Operation Manual

Issuing Module. Operation Manual

03.51.30

01.12.2020

Contents

The Way4™ Issuing Module is used to enter and process client and contract information, required by the issuer when issuing bank cards, creating card issuing jobs and performing operations involving issued cards.

This document is intended for Way4 users, banks or processing centre employees working with the Issuing Module, and contains information on basic operations for entering and processing client and contract data, issuing cards, and entering payment batches.

While working with this document, it is recommended that users refer to the following reference material from OpenWay's documentation series:

- Cardholder Statements
- Way4 Global Parameters
- Documents
- Business Model Overview
- Issuing Advanced Applications R2
- Importing and Exporting Advanced Applications R2 (XML Format)
- Acquiring Module User Manual
- Configuring Way4™ System for Smart Card Issuing
- Interest Accrual
- Way4™ Products. Service Packages
- Products and Contract Subtypes
- DB Manager Manual
- Customer Support Service Manual
- Administering WAY4™ Authentication Server
- Way4™ Dictionaries
- Balance Types.

The following notation is used in this document:

- Field labels in screen forms are typed in *italics*.
- Button labels used in screen forms are placed in square brackets, such as [Approve].
- Menu selection sequences are shown with arrows, such as Issuing → Contracts Input & Update.
- Item selection sequences, in the system menu, are shown with different arrows, such as Database => Change password.
- Key combinations used while working with DB Manager are shown in angular brackets such as <Ctrl>+<F3>.
- The names of directories and/or files that vary for each local instance of the program are also displayed in angular brackets, like <OWS_HOME>.

Warnings about potentially hazardous situations or actions.

Information about important features, additional options or the best use of certain system functions.

1 Clients and Contracts

This section describes information that is registered in the database (DB) for issuing clients (private and corporate clients) and contracts opened for each client.

The WAY4 Issuing Module and this user manual use the term "client" to mean "cardholder".

> Data about new clients and contracts is input when a client makes a request to the bank (see the section "Entering Data for New Clients and Contracts ").
> It is not recommended to register and edit clients and contracts manually in production systems, since this assumes that a contract spends a long time in the "Not Ready" status. This may lead to errors in scheduled daily procedures. In production systems, contracts can be edited manually when daily procedures are not running and will not be run until planned approval of a contract. Clients and contracts can be registered and edited manually in test systems.

For more information about the role of the node on which WAY4 is installed, see the section "System Instances" Dictionary" of the document "WAY4™ Dictionaries".

Client and contract information is accessed through the menu folder "Issuing → Contracts Input & Update".

> Before starting to work, users must check that the desired financial institution and client category are indicated in the status bar. If the user is granted the privilege of working with several financial institutions and client categories, desired values can be selected from the "Issuing → Contracts Input & Update → Set Client Type" user menu item.

1.1 Client Information

Depending on the client type, information in the DB can be accessed in one of the following ways:

- For a private client – the user menu "Issuing → Contracts Input & Update → Clients (Private)". This opens the "Clients (Private)" form (see Fig. 1) with a list of private clients.

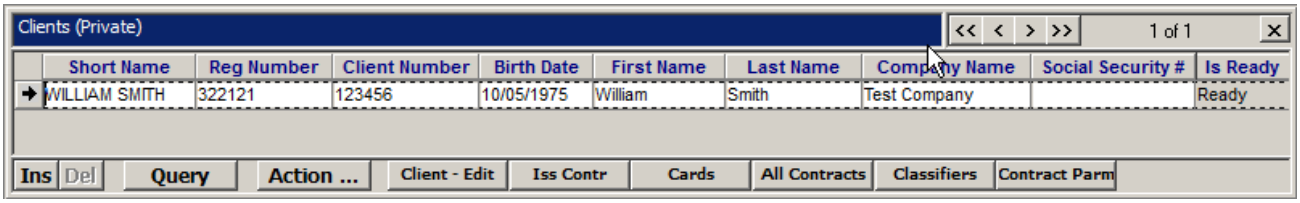

Fig. 1. List of private clients

- For a corporate client – the user menu "Issuing → Contracts Input & Update → Clients (Corporate)". This opens the "Clients (Corporate)" form (see Fig. 2) with a list of clients.

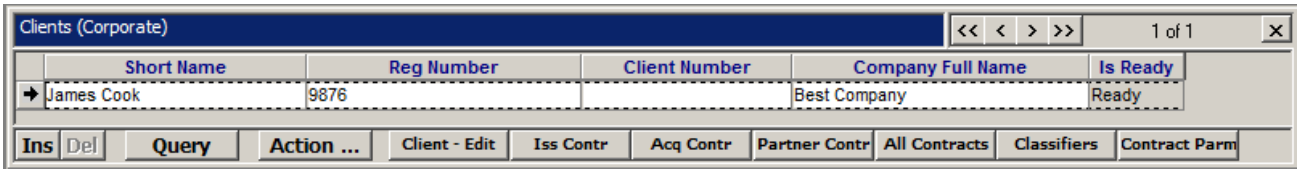

Fig. 2. List of corporate clients

To get more detailed information about a client, select a record and click the [Client -Edit] button to open the "Client-Edit for ..." form (see Fig. 3).

Form fields are filled in based on a client's request, according to the issuing bank's regulations.

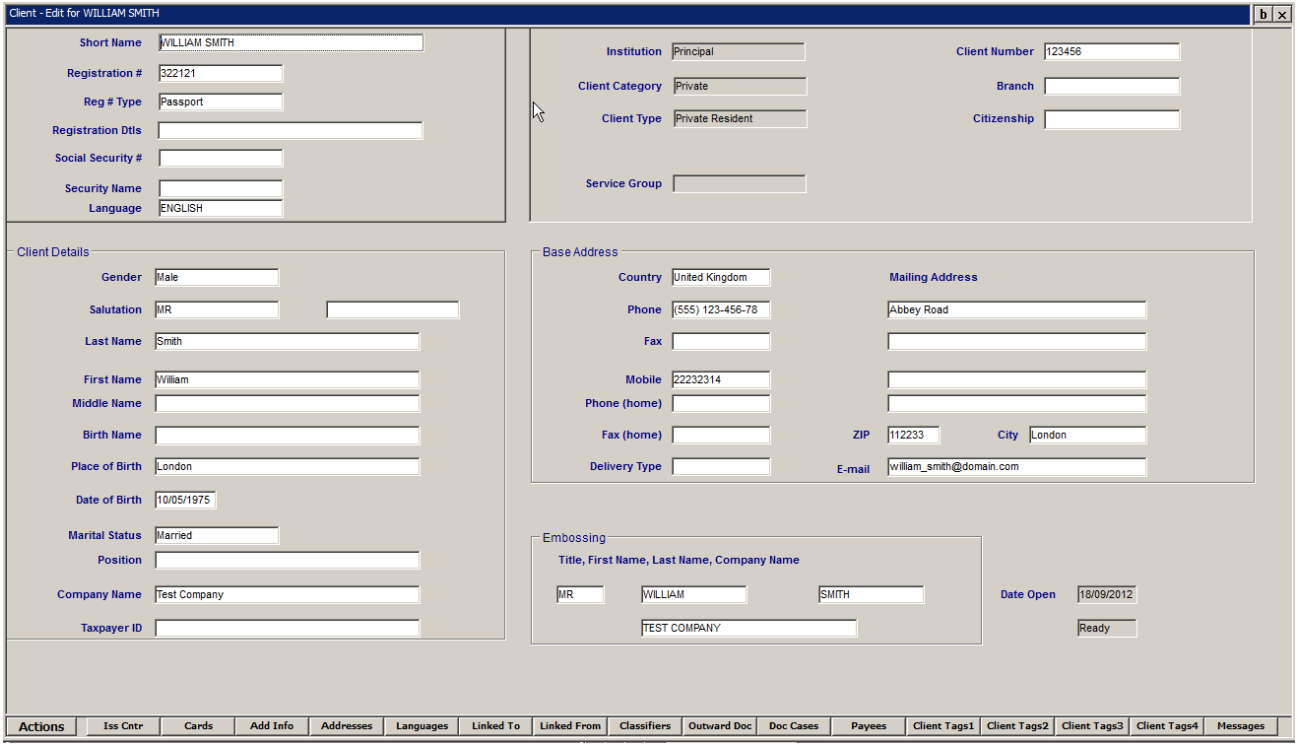

Fig. 3. Form with detailed information about a private client

If a client is being registered manually, used the menu item "Issuing → Contracts Input & Update → Client New (Private)". To manually register a corporate client, used the menu item "Issuing → Contracts Input & Update → Client New (Corporate)". The client registration form contains the same list of fields as the "Client-Edit for ..." form (see Fig. 3).

Field description:

- Short Name – used to quickly search for a client in the list of registered clients.
- Registration # – contains information used to identify client records in the DB (for instance, a passport number or a tax identification number). The field's length is 64 characters.
- Reg # Type – source of the information for determining a client's identification number.
- Registration Dtls – additional registration information about the client.

It is strongly recommended that the value entered into the *Registration #* field be unique within a financial institution and client category. This condition is set through the UNIQUENESS_CLIENT_REG_NUMBER global parameter (see the WAY4 Global Parameters Administrator Manual).

- Social Security # – social security number (SNILS for the Russian Federation). The global parameter "UNIQUENESS_CLIENT_SOCIAL_NUMBER| document=Core\Global_Parameters.docx;bookmark=UNIQUENESS_CLIENT_SOCIAL_NUMBER" is responsible for the value's uniqueness in the financial institution and client category (see the document "WAY4™ Global Parameters"). The field's length is 64 characters.
- Security Name – a secret word used for client identification that can be given over the telephone.
- Language contains a drop-down list of languages registered in the system (see the list in "Full → Configuration Setup → Client Classifiers → Languages"). If the system supports translation of operation names into a certain language (for more details, refer to the Documents| document=Transaction_management\Documents.docx;bookmark=Title Administrator Manual), client statements will be created in the language selected from this field.
- Client Number – a unique identifier that can be used, for instance, to find a client record in the RBS database. The uniqueness of the value in a financial institution is determined by the setting of the UNIQUENESS_CLIENT_REG_NUMBER| document=Core\Global_Parameters.docx;bookmark=UNIQUENESS_CLIENT_REG_NUMBER global parameter (see the WAY4 Global Parameters Administrator Manual). The field's length is 64 characters.
- Branch – the bank office where the client will receive account statements (see the Cardholder Statements|document=Issuing\Cardholder_Statements.docx;bookmark=Title User Manual).
- Citizenship – the client's citizenship.
- The Client Details group of fields specifies the following information about the client:
- *Gender* – client gender:
- Male
- Female
- Not specified
- *Salutation* – client salutation selected from a drop-down list of salutations registered in WAY4(see the dictionary "Full → Configuration Setup → Client Classifiers → Client Salutations")
- *Last Name* – client last name
- *First Name* – client first name
- *Middle Name* – client middle name or patronymic
- *Birth Name* – client birth name
- *Marital Status* – client marital status selected from a list of marital statuses registered in WAY4 (see "Full → Configuration Setup → Client Classifiers → Marital Status")
- *Date of Birth* is a client's birth date
- *Place of Birth* is a client's birth place
- *Position* is a client's job position
- *Company Name* is a client's workplace

- *Taxpayer ID* – individual client ID, e.g. ITN (individual taxpayer identification number). The global parameter "UNIQUENESS_CLIENT_ITN" is responsible for the controlling the uniqueness of this value in the financial institution and client category (see the document "WAY4™ Global Parameters"). The field's length is 64 characters.
- The Base Address field group is used to specify information about the client's main address.
- *Country* – client country selected from the list of countries registered in WAY4 (see the list in "Full → Configuration Setup → Main Tables → Country Table"). It should be noted that only those countries with the "Yes" value of the *Use In Bank* field in the "Country Table" dictionary can be selected in the *Country* field.

  The value specified in the *Country* field of a client record can be used to generate the client's mailing address.
- The *Phone, Fax, Mobile, Phone (home),* and *Fax (home)* fields are used to specify the corresponding phone and fax numbers.
- Rows with the *Mailing Address* label are used to enter a client's address. In some banks it is necessary to support structured addresses when entering data, monitoring data integrity and when creating reports. The existence of four separate fields for entering client address data make it possible to resolve this task. For example, the following structure may be supported:
- Address Line 1 – user-defined text.
- Address Line 2 – street name.
- Address Line 3 – house name.
- Address Line 4 – apartment number.
- *ZIP* – ZIP (postal) code.
- *City* – city (town).
- *E- mail* – client's e-mail address.
- *Delivery Type* – delivery types for correspondence (reports, cards produced, PIN mailers, etc.). For example, the following delivery types may be used: mail, courier, e-mail, etc. This field's value can be used as an additional criterion for grouping batch report files.

In the current implementation, the list of a client's addresses does not include the address that is specified in the client's record (address information from the CLIENT table). If for some reason, the address from the client record must be used, set the value of the USE_CL_BASE_ADDR global parameter to "Y" (see the WAY4 Global Parameters Administrator Manual).

- The Embossing fields contain information used when embossing information on plastic. By default, the values indicated in this group of fields will be copied to fields of the same name in the card contract form. However, these values can be reset from the card contract.

In a WAY4 production system it is strongly recommended not to manually change the values of fields in the *Embossing* group in the form for editing a client record, for example, the *Company Name* field. It is recommended to make these changes using applications to change a client record (see the section "Issuing Client (Client)" of the document "Issuing Advanced Applications R2"). In this case, updated data will be correctly applied to all a client's card contracts and used the next time cards are reissued.

If fields of the *Embossing* group are changed in a test node, note that this automatically redefines only those fields of the same name in card contract forms that have not been redefined before.

If a private client is being registered manually using the "Client – New (Private)" form, note that this form contains several fields that cannot be edited. Their values are determined by current DB Manager parameters:

- Institution – financial institution to which the client belongs.
- Client Category – client category (client categories are listed in the Client Category field of the "Full → Configuration Setup → Client Classifiers → Client Types" form).
- Client Type – client type (registered client types are listed in the Name field of the "Full → Configuration Setup → Client Classifiers → Client Types" form).
- Date Open – date the client was registered in the DB.
- Service Group – additional client classifier (the list of registered service groups can be found in "Full → DB Administrator Utilities → Users & Grants → Service Groups"); this field can be used when configuring various filters for data or when creating reports. For instance, a separate group of VIP clients can be created from an additional classification.

Additional client information can be accessed by clicking the [Add Info] button (see Fig. 4).

