected the " <i>Contract2</i> " | System shows the error's popup with a message that explains the reason why it can't be closed | System shows the error's popup with a message that explains the reason why it can't be closed |
| The operator selected the " <i>Contract3</i> " | System shows the error's popup with a message that explains the reason why it can't be closed | System shows the error's popup with a message that explains the reason why it can't be closed |

2.1.5 Adds contract test

| | | |
|---|--|--|
| Test ID | 5 | |
| Test name | Adds contract | |
| Test goal | The goal is to let the operator add new contracts | |
| Note | | |
| Input | Desired Output | Obtained Output |
| The operator fills all forms interested for the contract's adding | System shows a popup with message "New contract added" | System shows a popup with message "New contract added" |
| The operator fills a form with invalid characters | System shows the error's popup with a message that explains the reason why it can't continue the operation | System shows the error's popup with a message that explains the reason why it can't continue the operation |

2.1.6 Reports errors in bills test

| | | |
|--|--|--|
| Test ID | 6 | |
| Test name | Reports errors in bills | |
| Test goal | The goal is to let the operator reports errors in bills | |
| Note | | |
| Input | Desired Output | Obtained Output |
| The operator fill the form with the errors | System shows a popup with message "Operation successfully completed" | System shows a popup with message "Operation successfully completed" |

2.1.7 Deletes injunctions test

| | | |
|------------------|--|------------------------|
| Test ID | 7 | |
| Test name | Deletes injunctions | |
| Test goal | The goal is to let the operator delete injunctions | |
| Note | | |
| Input | Desired Output | Obtained Output |
| | | |

2.1.8 Confirms bill test

| | | |
|--|---|--|
| Test ID | 8 | |
| Test name | Confirms bill | |
| Test goal | The goal is to let the operator confirm a selected bill | |
| Note | | |
| Input | Desired Output | Obtained Output |
| The operator selects a bill from the bill's table and presses "Confirm" button | System shows the bill's pre-view (PDF) | System shows the bill's pre-view (PDF) |

2.1.9 Resends bill test

| | | |
|--|--|--|
| Test ID | 9 | |
| Test name | Resends bill | |
| Test goal | The goal is to let the operator resend a selected bill | |
| Note | | |
| Input | Desired Output | Obtained Output |
| The operator selects a bill from the bill's table and presses "Confirm" button | System shows the bill's pre-view (PDF) | System shows the bill's pre-view (PDF) |

2.1.10 Confirms injunctions test

| | | |
|---|---|--|
| Test ID | 10 | |
| Test name | Confirms injunctions | |
| Test goal | The goal is to let the operator confirm an injunction | |
| Note | | |
| Input | Desired Output | Obtained Output |
| The operator selects an injunction from the injunction's table and presses "Confirm" button | System shows the bill's pre-view (PDF) | System shows the bill's pre-view (PDF) |

2.1.11 Resends injunctions test

| | | |
|---|---|--|
| Test ID | 11 | |
| Test name | Confirms injunctions | |
| Test goal | The goal is to let the operator resends an injunction | |
| Note | | |
| Input | Desired Output | Obtained Output |
| The operator selects an injunction from the injunction's table and presses "Confirm" button | System shows the bill's pre-view (PDF) | System shows the bill's pre-view (PDF) |