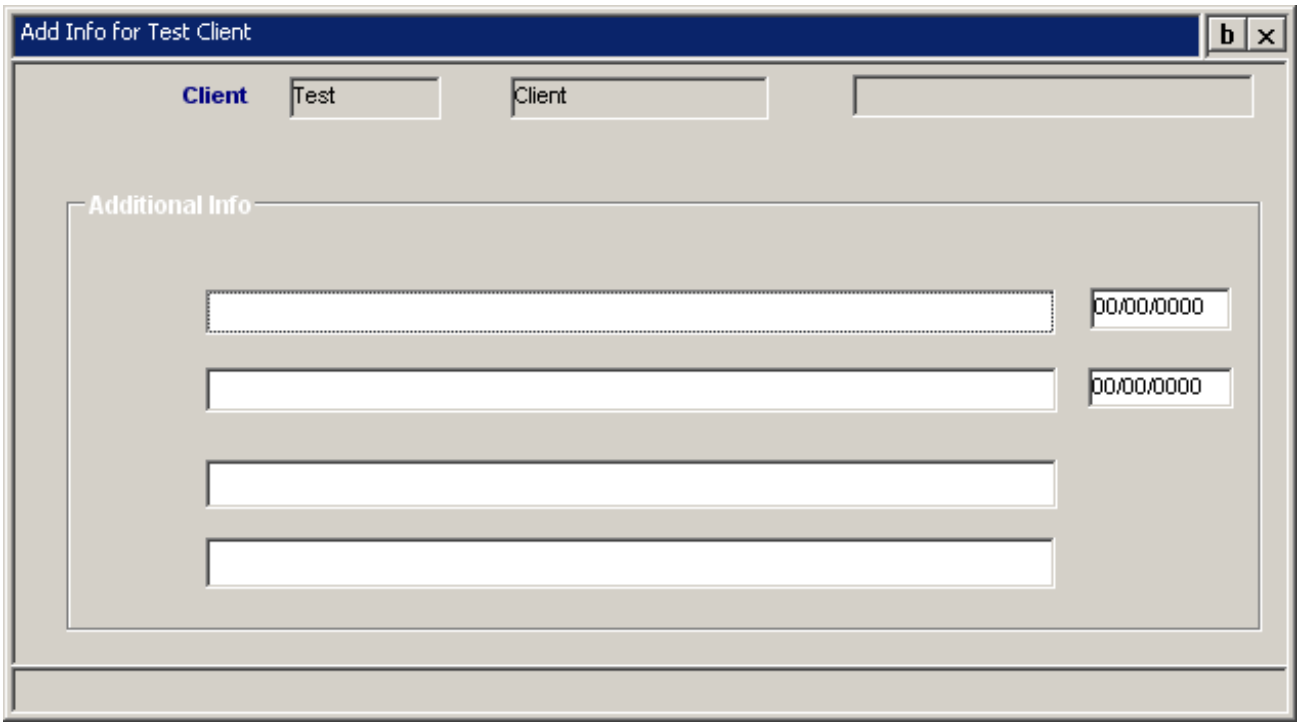

Fig. 4. Form with additional client information

The fields of the "Add Info ..." form are used to indicate any additional information about a client. For instance, the two upper fields of the *Additional Info* section can be used to clarify further the dates shown in the adjacent fields.

- The "Client-Edit for ..." form (see Fig. 3) contains the following buttons: [Cards] and [Iss Cntr] – information about the client's card and account contracts (see "Contract Hierarchy").
- [Addresses] – information about client addresses (see "Client and Contract Address Support").
- [Linked To] – links the client to other clients registered in the database (see "Linked Clients"). This activity is performed in manual edit mode.
- [Linked From] – information about clients with which this client was already linked (see "Linked Clients").
- [Classifiers] – current values of the client's user classifiers (see the document "WAY4™ Client and Contract Classifiers|document=Core\Contract_and_Client_Classifiers.docx;bookmark=Title").
- [Outward Doc] – outgoing documents for the client (see the document "Documents|document=Transaction_management\Documents.docx;bookmark=Title").
- [Doc Cases] – information about suspicious transactions (see the document "Risk Monitoring|document=Risk_management\Risk_Management.docx;bookmark=Title").
- [Payees] – custom setup of payment participant requisites. The payee code must be unique for contract. It is used, for example, when configuring individual payment orders (see the document "Documents|document=Transaction_management\Documents.docx;bookmark=Title").
- [Client tags ...] – view and generate additional information about a client. This information is shown in tagged form and stored in the ADD_INFO_01, ADD_INFO_02, ADD_INFO_03 and ADD_INFO_04 fields of the CLIENT table. The table may, for example, contain information about a client's current debt, previous place of employment, etc. A detailed description of the form for entering tags is provided in the section "Entering and Editing Tags", document "Products and

Contract Subtypes|
document=Product_management\Products_and_Subtypes.docx;bookmark=Title").

To create a record for a legal entity (corporate client) in a test system, use the "Client – New (Corporate)" form, (see Fig. 5).

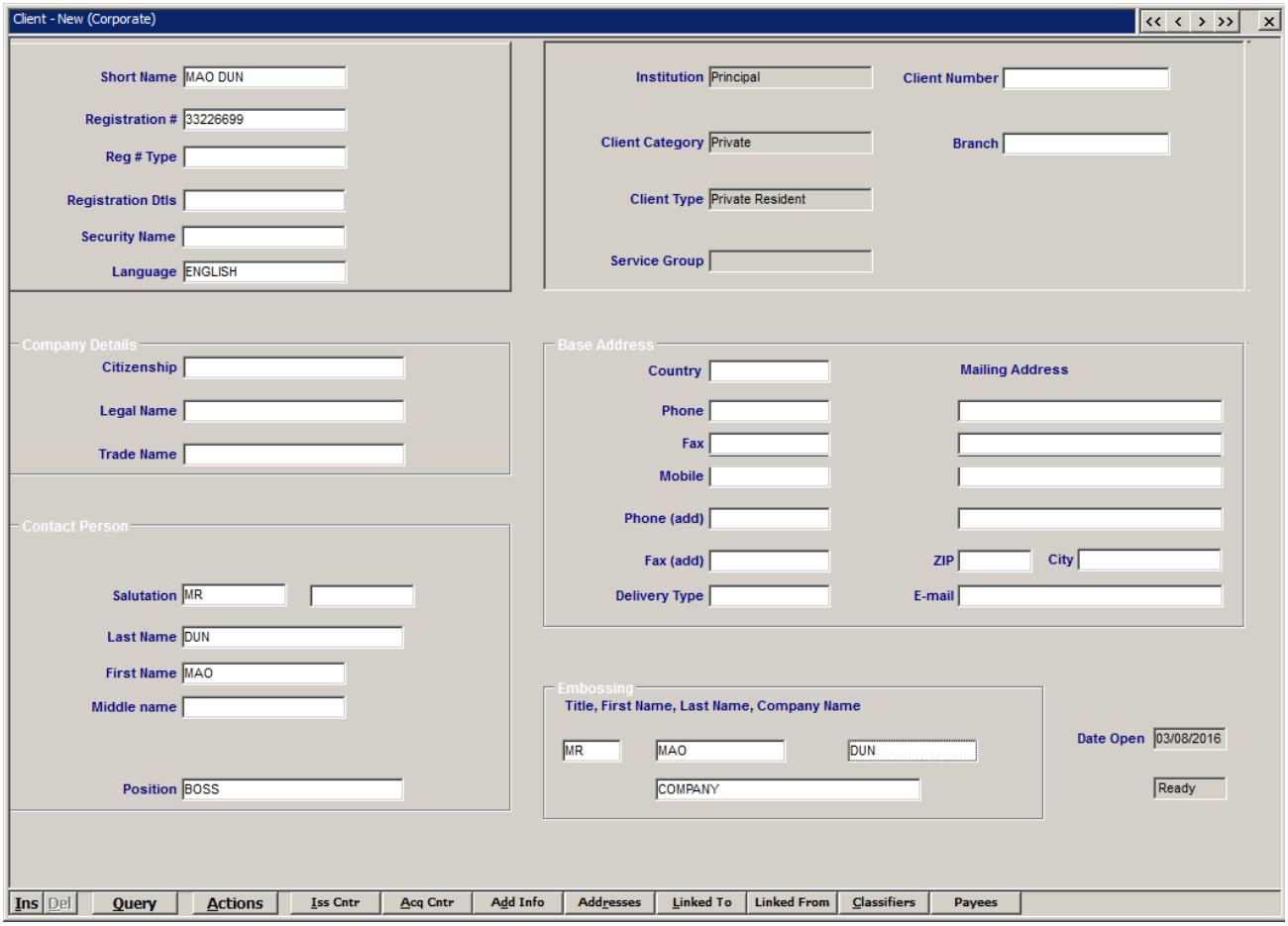

Fig. 5. Form for entering information about new corporate clients

This form differs in some ways from the "Client – New (Private)" form in that it lacks the "Client Details" group of fields and contains the following additional field groups:

- In the Company Details group of fields, the following fields are present:
- *Citizenship* – drop-down list used to specify the country in which the corporate client is registered
- *Legal Name* – corporate legal name
- *Trade Name* – corporate trade name
- The group of fields Contact Person should indicate data on the official company representative working with the issuer bank.
- *Salutation* is a client salutation selected from a drop-down list (see the list in "Full → Configuration Setup → Client Classifiers → Client Salutations")
- *Last Name* is a contact person's last name
- *First Name* is a contact person's first name
- *Middle Name* is a contact person's middle name or patronymic
- *Position* is a contact person's job position

After the fields of the form have been filled in, click the [Check] button. This will initiate the data verification process. It includes a standard verification of the correctness of the unique client number entered into the *Registration #* field and can include additional types of data verification configured for each specific bank.

> The specific verification procedures used for client registration data are configured by the WAY4 system vendor.

If all the necessary data is entered correctly, a window with the message "Check Client Completed" appears on the screen, and the client record assumes the "Ready" status, which means that it is now accessible to WAY4 users.

If any mandatory client data has been entered incorrectly or is missing, a window with an appropriate error message appears.

> If the values of fields in the *Embossing* group must be changed in the form for editing corporate client data – for example, the *Company Name* field, in the application processing module create an application to edit data (see the document "Issuing Advanced Applications R2".

1.2 Contract Hierarchy

Two types of contracts are used in the WAY4 Issuing Module:

- The issuing contract, used for accounting purposes with the accounts of a given contract and its subcontracts (where the contract is a main contract), and also for authorizing lower-ranking card contracts.

> No cards are issued on the basis of accounting contracts.

- The card contract, used for accounting purposes with the accounts of a given contract and its child card contracts (where the contract is a main contract), and also for authorisation. A card contract contains the parameters of plastics issued under that card contract and the services provided with the card.

> The card contract number is also the card number embossed on the plastic.

WAY4 allows for creation of subcontracts that are child contracts to higher-ranking contracts, and allows users to create hierarchical contract structures.

Accounting contracts can have as their subcontracts both accounting contracts and card contracts; card contracts can only have card contracts as subcontracts.

It is recommended to use an accounting contract as the main contract and a card contract as a subcontract (see Fig. 6).

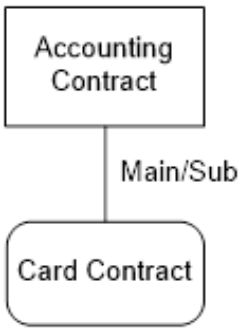

Fig. 6. Card subcontract with a main accounting contract

"Main/Sub" hierarchies are limited by an Accounting Scheme being used for the entire contract tree structure.

To create a contract tree where different Accounting Schemes are used, WAY4 allows users to use another kind of contract hierarchy, the "Liability" hierarchy (for an example of this, see Fig. 7).

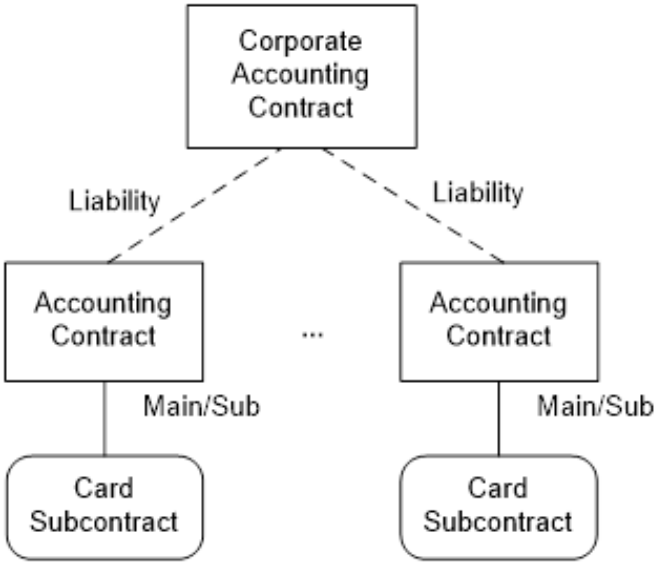

Fig. 7. Corporate contract tree

In a hierarchy of this type, different links are used: "Full Liability", "Affiliated", "Reporting", and "Only Check Balance". The table below Table 1 shows the functional difference between these types of links.

- An example of a "Full Liability" link:
- Every corporate branch is independently responsible for the repayment of its loans and loan interest.
- All branches as a whole should not exceed the general corporate credit limit.
- Transactions executed in any corporate branch are regulated by usage limiters set for the entire corporation.
- Product parameters available when opening a corporate client's contract depend on the product parameters set for the corporate branch.
- An example of an "Affiliated" link:

- Every corporate client has an independent credit limit and is independently responsible for the repayment of his/her loan and its interest.
- Product parameters available when opening a corporate client's accounts depend on the product parameters for the corporate branch.
- An example of an "Only Check Balance" link:
- Every corporate department is independently responsible for the repayment of its loans and loan interest.
- All departments as a whole should not exceed the general corporate credit limit.
- Transactions executed in any corporate branch are regulated by usage limiters set for the entire corporation.
- A hierarchy with a "Reporting" link type is used to gather statistical data on contract activity within its tree. This data is needed for generating "non-financial" reports, such as statements on all corporate accounts – without their consolidated totals.

Table 1. Functional difference between various types of contract links

Function	Contract Link				
	Main / Sub	Main / Sub			
		Full Liability	Affiliated	Reporting	Only Check Balance
Manages main contract balance for authorisation	+	+	–	–	+
Manages limiters in the main contract	+/–*	+	+/–*	+/–*	+
Automatically changes the main contract's account balance when posting a document to subcontracts	+	–	–	–	–
Automatically accrues interest on the main contract as a result of subcontract operations	+	–	–	–	–
Main contract statements including the balance and all subcontract transactions	+	+	–	–	–

Function	Contract Link				
	Main / Sub	Main / Sub			
		Full Liability	Affiliated	Reporting	Only Check Balance
Different Service Packages and contract types in main contract and subcontracts	+	+	+	+	+
Mandatory use of an Accounting Scheme with main contract and subcontracts (interest rates, billing cycle, etc.)	+	–	–	–	–
Manages contract hierarchy dependent on product hierarchy	+	+	+	–	–
Gathers statistics on contract activities in the tree for creating "non-financial" reports	+	+	+	+	–

* – usage limiters of the parent contract are checked depending on the value of the *Usage Scenario* field in the "Cards for <...>" form (see Fig. 10). If the *Usage Scenario* field contains the "Main and Own" value, usage limiters of the parent contract are checked; if the field contains the "Own Only" value, only limiters specified in this contract are checked.

Note that hierarchy links can have following restrictions:

A "Liability" type link can only be used for accounting contracts.
An accounting contract can only have one parent contract directly above it, linked by either a "Main/Sub" or a "Liability" type link.

1.3 Accounting Contracts for Private Clients

In a production system, new contracts are registered using the Advanced Applications R2 module, see the section "Entering Data for New Clients and Contracts ").

In a test system, issuing accounting contracts for private clients can be created in the following ways:

- After the new client's data have been entered in the "Client – New (Private)" form (see Fig. 3 in the "Creating New Clients" section), click the [Iss Cntr] button and then the [Ins] button in the "Iss Contr for <name of client>" form that appears on the screen (see Fig. 8).
- To create another independent issuing accounting contract for the selected client, click the [Ins] button in the "Iss Contr for <name of client>" form (see Fig. 8).
- Select the "Issuing → Contract Input & Update → Issuing Contracts – New" user menu path. The screen will display the "Single Cards – New (Private)" form; then, in the Client field, select the name of a client registered in the DB.

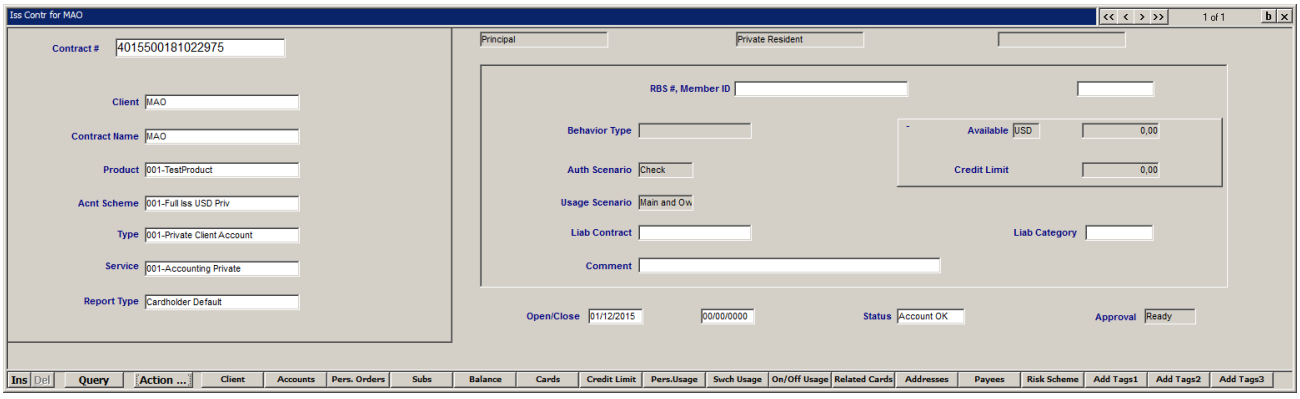

Fig. 8. Form for entering information about issuing accounting contracts

The editable fields in this form are filled in based on data from the client application – according to the issuing bank's regulations.

When filling in the form fields, follow the following recommendations:

- The Contract # field is the accounting contract number, unique in the system. Depending on the type of contract subtype selected (see the Products and Contract Subtypes| document=Product_management\Products_and_Subtypes.docx;bookmark=Title Administrator Manual), the number can be assigned to an issuing accounting contract in one of the following ways:
- Automatically when approving the contract
- By manually numbering the contract
- The Client field indicates the client for whom the contract is being registered.
- The Contract Name field is used to enter the contract name that will be used by WAY4 to search for this contract in the list of registered contracts.
- The Product field indicates the name of the Product selected from the drop-down list of registered Products for the corresponding financial institution or client type.

> ⚠ It should be noted that clicking on the [Approve] button after setting the Product name will automatically fill in the *Acnt Scheme*, *Type*, and *Service* fields with the values of the selected product parameters.

If the *Product* field is empty, the following fields must be filled in:

- The *Acnt Scheme* field must contain the name of the contract's Accounting Scheme (see the "Accounting Schemes" section of the WAY4 Products. Accounting Schemes Administrator

Manual), which should be selected from the list of Accounting Schemes registered in the system for the corresponding financial institution and client category.

- The *Type* field allows users to make a selection from a drop-down list of accounting contract subtypes (see "Contract Subtypes" section of the Products and Contract Subtypes Administrator Manual).
- The *Service* field is used to enter the name of the Service Package corresponding to the contract type the selected subtype belongs to (see "Contract Subtypes" section of the Products and Contract Subtypes Administrator Manual).
- The *Report Type* field is used to indicate the set of reports. In WAY4, sets of reports are configured through the "Full → Configuration Setup → Client Classifiers → Client Report Types" menu item.
- The RBS # field is used to store a bank account number (on the condition that accounts are maintained in the banking system). For the client's main account contract, this value is the mirror of the client's personal account in the banking system (ABS). For backward compatibility, data necessary for custom accounting numeration can be stored in the RBS # field.
  When a new account is registered, the number of the client's account in the ABS is specified in the *RBS #* field. When account and card contracts are registered that are subordinate to a higher-ranking contract in a "Main/Sub" hierarchy, the *RBS #* field value is automatically inherited from the higher-ranking contract. For subcontracts in a "Liability" hierarchy, the *RBS #* field value is not inherited from a higher-ranking contract.
- The RBS Member ID field may contain a banking system identifier or an identifier of a group of accounts in a banking system. This identifier must also be specified in the Bank ID Code field of the "RBS Bank Identification Codes" table (Full → Configuration Setup → Routing → RBS Bank Identification Codes). Together with RBS #, this value allows contracts to be grouped according to their RBS system or into subgroups within a single RBS system. The two fields can be used for contract identification if the "UNIQUENESS_RBS_NUMBER" global parameter is set to "Y" (see section "UNIQUENESS_RBS_NUMBER" in the WAY4™ Global Parameters Administrator Manual). For this, the values of the fields can be specified in files during import and export of Advanced Applications R2 applications (see section "File Format" in the Importing and Exporting Advanced Applications R2 (XML Format) Administrator Manual), registration of applications to open issuing and card contracts (see the document "Issuing Advanced Applications R2"), and import of payments (see the CBS Payments Import| document=Core_banking_interface\Core_banking_interface\CBS_Payments_Import.docx;bookmark=Title Administrator Manual). The RBS Member ID may also be left blank.

Note that field *RBS Member ID* may be left blank. Then, if applications and payments are imported from several independent financial institutions, and contracts are identified by field *RBS #*, its values must be unique for each financial institution.

- The Behavior Type field indicates the Risk Group inherited by the contract. Risk Groups registered in the system can be viewed through the "Full → Configuration Setup → Behavior Scoring Setup → Behavior Types" menu item.
- If this contract has a parent contract in a "Liability" hierarchy (see "Contract Hierarchy"), the following fields are filled in:

- The *Liab Contract* field should indicate the parent contract, according to the "Liability" hierarchy, selected from the list of all contracts registered in the DB.
- *Liab Category* is a field with a drop-down list showing links between contracts and their parents in the "Liability" hierarchy ("Full Liability", "Affiliated", "Reporting", or "Only Check Balance").

  When a contract is assigned to a parent contract (*Liab Contract* field), with the "Reporting" or "Only Check Balance" relation type (*Liab Category* field), use the "Refresh Product List" context menu command from the [Actions] button to refresh the list of Products (*Product* field) that are available for this contract. The list of Products will be refreshed if the contract is not approved (*Approval* = "Not Ready"). The list of available Products is not limited by the parent Product.
  If the "Full Liability" or "Affiliate" relation type is selected in the *Liab Contract* field for a subcontract and the "Refresh Product List" command is executed, the list of available Products will be limited by the parent Product.
- *Comment* is a field for entering additional contract information.
- *Open* is opening date of the contract. By default, this field will contain the current banking date.
- *Close* is the closing date of the contract (see "").
- *Status* is the status of the contract. The contract status affects how operations involving this contract and all its subcontracts are performed. The issuing accounting contract can have one of the following statuses:
- "Account OK" – active contract status
- "Account Closed" – the contract is closed (see "Closing Contracts")
- "Account Decline" – contract status meaning that the authorisations of child card contracts (when the contract in question is a parent contract) will be declined
- *Approval* – automatically generated, indicates whether the contract has been approved. Possible values are "Ready" – the contract has been approved, and "Not Ready" – the contract has not been approved.

The [Add Tags ...] buttons are used to view and generate additional information about a contract. This information is shown in tagged form and is stored in the fields ADD_INFO_01, ADD_INFO_02, ADD_INFO_03, and ADD_INFO_04 of the ACNT_CONTRACT table (the form for entering tags is described in detail in the section "Entering and Editing Tags", document "Products and Contract Subtypes"").

[Contract Parm] buttons are used to work with contract and client parameters (see the section "Contract Parameters ").

If a contract is being registered manually, approve it by clicking the [Approve] button.

If incorrect data has been entered, the process for approving the contract will be terminated and an error message will be displayed.

After a contract has been approved, the screen will display a "Contract updated" message and the "Ready" value will appear in the *Approval* field of the form.

1.4 Card Contracts for Private Clients

In a production system, new contracts are registered using the Advanced Applications module (see the section "Entering Data for New Clients and Contracts ").

1.4.1 Independent Card Contracts for Private Clients

Independent card contracts are card contracts with no parent contract.

In a test system, independent card contracts for private clients can be created in the following ways:

- After entering new client data in the "Client – New (Private)" form (see Fig. 3 in the "Client Information" section), click the [Cards] button and then the [Ins] button in the "Cards for <name of client>" form that appears.
- To create another independent card contract for that client, click the [Ins] button in the "Cards for <name of client>" form.
- Select the "Issuing → Contract Input & Update → Single Cards – New" user menu path. The screen will display the "Single Cards – New (Private)" form, and, in the *Client* field, select the name of a client, registered in the DB.

The "Cards for <name of client>" form is shown in the following figure Fig. 9.

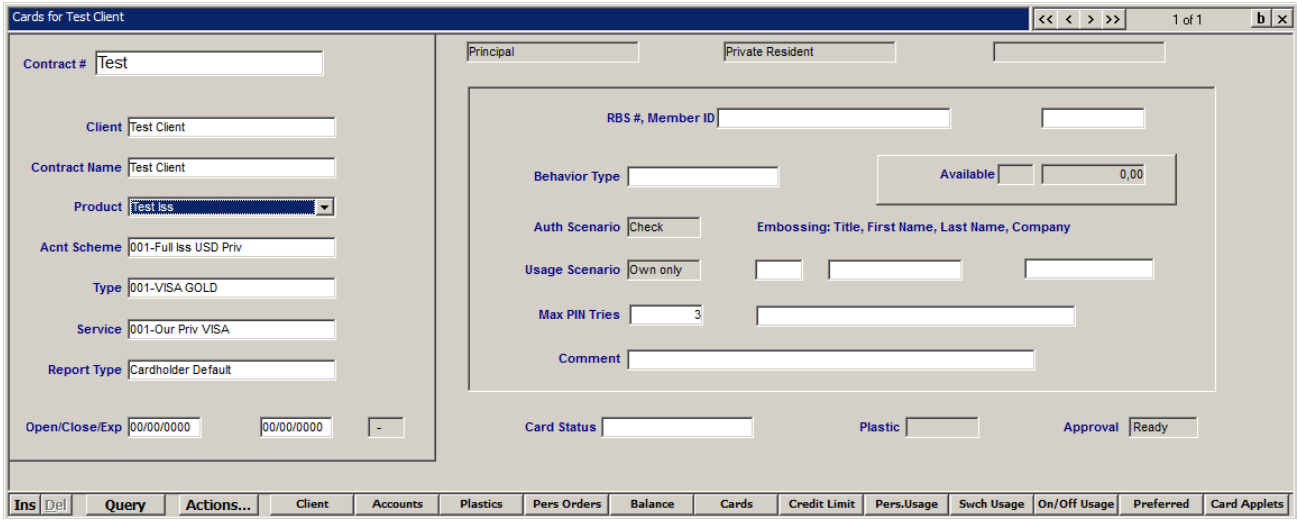

Fig. 9. Information about an independent card contract

When registering a contract manually, follow the following recommendations:

- The *Contract #* field is the card number assigned automatically upon contract approval depending on the selected contract subtype (see the Products and Contract Subtypes Administrator Manual).
- The *Contract Name* field is used to enter the contract name to be used in WAY4 for searching for a contract in the list of registered contracts.
- The *Product* field indicates the name of the product selected from the drop-down list of those registered in the system for the corresponding financial institution and client type.

It should be noted that clicking on the [Approve] button after setting the Product name will automatically fill in the *Acnt Scheme*, *Type*, and *Service* fields with the values of the selected product parameters.

If the *Product* drop-down list is empty, following data must be entered into the form:

- The *Acnt Scheme* field must contain the name of the contract's Accounting Scheme. This should be selected from the list of Accounting Schemes registered in the system for the corresponding financial institution and client category.
- The *Type* field allows users to select an accounting contract subtype from a drop-down list (see the "Contract Subtypes" section of the Products and Contract Subtypes Administrator Manual).
- The *Service* field is used to enter the name of the Service Package corresponding to the contract type to which the selected subtype belongs (see the "Contract Types" section of the Products and Contract Subtypes Administrator Manual).
- The *Report Type* field is used to indicate the set of reports. In WAY4, sets of reports are configured through the "Full → Configuration Setup → Client Classifiers → Client Report Types" menu item.
- The *RBS #* field is used to store an account number in the banking system (ABS) on the condition that accounts are maintained in the ABS. For a client's main account contract, this value is a mirror of the client's personal account in the ABS. For backward compatibility, the may contain *RBS #* field data necessary for custom accounting numeration.
  If a new card contract is related to a higher-ranking account contract in a "Main/Sub" hierarchy, the *RBS #* field value is automatically inherited from the account contract. In a "Liability" hierarchy, a card contract does not inherit the *RBS #* field value from a higher-ranking contract.
- The *RBS Member ID* field may contain a banking system identifier or an identifier of a group of accounts in a banking system (for more details on the use of this field, see "Accounting Contracts for Private Clients")
- *Open* is the opening date of the contract. By default, this field contains the current banking date.
- *Close* is the closing date of the contract (see "Closing Contracts").
- The *Expiry* field should display the expiration date of the card in "YY-MM" format, calculated by the system. The card expiration date will be determined by the following factors:
- The subtype of the card contract (see the Products and Contract Subtypes Administrator Manual)
- The values of global parameters such as SHIFT_CARD_EXPIRE_FROM, CARD_RENEW_ADVANCE, and CARD_RENEW_FROM_TODAY (for descriptions of global parameters please refer to the WAY4 Global Parameters Administrator Manual).

The expiration date of a card can be set manually (see "Changing Card Issuing Parameters").

- *Card Status* – card contract status. A contract's status determines whether transactions may be performed with the card.
- *Plastic* – card production job status (see a description of the *Production Status* field in section "Marking an Individual Card").

- *Approval* – automatically generated, indicates whether the contract has been approved. Possible values are "Ready" – the contract has been approved, and "Not Ready" – the contract has not been approved.

After filling in these form fields, click the [Approve] button to approve the contract.

If incorrect information has been entered, the approval process is terminated and an error message is displayed.

After approval, the screen displays a "Contract updated" message and the "Ready" value appears in the *Approval* field of the form.

> ⚠ It should be noted that after a contract has been approved, values subsequently entered into the *Embossing* group of card issuing fields will not be automatically refreshed. If users need to edit the values in the *Embossing* group of fields, unmark the card (see "Unmarking Cards"), make the necessary changes, and repeat the activation of the card contract.

1.4.2 Card Subcontracts for Private Clients

WAY4 allows users to create card subcontracts for accounting and card contracts registered in the DB. Doing this manually is only possible on a test system.

To enter card subcontracts, proceed as follows:

- When creating card subcontracts for an accounting contract, click the [Cards] button in the "Iss Contr for <name of client>" form (see Fig. 8) and then the [Ins] button in the "Cards for <contract name>" blank form. The "Cards for <contract name>" form will open for entering card subcontracts (see Fig. 10), in which read-only field values are partially determined by the parameters of the parent card contract.
- When creating card subcontracts for a card contract, click the [Cards] button in the "Iss Cards for <name of client>" form (see Fig. 9 and Fig. 14) and then the [Ins] button in the "Cards for <contract name>" blank form used to enter card subcontracts. The screen will display the "Cards for <contract name>" form (see Fig. 10), in which uneditable fields are partially determined by the parameters of the parent card contract.

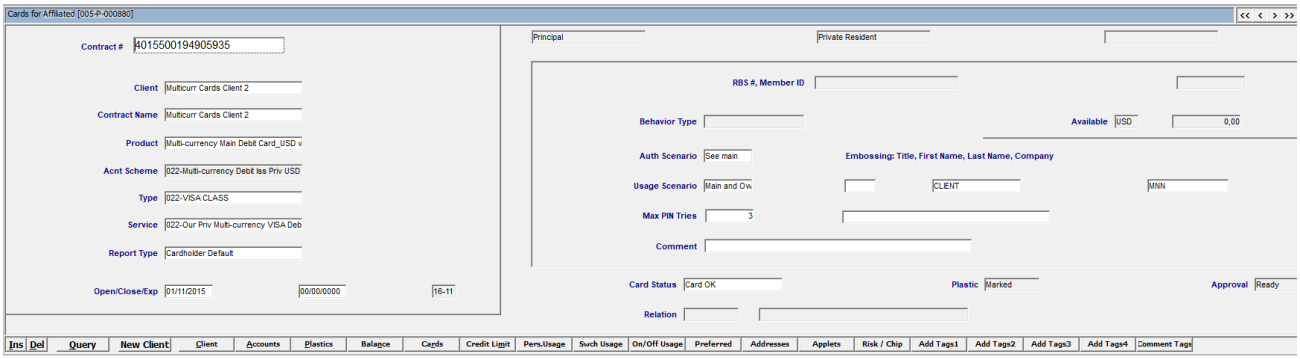

Fig. 10. Card subcontract form

Editable fields of this form can be filled in based on data from the client application according to the issuing bank's regulations.

When filling in the new card subcontract fields, consider the following:

- The *Client* field can be filled in in the following way:
- When the created subcontract must be linked to a client registered in the DB, click inside the *Client* field and select the name of the client in the "Client Selection" dialogue window.
- When a new client record must be created and linked to a subcontract, click the [New Client] button in the "Cards for <contract name>" form. This will create a new client record in the DB and the screen will display the "Client Record created" information message.

  The *Short Name* field of the created client record will be automatically filled in with this name. To change it and to define other client properties, click the [Client] button in the "Cards for <contract name>" form (see Fig. 10), and, in the "Client for <contract name>" form that opens, enter the necessary data.
- For a subcontract, the following fields are filled in:
- *Auth Scenario* containing rules for determining the amount available when authorizing the contract:
- If the value entered into this field is "Check", the amount available is calculated according to the following formula:
- $Amount\_Available_{Auth} = \min(Amount\_Available_{Own}, Amount\_Availabe_{Main})$

  where $Amount\_Available_{Main}$ = Amount_Available of the parent contract.
- If the value entered into this field is "See Main", the amount available is calculated according to the following formula:
- $Amount\_Available_{Auth} = Amount\ Available_{Main}$

  where Amount_AvailableMain = Amount_Available of the parent contract.
- If the value is "Billing Limit", the amount available is calculated the same way as in the case of "Check", the difference being that at the end of a billing cycle the balances of all the accounts of the subcontract are reset to zero, meaning that amount available of the contract is reset every month. This authorisation scenario is used in corporate contract schemes; the amount available is calculated with consideration of the global parameter "CLEAR_BILLING_BLOCKED" (see the document "WAY4™ Global Parameters".
- The value of the *Usage Scenario* field determines the use of Usage Limiters during an authorisation request (see section document "Usage Limiters"):
- "Main and Own" – the set of Usage Limiters defined for the contract and the possible parent contracts of that contract is checked.
- "Own only" – only the limits defined in that contract are active.
- After entering data in the subcontract form, click the [Approve] button in the main accounting or card contract form to approve the entire contract hierarchy.

1.5 Information about card applications

According to the EMV standard, several card applications can be loaded on one smart card (multi-application card). For more information about card applications, see the section "Configuring Several Applications for a Card" of the document "Configuring WAY4™ for Smart Card Issuing".

To get information about applets on a card, click the [Applets] button in a card contract's "Cards for <... >" form (see Fig. 10).

The "Applets" form shows card applet parameters (see Fig. 11).

Fig. 11. Main card application's parameters

If a card combines two or more applications, the *Base Contract* field of the "Applets" form is not filled in for the main application. For an additional applet, the main application's contract number is indicated in the *Base Contract* field.

For more information about card production parameters, see the document "Configuring WAY4™ for Smart Card Issuing".

The [Balance] button is used for access to information about the state of an applet contract's balance: credit limits, available funds, blocked funds, contract currency, etc.

The [Plastic] button is used for access to information about an applet's parameters on a plastic: applet's serial number on the plastic, applet's expiry date, production type, status, etc.

1.5.1 Corporate Contracts

Corporate contract scheme can be regarded as an example of the use of contract hierarchy structure (see Fig. 12).

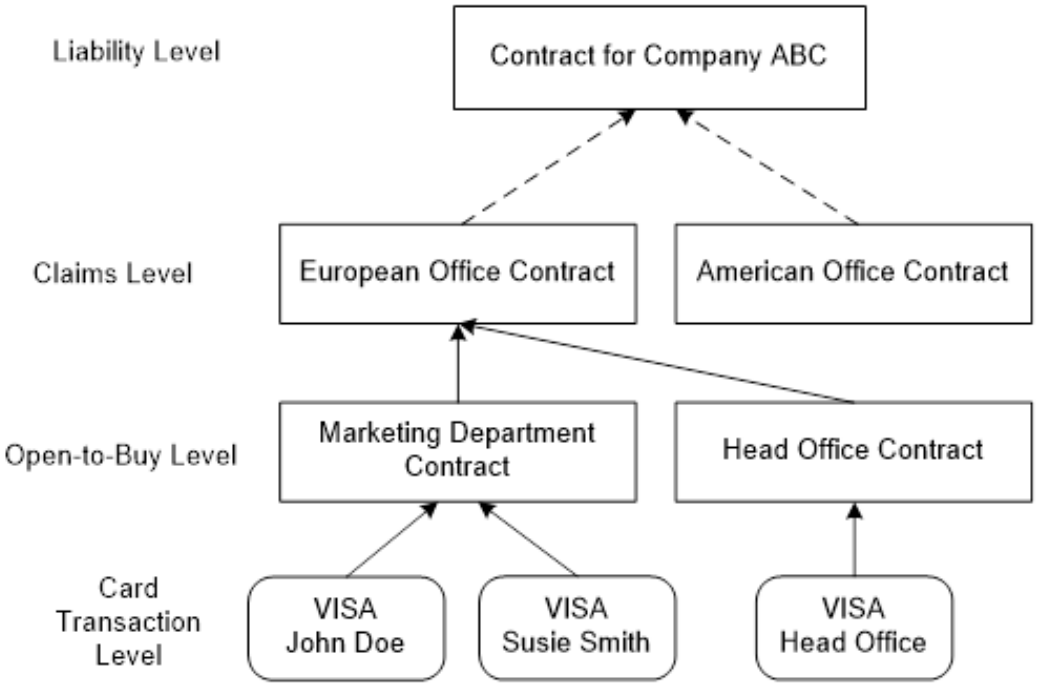

Fig. 12. Example of the use of a corporate contract scheme

> It should be kept in mind that WAY4 allows users to create hierarchical contract schemes of any complexity. However, for the optimisation of accounting and data processing, it is recommended that newly created structures include no more than three or four levels.

1.5.1.1 Liability Level

The scheme shown in the figure Fig. 12 in the "Corporate Contracts" section contains a usage example of a contract hierarchy. The main corporate contract is shown on the topmost level. This level is not characterised by any liability but is used to consolidate the company's liability to the financial institution. Nevertheless, the main corporate contract can take part in certain financial operations.

When manually registering (in a test system) a corporate accounting contract, use one of the following procedures:

- After entering information about a corporate client in the "Client – New (Corporate)" form (see Fig. 3 , click the [Iss Cntr] button, and, in the "Iss Cntr for <name of corporate person>" form that opens, click the [Ins] button.
- Select the "Issuing →Contract Input & Update → Issuing Contract – New (Corporate)" user menu path and, in the "Issuing Contract – New (Corporate)" form that opens, select the name of a client registered in the DB in the *Client* field.

The "Iss Contr for <name of corporate person>" form is shown in (Fig. 13).

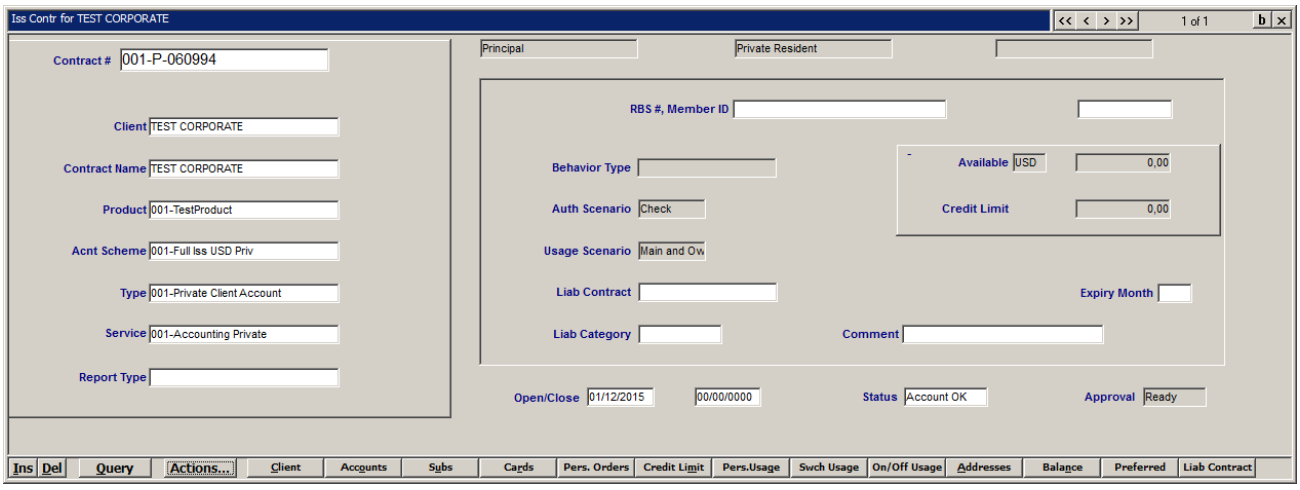

Fig. 13. Form for entering information on the accounting contract

When registering a contract manually, use the following recommendations:

- The *Contract #* field is the accounting contract number, unique in the system. Depending on the type of contract subtype selected (see the Products and Contract Subtypes Administrator Manual), the number can be assigned to an issuing accounting contract in one of the following ways:
- Automatically upon contract approval
- By manually numbering the contract
- The *Client* field should indicate the client for which the contract is being registered.
- The *Contract Name* field is used to enter the contract name to be used by WAY4 when searching for the contract in the list of registered contracts.
- The *Product* field contains the name of a product selected from the drop-down list of those registered in the system for the corresponding financial institution or client type.

> ⚠ It should be noted that clicking on the [Approve] button after setting the Product name will automatically fill in the *Acnt Scheme*, *Type*, and *Service* fields with the values of the selected product parameters.

If the *Product* drop-down list is empty, the following data must be entered into the form:

- The *Acnt Scheme* field must contain the name of the contract's Accounting Scheme; this should be selected from the list of Accounting Schemes registered in the system for the corresponding financial institution and client category.
- The *Type* field allows users to select an accounting contract subtype from a drop-down list.
- The *Service* field is used to enter the name of the Service Package corresponding to the selected contract type.
- The *RBS #* field is usually used to indicate the contract number, which is the account number of the corporate client in the bank system.
- The *RBS Member ID* field may contain a banking system identifier or an identifier of a group of accounts in a banking system. This identifier must also be specified in the *Bank ID Code* field of

the "RBS Bank Identification Codes" table (Full → Configuration Setup → Routing → RBS Bank Identification Codes). Together with *RBS #*, this value allows contracts to be grouped according to their RBS system or into subgroups within a single RBS system. The two fields can be used for contract identification if the "UNIQUENESS_RBS_NUMBER" global parameter is set to "Y" (see section "UNIQUENESS_RBS_NUMBER" in the WAY4™ Global Parameters Administrator Manual). For this, the values of the fields can be specified in files during import and export of advanced applications (see section "File Format" of the Importing and Exporting Advanced Applications R2 (XML Format) Administrator Manual), registration of applications to open issuing and card contracts (see the document "Issuing Advanced Applications R2"), and import of payments (see the CBS Payments Import Administrator Manual). The *RBS Member ID* may also be left blank.

Note that field *RBS Member ID* may be left blank. Then, if applications and payments are imported from several independent financial institutions, and contracts are identified by field *RBS #*, its values must be unique for each financial institution.

- The *Expiry Month* field can contain the sequential number of a month in a year. This value affects the way active periods are calculated for the cards that belong to the same tree with the corporate contract.
- *Comment* is the field for entering additional contract information.
- *Open* is the opening date of the contract. By default, this field contains the current banking date.
- *Close* is the closing date of the contract (see "Closing Contracts").
- *Status* is the status of the contract. The contract status affects how operations involving this contract and all its subcontracts (if the contract is a parent contract to other contracts in the hierarchy) are executed. An issuing accounting contract can have one of the following statuses:
- "Account OK" – active contract status
- "Account Closed" – the contract is closed (see "Closing Contracts")
- "Account Decline" – contract status meaning that the authorisations of child card contracts (when the contract in question is a parent contract) will be declined
- *Approval* – automatically generated, indicates whether the contract has been approved. Possible values are "Ready" – the contract has been approved, and "Not Ready" – the contract has not been approved.

After filling in the form fields, click the [Approve] button to approve the contract.

If incorrect data has been entered, the approval process will be terminated and an error message will be displayed.

After the contract has been approved, the screen will display a "Contract updated" message and the "Ready" value will appear in the *Approval* field of the form.

While working with the "Iss Contr for <name of corporate person>" form, the following operations can be performed:

- Create a new accounting contract for this client. To do this, click the [Ins] button in the "Iss Contr for <name of corporate person>" form and repeat the abovementioned actions to register the new contract.

- Create subcontracts for the activated accounting contract. To do this, click the [Subs] button in the "Iss Contr for <name of corporate person>" form.
- Create card subcontracts for the current client by clicking on the [Cards] button in the "Iss Contr for <name of corporate person>" form.
- Create liability hierarchy subcontracts by clicking on the [Liab Contract] button.
- Define contract addresses (see "Client and Contract Address Support").

1.5.1.2 Claims Level

The example in the figure Fig. 12 in "Corporate Contracts" section shows liability on the branch office level.

To set up a liability relationship between contracts, fill in the following editable fields in the subcontract form:

- *Liab Contract* field contains a drop-down list for selecting a contract number (for instance, the main corporate contract).
- *Liab Category* field contains a drop-down list for selecting the liability relationship.

After filling in the form fields, click the [Approve] button to approve the contract.

If incorrect data has been entered, the approval process will be terminated and an error message will be displayed.

After the contract has been approved, the screen will display a "Contract updated" message and the "Ready" value will appear in the *Approval* field of the form.

In working with the "Iss Contr for <name of corporate person>" form, the following operations are possible:

- Create a new accounting contract for this client. To do this, click the [Ins] button in the "Iss Contr for <name of corporate person>" form and repeat the abovementioned actions to register the new contract.
- Create subcontracts for the activated accounting contract. To do this, click the [Subs] button in the "Iss Contr for <name of corporate person>" form.
- Create card subcontracts for the current client by clicking on the [Cards] button in the "Iss Contr for <name of corporate person>" form.
- Define contract addresses (see "Client and Contract Address Support").

1.5.1.3 Open-to-Buy Level

The third level in the example presented in the figure Fig. 12 in the "Corporate Contracts" section can be represented by a corporate branch contract or by the contracts of individual corporate employees.

To enter accounting subcontracts (for instance, for corporate clients, when the main accounting contract is used for the company as a whole and the accounting subcontracts for company branches), click on the [Subs] button in the "Iss Contr for <name of corporate person>" form.

The "Subs for <contract name>" form for the accounting subcontract will open, which is similar to the main contract form. The values of uneditable fields are partially determined by the parameters of the parent contract.

Editable form fields are filled in based on data from the client application according to the issuing bank's regulations.

After entering data in the accounting subcontract form, click the [Approve] button in the main accounting contract form to approve the entire contract hierarchy.

1.5.1.4 Card Transaction Level

The last level in the example presented in the figure Fig. 12 in the "Corporate Contracts" section is represented by the card contracts of individual corporate employees. These contracts initiate card transactions but can draw from funds accessible to the corporate branch contract.

When manually registering card subcontracts for an accounting contract, click the [Cards] button in the "Iss Contr for <name of corporate person>" form and then the [Ins] button in the "Cards for <contract name>" form that opens. The "Cards for <contract name>" card subcontract form is identical to the card subcontract form (see Fig. 10 in the "Card Subcontracts for Private " section), where the values of uneditable fields in the card subcontract form are partially determined by the parameters of the parent accounting contract.

The "Cards for <contract name>" form will open (see Fig. 14).

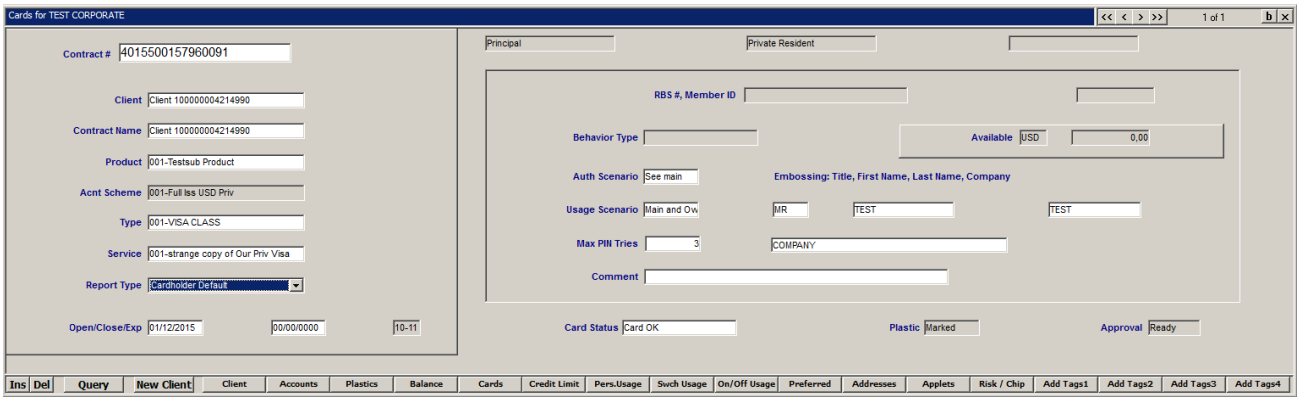

Fig. 14. Form for entering information about card contracts

When registering a contract manually, follow these recommendations:

- The *Client* field can be filled in in one of the following ways:
- To link the created subcontract to a client registered in the DB, click the *Client* field and select the name of the client in the "Client Selection" dialogue window.
- To create a new client record and link the subcontract to it when creating a subcontract, click the [New Client] form in the "Cards for <contract name>" form. This will create a new client record in the DB and the screen will display the "Client Record created" information message.

  The *Short Name* field in the created client record will be automatically filled in with this name. To change it and define other client properties, click the [Client] button in the "Cards for <contract name>" form (see Fig. 10), and, in the opened form "Client for <contract name>", enter the necessary data.
- The *Contract #* field is the card number assigned automatically upon contract approval, depending on the selected contract subtype (see the Products and Contract Subtypes Administrator Manual).

- The *Contract Name* field is used to enter the contract name to be used by WAY4 to search for the contract in the list of registered contracts.
- The *Product* field indicates the name of the product from the drop-down list of those registered in the system for the corresponding financial institution or client type.

It should be noted that clicking on the [Approve] button after setting the Product name will automatically fill in the *Acnt Scheme*, *Type*, and *Service* fields in the main issuing corporate contract with the values of the selected product parameters.

If the *Product* drop-down list is empty, the following data must be entered into the form:

- The *Acnt Scheme* field must contain the name of the contract's Accounting Scheme. This should be selected from the list of Accounting Schemes registered in the system for the corresponding financial institution and client category.
- The *Type* field allows users to select a subtype for an accounting contract from a drop-down list.
- The *Service* field is used to enter the name of the Service Package corresponding to the selected contract type.
- The *Behavior Type* field is used to indicate the behaviour type inherited by the contract.
- The following fields are filled in for a subcontract:
- *Auth Scenario* determines the rules for calculating the amount available when authorizing the contract:
- If the value entered into this field is "Check", the amount available is calculated according to the following formula:
- $Amount\_Available_{Auth} = \min(Amount\_Available_{Own}, Amount\_Availabe_{Main})$

  where $Amount\_Available_{Main}$ = Amount_Available of the parent contract.
- If the value entered into this field is "See Main", the amount available is calculated according to the following formula:
- $Amount\_Available_{Auth} = Amount\ Available_{Main}$

  where Amount_AvailableMain = Amount_Available of the parent contract.
- If the field is set as "Billing Limit", the amount available is calculated the same way as with "Check", the difference in this configuration being that all the subcontract's accounts are set to a zero balance at the end of the billing cycle so that the contract's amount available is reset every month. This authorisation scenario is used in corporate contract schemes; the amount available is calculated with consideration of the global parameter "CLEAR_BILLING_BLOCKED" (see the document "WAY4™ Global Parameters").
- The value of the *Usage Scenario* field determines the use of Usage Limiters during an authorisation request (see section document "Usage Limiters"):
- "Main and Own" – the set of Usage Limiters defined for the contract and the possible parent contracts of that contract is checked.
- "Own only" – only the limits defined in that contract are active.
- *Open* is the opening date of the contract. By default, this field contains the current banking date.

- *Close* is the closing date of the contract (see "Closing Contracts").
- The Expiry field shows the card expiry date calculated by the system in the "YY-MM" format. To calculate the expiry date, the following configurations are used:
- The card contract subtype (see the Products and Contract Subtypes Administrator Manual).
- The values of global parameters such as SHIFT_CARD_EXPIRE_FROM, CARD_RENEW_ADVANCE and CARD_RENEW_FROM_TODAY (see the WAY4™ Global Parameters Administrator Manual).
- The value of the *Expiry Month* field in the parent corporate accounting contract.

The card expiry date can be set manually (see "Changing Card Issuing Parameters").

After filling in the form fields, click the [Approve] button in the main issuing corporate contract to approve the contract.

If incorrect data has been entered, the approval process will be terminated and an error message will be displayed.

After the contract has been approved, the screen will show a "Contract updated" message and the "Ready" value will appear in the *Approval* field of the form.

It should be kept in mind that after a contract has been approved, any edited value in the *Embossing* group of fields will not automatically refresh the embossing data that already exists in the system. If the data in the *Embossing* group of fields needs to be edited, unmark the card (see "Unmarking Cards"), make the necessary changes, and re-activate the card contract.

1.5.2 Client and Contract Address Support

Addresses that are registered in the "Client addresses" table (CLIENT_ADDRESSES) are called additional addresses. An additional address for a client or contract can be used by the WAY4 while the following processes are running:

- Statement creation: in this case, created statements are sent to the indicated address.
- Card issuing: in this case, the address is used when printing PIN mailers.
- Sending notifications about transaction activity. In this case, a notification is send to a client by email or SMS.

WAY4 determines the client's and contract's address according to the settings in the section "Address Types" dictionary" of the document "WAY4 Dictionaries".

At any one time, there may be several addresses with the same type (*Type*) and nested effective periods. When determining an address that is effective at a certain point in time, the address with the shortest effective period is selected.

Additional phone numbers and email addresses that are registered as supplementary are an exception. Supplementary addresses are registered using a service for enabling SMS notifications. This service is provided to OpenWay clients under software licenses. For more information about supplementary addresses, see the section "Viewing and editing supplementary addresses")

Additional addresses with overlapping effective periods are not supported. For additional addresses, the date from which an address is effective (*Date From*) or the date until which it is effective (*Date To)* may be the same. For example, if one additional address is set with an effective period from June 1-30, a second additional address may be set with an effective period from June 1 to June 10. However, an additional address with an effective period from June 29 to July 31 is not permissible. When searching for a relevant additional address, the address with the effective period from June 1 to June 10 will be selected.

In addition, temporary addresses for a client can be defined that are effective annually during a specific period, for example, from 1 May to 30 September. The start date (*Date From* field) and end date (*Date To* field) for a temporary address must be specified, as well as the YEARLY; tag (*Add_Info*) field (see Fig. 15). The "RENEW_YEARLY_ADDRESS" procedure, menu item "Full → Daily Procedures → Yearly Address Renew" renews the validity of the temporary address for the current year. The procedure for renewing the validity of temporary addresses should be run regularly, for example, on the 28th of each month. The procedure is started either automatically or using the WAY4™ Scheduler (see the document "Scheduler R2"). If the effective period of a renewable temporary address overlaps with that of addresses of the same type set earlier, this address is rejected. The results of the "RENEWED_YEARLY_ADDRESS" procedure will be shown in the "Last Process" form (the form is described in the section ""Last Process" Menu Item" of the document "DB Manager Manual").

When registering a contract manually, to create an address, click the [Addresses] button in the client data edit form. In the "Addresses for <name of client>" form that opens, click the [Ins] button to open the "Addresses for <name of client>" form (see Fig. 15).

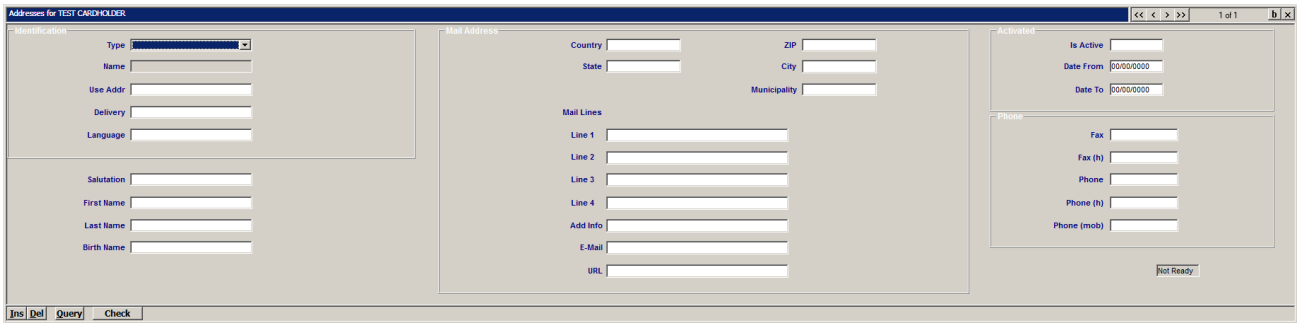

Fig. 15. Additional client addresses

Fields in the "Addresses for <name of client>" form:

- *Type* is the type of address. Addresses are classified by their values. Additional address types are defined in the "Address Types" list ("Full → Configuration Setup → Client Classifiers → Address Types").

  If the address type registered in the "Address Types" list has "Custom Check" in the *Group Code* field, client addresses it is not necessary to set client addresses.

- Use Addr – list of address types (see the list at "Full → Configuration Setup → Client Classifiers → Address Types"); allows addresses of one type to be used as addresses of another type
- *Delivery* – delivery type for correspondence (reports, issued cards, PIN mailers, etc.). For example, the following delivery types can be used: by mail, by messenger, or by e-mail. The value of this field can be used as an additional criterion when sorting batch report files. Delivery types are classified in the "Delivery Type" dictionary ("Full → Configuration Setup → Client Classifiers → Delivery Type").
- *Language* – list of languages registered in WAY4 (see the list at "Full → Configuration Setup → Client Classifiers → Languages"); if transaction names are translated in the system into a specific language (for details, see section "Entry Codes" in the WAY4™ Accounting Administrator Manual), client statements will be generated in this language if it is selected in this field.
- *Salutation* is a drop-down list to select how the client will be addressed (for the list of salutations registered in WAY4 see "Full → Configuration Setup → Client Classifiers → Client Salutations").
- *First name*, *Last name* and *Birth name* – client first name, surname and surname at birth, respectively.
- *Country* – list showing countries registered in the system (see the list in "Full → Configuration Setup → Main Tables → Country Table"). It should be noted that the *Country* field in a client record can only contain countries listed in the "Country Table" list, which have the "Yes" value set in the *Use In Bank* field.

  The value in the *Country* field in a client record can be used to create the client's mailing address.

- *State* – state code.
- *ZIP* – postal (ZIP) code.
- *City* – city (town)
- *Municipality* – municipality code.
- Four *Address Line* fields of the *Mail Lines* field group can be used to enter a client's address. Some banks require the support of structured addresses when entering, verifying, and reporting on data. Four fields are sufficient to fulfil this requirement. For example, the following address structure can be used:
- Address Line 1 – user-defined text.
- Address Line 2 – street name.
- Address Line 3 – house number.
- Address Line 4 – apartment number.
- *Add Info* field – additional information, for example, the code from the address classification system or marker (the YEARLY; tag) that the address is effective annually during a specific time period.
- *E-mail* – client e-mail address.
- *URL* – client URL address.

  This makes it possible in WAY4 to specify another entity as the recipient of correspondence.

- *Activated* field group:
- *Is Active* – indicates whether or not the address is active. If the "Yes" value is entered in the field, the address is used. If "No" is entered, then it is not used.

- *Date From* and *Date To* –calendar dates of this setup's effective period.

> ⚠ Only one address of a certain type can be active at one time.

- *Fax*, *Fax (h)*, *Phone*, *Phone (h)*, and *Phone(mob)* from the *Phone* group – phone and fax numbers.
- To register contract addresses, click the [Address] button in the form for editing the contract> The "Addresses for <name of client>" form will open (see Fig. 15). Entering a contract address involves filling in the same fields as for the client address.

> ⚠ Note that in any record with an address, a value must be set for the *Type* field. If the address type belongs to a specific group ("Postal Code", "Contact Data", "EMail"), the corresponding fields must be filled in in the address. If the address belongs to the "Postal Code" group, one of the *Address Line* fields must be filled in. If the address belongs to the "Contact Data" type, one of the *Phone* group fields must be filled in. The *E*-Mail field must be filled in for the "Email" group. Otherwise, when an address is checked, a message will be shown that required information is missing.

When defining the statement or PIN-mailer address, a standard address search algorithm is used (for more information, see the section ""Address Types" Dictionary" of the document "WAY4™ Dictionaries").

For instance, statements for parent corporate contracts and employee contracts should be sent to the corporate address but PIN mailers must be sent to the employee home addresses. In this case, an address type for statement delivery and an address type for PIN mailer delivery must be set up see the section ""Address Types" Dictionary" of the document "WAY4™ Dictionaries"). Usually, a statement address is defined for the corporate contract. The employee's address contained in the client record or the employee's contract address can be used as the PIN-mailer address.

1.5.3 Viewing and editing supplementary addresses

To notify clients (send SMS or email messages), WAY4 supports registration of supplementary addresses: phone numbers and email addresses for a client. There can be several supplementary addresses with the same type (*Type* field, see Fig. 15) that are effective at the same time. These addresses can only be registered using a service for enabling SMS notifications. This service is provided to OpenWay clients under software licenses.

> ⚠ Note that supplementary phone numbers and email addresses can be manually edited and deleted on a test system only. In a production system, records must be edited and deleted using services for changing contact data or when SMS notification is disabled.

To work with supplementary addresses in a test system, the [Add Contacts] button is available, menu item "Issuing → Contracts Input & Update → Clients (Private) → [Client - Edit] → [Addresses]" (see Fig. 16).

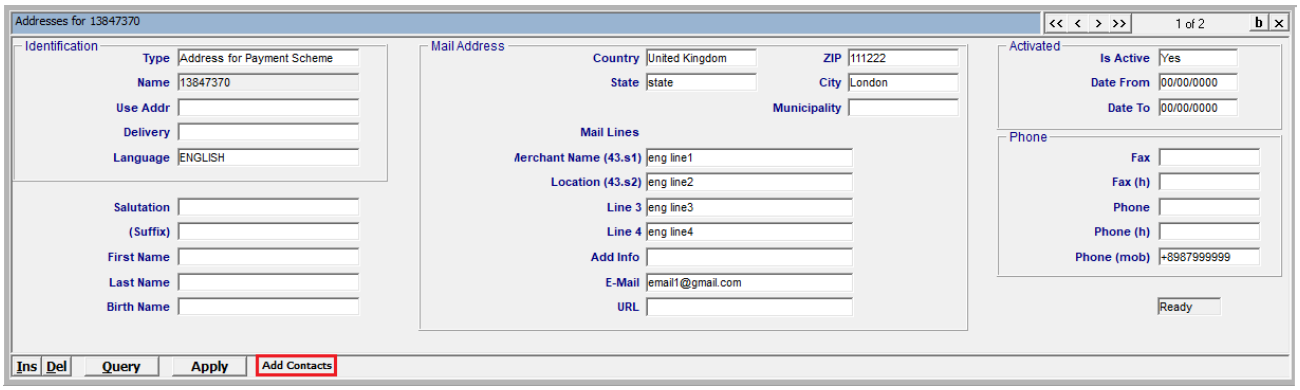

Fig. 16. Client addresses that were registered earlier

Phone numbers and email addresses that were registered earlier can be viewed, edited, and deleted in the "Add Contacts" form (see Fig. 17).

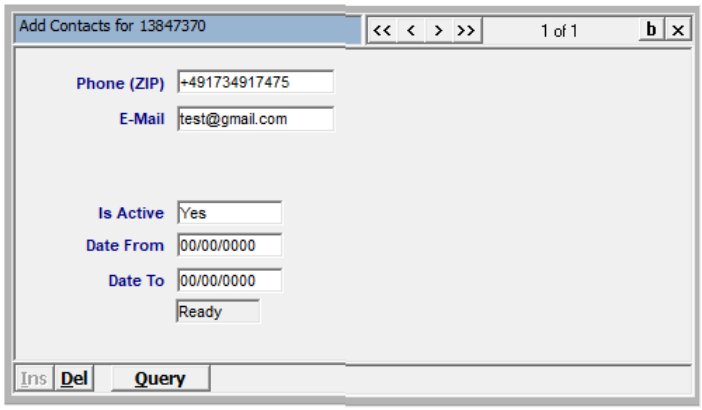

Fig. 17. Form for viewing and editing supplementary addresses

Changes to addresses are applied using the [Apply] button (see Fig. 16).

To configure sending notifications to several phone numbers and email addresses, the variables %TELEPHONE_LIST% and %EMAIL_LIST% are used. For more information about notification setup, see the document "Configuration of Client Messages".

1.5.4 Linked Clients

Information on how a client is related to other clients registered in the database is sometimes used for additional client data analysis. For instance, the linked clients mechanism can be used to specify the relation between relatives.

To register linked clients, first register the corresponding client link type.

To register a new client link type, select the "Full → Configuration Setup → Client Classifiers → Linked Client Types" user menu item. This will open the "Linked Client Types" grid form (see Fig. 18).

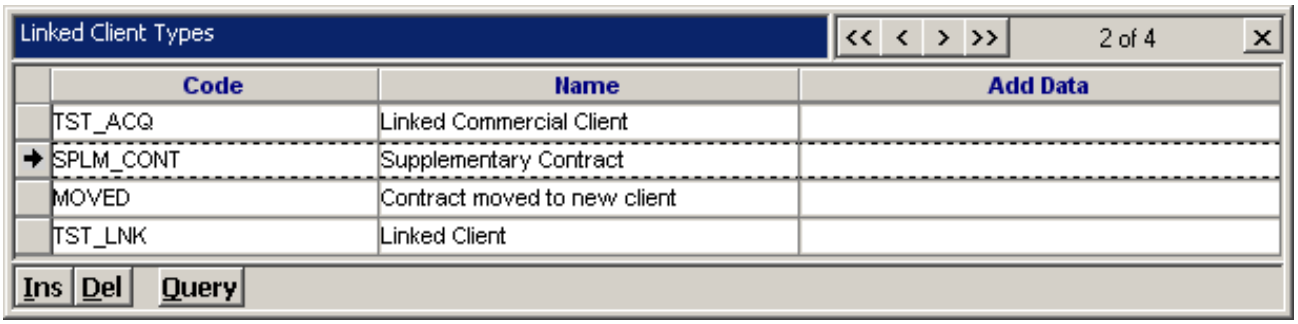

Fig. 18. Grid form for registering client link types

In the form, click the [Ins] button to add a row and fill in the following fields:

- *Code* – link type code
- *Name* – link type name
- *Add Data* – additional link type data; this is an optional field

If this client's link with other clients is manually registered in the database, click the [Linked To] button in the form for entering client data (see Fig. 3 in section "Client Information"). This will open the "Linked Clients for <name of client>" form (see Fig. 19).

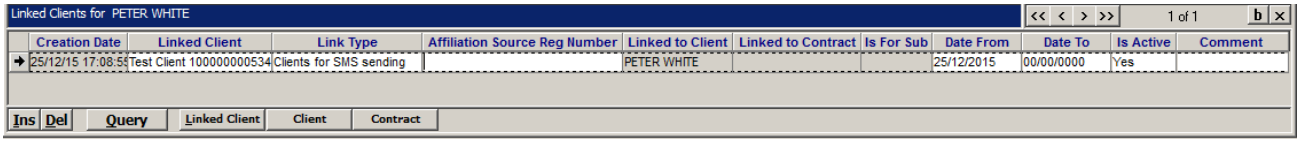

Fig. 19. Information about linked clients

The form contains the fields:

- *Creation Date* – date and time of client link registration
- *Linked Client* – drop-down list of clients registered in the system; used to select a client to whom the current client is linked
- *Link Type* – drop-down list of registered client link types
- *Affiliation Source Reg Number* – number of the external document (for example, power of attorney) used to establish the link
- *Linked to Client* – current client (with whom the link is being defined)
- *Date From and Date To* – link effective period
- *Is Active* – shows whether the client link is active; if the field contains "Yes", the link is active, if the field contains "No", the link is inactive
- *Comment* – additional client link data

The [Linked Client] button in the form is used to view information on the client specified in the *Linked Client* field of the form.

The [Client] button is used to view information about the client specified in this form's *Linked to Client* field.

The [Contract] button is used to view information about the contract for the client specified in this form's *Linked to Client* field.

Clients already linked to this client are viewed in the "Linked Clients for <client name>" form (see Fig. 19). The form is opened by clicking the [Linked From] button in the form for creating or editing a client.

In this case, this client is specified in the *Linked Client* field and the client to whom this client is already linked in the *Linked to Client* field.

1.5.5 Generating Interest Accrual Reports for the Billing Cycle

Interest Accrual reports for a billing cycle are generated through the "Billing for <name of account>" form opened by clicking the [Billing] button in the "Accounts for <contract name>" form containing contract account information (see Fig. 20). This form is opened by clicking the [Accounts] button in the form for entering contract information.

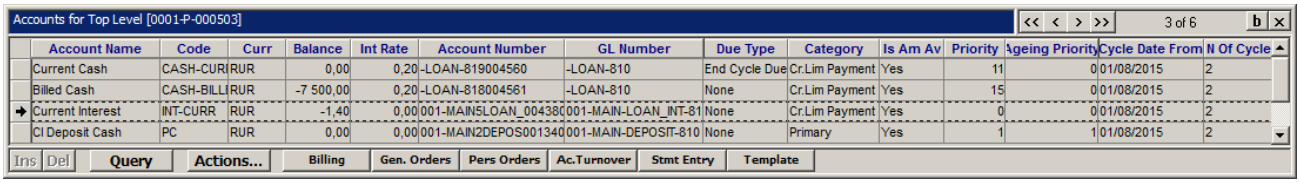

Fig. 20. Table of the accounts of a contract

When the [Calc Int] button is clicked, the window showing the sum total of interest accrued on an account is displayed.

To generate an interest accrual report, select the record for the desired contract account in the "Accounts for <contract name>" form and click the [Billing] → [Interest] button (see Fig. 21).

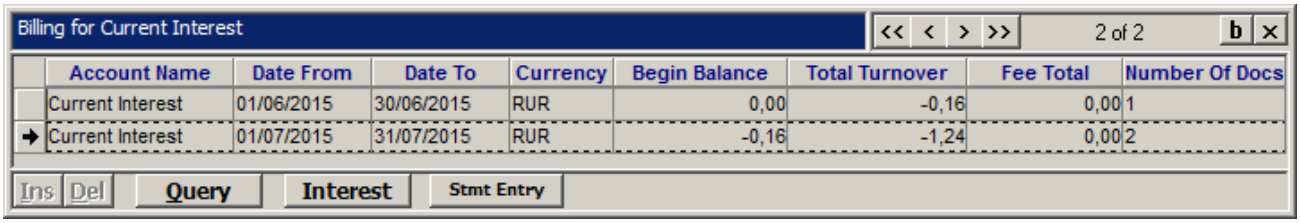

Fig. 21. Form for generating interest accrual reports for billing cycles

Each record in the "Billing for <name of account>" form shows the following contract account information for each billing cycle:

- The *Begin Balance* field – the account balance at the beginning of the billing cycle.
- The *Total Turnover* field – the sum totals of fund activity.
- The *Fee Total* field – the sum total of interest accrued over the billing cycle.
- The *Number of Doc* field – the number of generated documents.

When the [Ac.Turnover] button (until version 03.35.30, the [Item] button) is clicked, the "Contract Account Turnover for <name of account>" form (until version 03.35.30, the "Item for <name of account>" form) is brought to the screen. It contains technical information necessary for calculating interest and generating account statements.

1.5.6 Standing Payment Orders

Standing payment orders can be used for creating payment orders to be used, for instance, to make on-line utility payments.

The cardholder makes payments through an ATM, creating a document in the DB. After the document is processed in the standard way, funds are withdrawn from the contract account and transferred to the

utility provider's account. These funds will be blocked on the cardholder's account from the time the ATM transaction takes place until the payment is completed.

Inherited payment orders are used for these tasks. Inherited payment orders are created on the basis of template orders:

- Inherited orders are set up on the Accounting Scheme level.
- Inherited orders are manually created based on templates on the contract level or using the Advanced Applications module.

An inherited standing payment order is created manually in the contract form (for example, "Issuing → Contract Input & Update → Issuing Contract (Private)) using the "Create Order by Template" command from the [Actions] context menu.

Additional setup of inherited payment orders and their activation is performed in the "Create Order by Template" form that opens automatically after creation of an inherited payment order, or in the form "Pers Orders for <account name>" form opened by clicking the [Pers Orders] button in the contract's form or in the "Accounts for <contract name>" form (see Fig. 22).

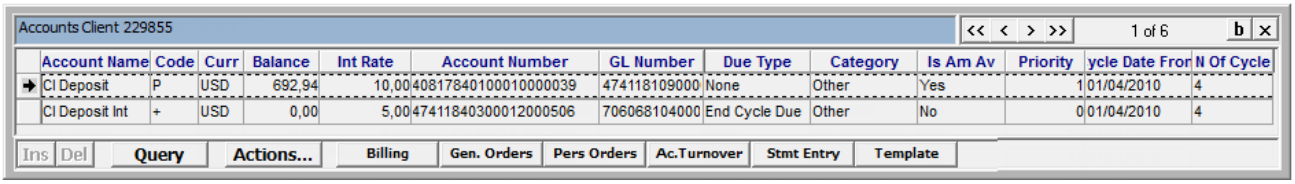

Fig. 22. "Accounts for <contract name>" form

For more information about manually creating inherited payment orders, see the section "Parameters of Inherited Standing Payment Orders Created on the Basis of a Template" of the document "Standing Payment Orders".

> From version 03.41.30, individual standing payment orders can only be created for bank contracts. Existing (created before version 03.41.30) individual payment orders for issuing contracts can be viewed by clicking the [Pers Orders] button in the contract form or in the "Accounts for <contract name>" form.

1.5.7 Preference List

The system allows contractors to be defined on the contract level.

For this, click the [Preferred] button in the card contract form, then fill in the "Preferred for <contract name>" form which appears (see Fig. 23).

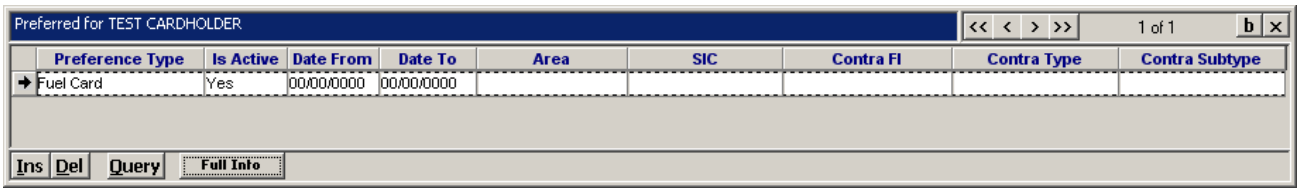

Fig. 23. Form for entering contractor data

To create a new record on the preference list, click the [Ins] button and fill in the record fields:

- *Preference Type* – preference type selected from a list (to create a new contractor category, select the "Full → Configuration Setup → Products Definition → Preference Type" menu path); a specific Service or a specific usage limiter from a Service Package may be related to a contractor category).
- Fields *Date From* and *Date To* define the beginning and ending calendar dates of the active period for that configuration.
- *SIC* is the field for entering a merchant category code (MCC).
- *Area* is the field for entering the name of a business or card area.
- *Contra FI* is the contractor's financial institution.
- *Contra Type* is the contractor's contract type.
- *Contra Subtype* is the contractor subtype.
- *Is Active* is the field indicating (set to either "Yes" or "No") whether or not this configuration is active in the system.

To access additional information on contractors, use the "Preferred Details" form (see section "Service Package" in the Preferred Counterparties Administrator Manual), opened by clicking the [Full Info] button in the table form containing the list of contractors.

To approve the changes in the contract form, click the [Approve] button.

> When a card is reissued with creation of a new contract, the list of counterparties is automatically transferred to the new contract. Only active records registered for the current contract are transferred.

For more details on preferred contractors, see the Preferred Counterparties Administrator Manual.

1.5.8 Related Cards

WAY4 supports account selection while executing operations on an ATM. While using this functionality, the cardholder can use the ATM to withdraw funds both from a card account and from accounts tracked through WAY4.

For this purpose, the system uses special card contracts that have a same-tier relationship with the base card through which account selection is made.

Contracts of the Related Cards type have the following characteristics:

- They are created as subcontracts of accounting contracts registered for the corresponding client account types.
- The parameters of these contracts (subtype, Accounting Scheme, Service Package) define the set of rules that determine how operations involving cards other than the base card are executed.
- When creating a related card contract, the base card should be indicated.

An example of the same-tier relationship between card contracts is shown in the following figure Fig. 24.

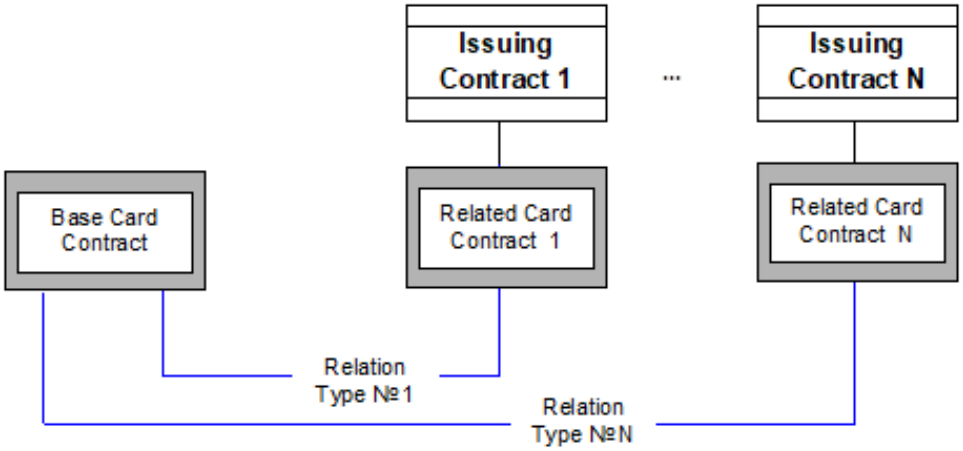

Fig. 24. Scheme of same-tier relationship between card contracts

To create related contracts, the contract relation type must be registered in the system beforehand. In this case, the account type is determined by the relation type.

To register a new relation type, select the "Full → Configuration Setup → Accounting Setup → Contract Relations" menu path. This command will bring the "Contract Relations" grid form (see Fig. 25) to the screen.

Contract Relations << < > >> 26 of 26

Name	Code	Contract Category	Posting Scheme
Default	00	Card	
Savings	10	Card	OWN_CLIENT;
Checking	20	Card	
Credit	30	Card	
Universal	40	Card	
Free relation_device	FREE_DEVICE	Device	FREE_RELATION;
Free Relation	FREE_RELATION	Card	FREE_RELATION;
PayPass	PP	Card	
rbs_acc	RBS_NUMBER	Card	
Unique	UN	Device	

Ins Del Query Check All

Fig. 25. Grid form for registering contract relations

Add a row to this grid by clicking the [Ins] button and indicate the following:

- In the *Name* field – the name of the relation type
- In the *Code* field – the relation type code; this field can be filled in the following ways:
- International payment systems support the following standard account type codes: "10", "20", and "30"; therefore, only accounts with these code types will be used for transactions with "foreign" cards.
- To execute operations involving "our" (ON-US) cards, WAY4 supports the use of any account type in this grid with any code.
- The value must be unique in this handbook.
- In the *Contract Category* field, select "Card" from the list.
- The *Posting Scheme* field contains information used during document processing; this field is optional.

The [Check All] button is used to check the uniqueness of the relation type code (value in the *Code* field).

A separate issuing accounting contract is registered for each account type. To create a related contract, click the [Related Cards] button in the accounting contract form (see Fig. 8), and the "Related Cards for <contract name>" form will appear (see Fig. 26).

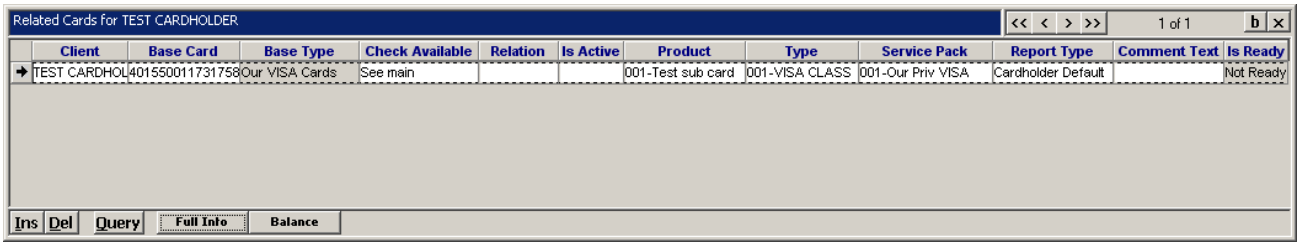

Fig. 26. Form for indicating related cards

The "Related Cards" form contains the following fields:

- *Client* is a client name for which the Base Card contract is created.
- *Base Card* is the number of the card contract. An ATM will provide account selection while performing transactions with this card.
- *Base Type* is a card contract type.
- *Check Available* is a rule for calculating the amount available while performing authorisation for the contract (for more details on the use of this field, see the description of the *Auth Scenario* field in section "Card Subcontracts for Private ").
- *Relation* is a drop-down list of card contract relation types registered in the "Contract Relations" table.
- *Is Active* is the field used to activate the selection made in the *Relation Type* field. After activation, the "Active" value should be specified in this field.
- *Product* is the field for selecting the desired product name from the list of products registered for this type. After having filled this field, there is no need to enter data into the *Type* and *Service Pack* fields.
- *Type* is a field containing a drop-down list for selecting the desired contract subtype.
- *Service Pack* is the field containing a drop-down list for selecting the desired contract Service Package.
- *Report Type* is the name of a report type. This field is not mandatory.
- *Comment Text* is the field for entering additional contract information. This field is not mandatory.
- The value in the *Is Ready* field shows that changes made to this form have or have not been applied to the database.

After filling in the fields of the "Related Cards" form, contract registration must be confirmed by clicking the [Approve] button in the parent accounting contract form.

The "FREE RELATION" relation type (with the hardcoded FREE RELATION code or with the FREE RELATION tag in the *Posting Scheme* field, see Fig. 25) makes it possible to set a relation between the card contract for which plastic is issued (Base Card) and any contract related to it. This means the Base Card can be linked with any number of other contracts through related cards with the "Free Relation" relation type.

This provides cardholders flexible access to the card account linked to the main card and to bank accounts that are linked with Related Cards whose balances can be maintained in WAY4 or in external systems.

While operations are performed, the choice of account is determined by the value of the "SET_DEFAULT_ACCOUNT" global parameter (see the WAY4 Global Parameters Administrator Manual).

> ⚠ Note that Events that are registered or included in an Event chain (records in the "Event Chain for <Event type name>" form that have the "Related Contract" value in the *For Contract* field) do not open for card contracts with the "FREE_RELATION" relation type, event when the "REL_TYPE=<relation type code>;" tag is set in the *Chain Details* field of the Event that is being configured (for more information, see the document "Events").

1.6 Restructuring the Contract Hierarchy

The system allows a contract without a parent contract to be assigned one. Parent contracts can also be reassigned to other contracts. These actions are performed through the "Issuing → Contracts Input & Update → Move Iss Contract Tree" menu item.

If a child contract is reassigned to another parent contract, the parameters of the child contract such as the authorisation scenario are kept in its new hierarchical structure.

If a contract without a parent contract is assigned one, the authorisation scenario for the new child contract assumes the value of "Check".

When the "Issuing → Contracts Input & Update → Move Iss Contract Tree" menu item is selected, the "Move Iss Contract Tree" form is brought to the screen. It contains all the contracts available for working with the given client category (see Fig. 27).

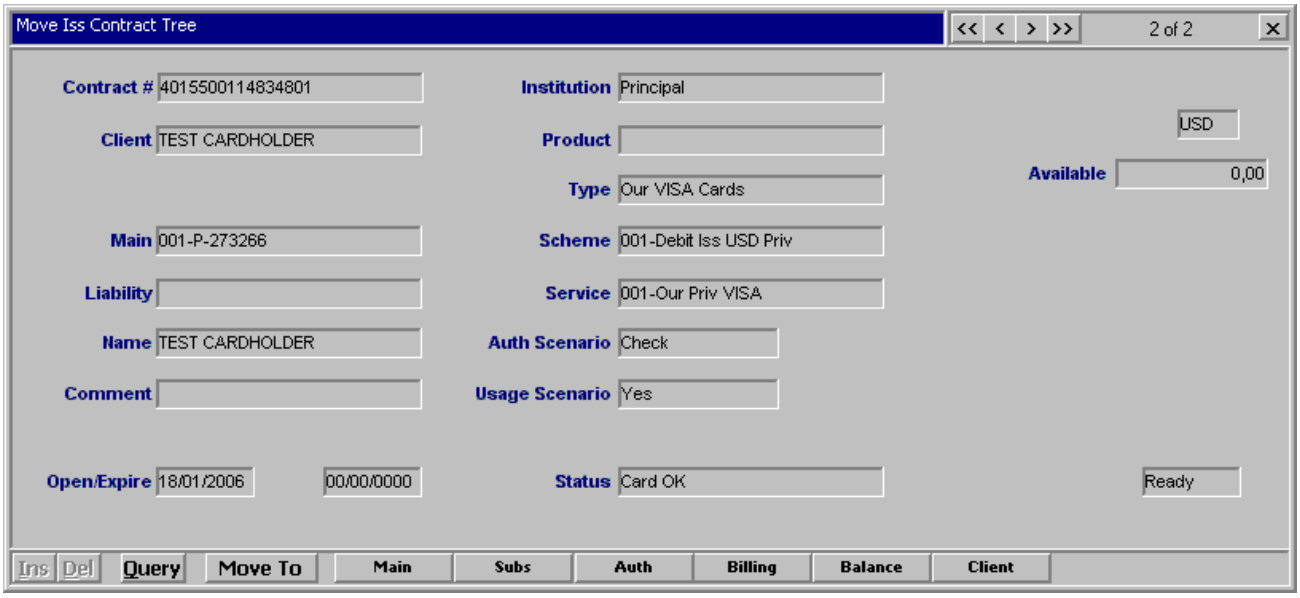

Fig. 27. Form for selecting contracts when restructuring hierarchies

After selecting an appropriate contract in this form, click the [Move To] button. This will open the "Set Contract" form (see Fig. 28). In the form's *New Parent Contract* field, indicate a new parent contract for the one you have selected and click the [Proceed] button.

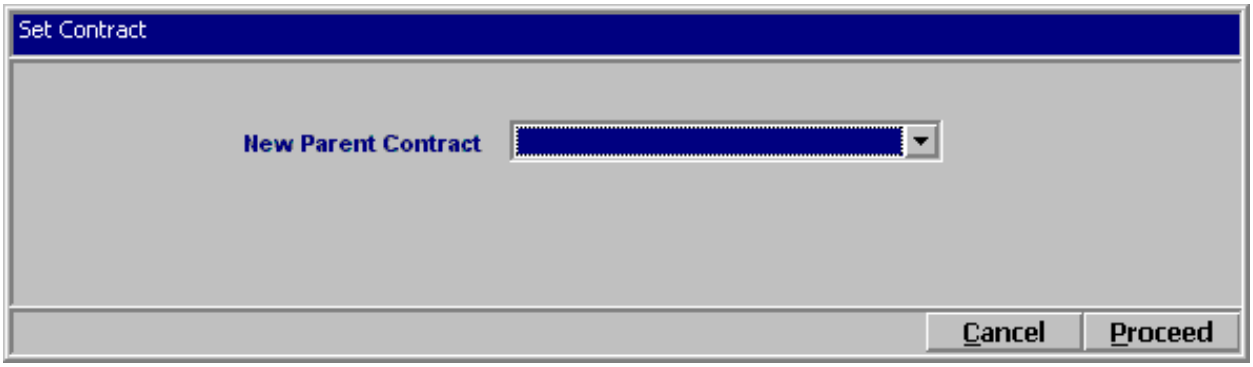

Fig. 28. Form for indicating new parent contracts

If the contract assignment is unsuccessful, the restructured hierarchy will be cancelled.

> ⚠ It should be remembered that this functionality allows for inadmissible hierarchical contract structures, such as an accounting contract subordinated to a card contract. It is strongly recommended that users be very careful when using this functionality.

1.6.1 Assigning Parent Accounting Contracts to Independent Card Contracts

Since WAY4 uses the main contract account in the hierarchy for accounting purposes, the main contract's account balance must be corrected in the new hierarchy when a parent contract is assigned to an independent contract (incorporated into the hierarchical structure).

For more information, see the section "Recalculating Balance Type Values" of the document "Balance Types".

When an independent card contract is moved to an account contract with the "Move Iss Contract Tree" utility ("Issuing → Contracts Input & Update → Move Iss Contract Tree"), account balances are synchronised automatically.

2 Entering Data for New Clients and Contracts

New clients and contracts are registered in the DB based on a client's request. When a client makes a request, an application is generated in WAY4. An application is a set of data that is used to register client records and contracts, change the parameters of contracts, standing payment orders, contract usage limiters, and more.

The Issuing Advanced Applications R2 module (see the document "Issuing Advanced Applications R2") is used to process client requests. The module provides for manual input of information from special-format files and from XML files.

Within the framework of additional agreements, online processing of applications to register and change client and contract information is also supported (WAY4 Gate, see the document "WAY4 Gate Specification", TS UFX Adapter).

2.1 Registering Applications

The application registration procedure is described in detail in the section "Creating Applications" of the document "Issuing Advanced Applications R2".

2.2 Application Import Procedure

To begin the application import procedure, select the " Advanced Applications R2 → Application Processing → Issuing XML Applications Import " user menu path.

The screen will display the "Load Files" window, containing a list of files ready for loading (see Fig. 29).

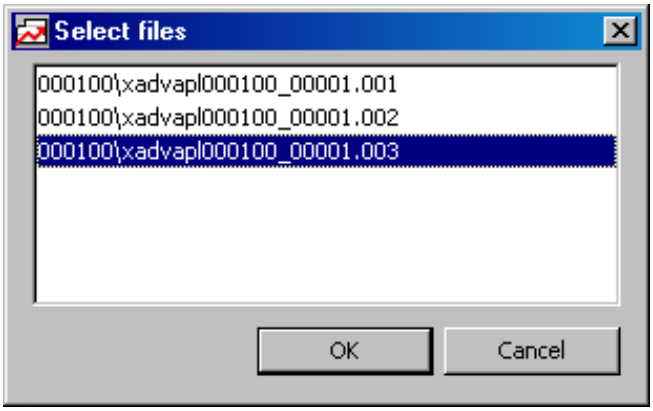

Fig. 29. List of files for loading

Files can be selected from this list by clicking file names while holding down the <Ctrl> button.

After selecting the desired files, click the [OK] button.

If a selected file has already been loaded, the screen will display a window with the corresponding message, e.g. "File (000100\xadvapl000100_00001.003) was loaded already".

2.3 Analysing File Import Results

File import results can be analysed by selecting the "Full → Process Log → Process Log" user menu path.

This will open the "Process Log" form, containing WAY4 process execution protocols (see Fig. 30).

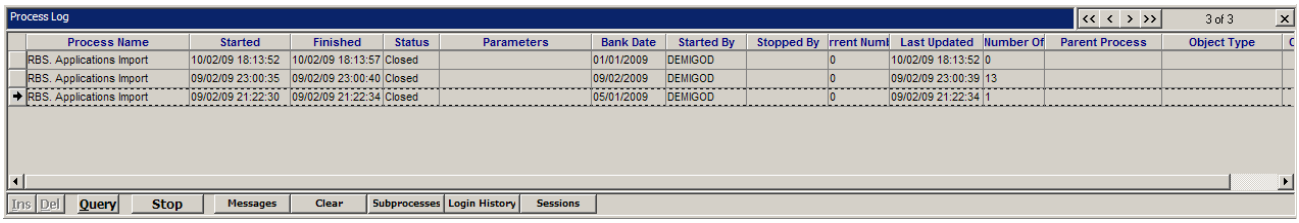

Fig. 30. Process Log

Users can control how each process is executed through messages formed by the system while a process is running.

Message text is opened by clicking the [Messages] button after selecting the row containing a process in the "Process Log" table.

As a result, the screen will display the "Messages for <name of process>" grid form, containing a message generated by the system while performing that process (see Fig. 31).

Successful file import will be apparent if there are no records containing an "Error" value in the *Type* field.

If records showing unsuccessful file import are found on the message list, users should consult their system administrator.

Fig. 31. Message showing file format check

If data has been successfully loaded from files (new clients, contracts, changes in contract parameters, etc.), the results can be noted in the corresponding tables, accessible in the Issuing Module.

2.4 Contract Parameters

Rules for generating and using contract parameters are described in detail in the section "Contract and Client Custom Parameters" of the document "WAY4™ Client and Contract Classifiers".

When manually registering a client, contract parameters for clients are defined and edited in the "Contract Parm for <client name>" form. This form is opened by clicking on the [Contract Parm] button in the following forms:

- "Clients (Private)"; menu item "Issuing Contracts Input & Update Clients (Private)".
- "Clients (Corporate)"; menu item "Issuing Contracts Input & Update Clients (Corporate)".

When manually registering a contract, parameter values for contracts are defined and edited in the "Contract Parm for <contract number>" form. This form is opened by clicking on the [Contract Parm] button in the following forms:

- "Issuing Contracts (Private)"; menu item "Issuing Contracts Input & Update Issuing Contracts (Private)".
- "Issuing Contracts (Private)"; menu item "Issuing Contracts Input & Update Single Cards".
- "Issuing Contracts – New (Private)"; menu item "Issuing Contracts Input & Update Issuing Contracts – New (Private)".
- "Issuing Contracts (Corporate)"; menu item "Issuing Contracts Input & Update Issuing Contracts (Corporate)". In this case, the "Contract Parm for <contract number>" form is opened using the "Links" item of the DB Manager system menu.

Calculated parameters and parameters for tariffs cannot be edited in these forms.

An example of editing a contract parameter is given in the section "Working with Contract and Client Custom Parameters" of the document "Customer Support Manual".

2.5 Deleting Incorrectly Created Client Records

The procedure for deleting client records is described in detail in the section "Deleting Erroneously Created Client Records in the DB" of the document "Special Contract Utilities".

2.6 Deleting Incorrectly Created Contracts

The procedure for deleting client records is described in detail in the sections "Deleting Erroneously Created Contracts (Issuing module)" of the document "Special Contract Utilities".

3 Card Issuing

Bankcards are issued after their card contracts are registered in the DB. Data necessary for card issuing are created through operations called card marking.

Cards are marked both when issuing new bankcards and when renewing expired ones.

Marking will change the status of a card contract and create a record in the DB that will be used to import files to be processed by the PIN Management subsystem.

To mark cards, use the "Issuing → Mark/Unmark Card To Production" user menu path.

> Before marking cards, users should make sure that the status line shows the desired financial institution and client category. If the user is granted privileges to work with several financial institutions, required values must be selected from the user menu at "Issuing → Mark/Unmark Card To Production → Set Financial Institution".

3.1 Marking Cards for Issuing

3.1.1 Marking an Individual Card

To mark a card, select the "Issuing → Mark/Unmark Card To Production → Mark/Unmark Single Card" user menu path.

The screen will show the "Mark/Unmark Single Card" grid form (see Fig. 32), Its rows show card contracts and subcontracts registered in the database.

Mark / Unmark Single Card — << < > >> — 23 of 178

Contract Type	Contract SubType	Production Status	Contract Number	Card Expire	Contract Name	Client	Date Open	Is Ready
Our VISA Cards	001-VISA CLASS	Ready	4015500197948783	-	Test Card	TEST CARDHOLDER	03/10/2009	Ready
Our VISA Cards	001-VISA CLASS	Ready	4015500125549067	-	Credit Card	Test Client 2	03/10/2009	Ready
Our VISA Cards	001-VISA CLASS	Marked	4015500117844062	10-10	Card	Test Client 2	03/10/2009	Ready
Our VISA Cards	001-VISA CLASS	Marked	4015500132949250	10-10	Debit Card	Test Client 805	03/10/2009	Ready
Our VISA Cards	001-VISA CLASS	Marked	4015500184365744	10-10	Test Card	Test Client 2	03/10/2009	Ready

Ins | Del | Query | Mark | Plastics | Client | Applets

Fig. 32. Grid form for card marking

To mark a card, select the line showing the desired card contract and click the [Mark] button. This will check the parameters of the selected contract.

If the contract's *Is Ready* field shows "Not Ready", the system generates the following error message: "Card contract was not approved".

During card marking, the system checks the contract status field value after checking the *Is Ready* field. If the value in the contract status field (*Card Status*) is other than "Card OK", the card marking is cancelled, and the error message "Card contract in bad status. Production impossible" is displayed.

When contract parameters have been successfully checked, the *Production Status* fields of the "Mark/Unmark Single Card" form and the *Plastic* field of the card contract will be set to "Marked".

The *Production Status* field contains a card production job status. The field may take on one of the following values:

- "Marked" – the card is marked for production
- "Sent" – the card's data has been exported to the PIN Management module (see "Exporting Card Data to PIN Management")
- "Ready" – the card's data has been imported from the PIN Management module (see "Receiving Cards from PIN Management")
- "Locked" – the card is locked; this corresponds to an issued but not activated card
- "Marked Applet" – the smart card applet has been marked for production
- "To Request" – the smart card applet is ready to be sent to a third-party vendor
- "Waiting for Response" – the smart card applet is waiting for a response from a third-party vendor
- "Waiting for Subs" – the smart card is waiting for a response from a third-party vendor
- "To Close" – do not issue plastic for this card contract. This status is used, for example, if the previous plastic was stolen or lost

After the card has been marked, a record is created in the "Plastics for <name of client>" form (see Fig. 33), that is used to transfer data necessary for processing in PIN Management.

The "Plastics for <name of client>" form can be accessed by clicking the [Plastics] button in the "Mark/Unmark Single Card" grid form or in the corresponding card contract form.

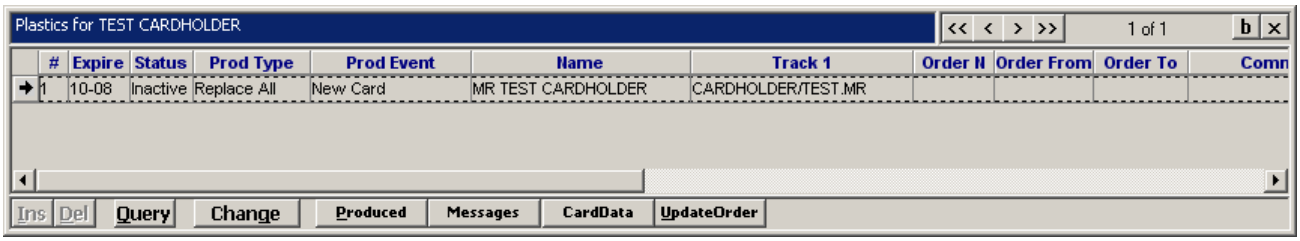

Fig. 33. Record in the "Plastics" form after card marking

After the card has been marked, its record in the "Plastics for <name of client>" form contains the "Inactive" value in the *Status* field by default. The values of the individual fields of this record can be edited by clicking the [Change] and [Update Order] buttons.

The *Status* field in the "Plastics for <...>" form contains a card status. A card's status determines whether transactions may be performed with the card. The field may take on one of the following values:

- "Active" – the card is active and may be used to perform transactions
- "Inactive" – the card has been marked
- "Closed" – status of an old card after a new card is issued; transactions with the old card may be performed until the new card is activated (see "Statuses of Reissued Bankcards")
- "Locked" – the card is locked; this corresponds to an issued but not activated card
- "Rejected" – an error occurred at the data preparation and personalisation step
- "From File" – an application to reissue the card is being processed by the Advanced Applications R2 module

After clicking the [Change] button, the "Production Type" form appears (see Fig. 37), where the user can change card issuing parameters (see "Changing Card Issuing Parameters").

After clicking on the [Update Order] button in the "Plastics for <name of client>" form, the "Update Order for <full name of client>" form grid appears where users can edit card issuing order parameters.

Fig. 34. Form for editing issuing order parameters

In this form, the following fields can be filled:

- *Order N* is the number of an issuing order.
- *Order From* is the name of the office that made the order.
- *Order To* is the name of the office to which the issued card (and the PIN mailer) will be sent.
- *Comment Text* is comment text for the order.

After parameters for bankcard issuing have been edited, click the [Save] button to save the entered values and close the dialogue window.

It should be kept in mind that when a card contract or subcontract is approved by clicking the [Approve] button, the system will automatically mark the card.

To unmark a card, select the desired row in the "Mark/Unmark Single Card" grid form and click the [UnMark] button. This operation ([UnMark] button} is only available when plastic for the card has not yet been issued and *Production Status* of the application to produce the card differs from "Locked" or "Ready". As a result, the *Production Status* column and the *Plastic* field of the card contract form will change from "Marked" to "Ready", and the corresponding record in the "Plastics for <name of client>" will be deleted.

The form containing client information is opened by clicking the [Client] button.

The form containing information about additional smart card applications (see the "Card Applications" section of the Configuring WAY4™ System for Smart Card Issuing Administrator Manual) is opened by clicking the [Applet] button.

3.1.2 Mark by Selection

To mark cards by selection, select the "Issuing → Mark/Unmark Card To Production →Mark/Unmark by Selection" user menu path.

This will open the "Mark/Unmark by Selection" grid form, similar to the "Mark/Unmark Single Card" form (see Fig. 32 in the "Marking an Individual Card" section), where its rows represent card contracts and subcontracts registered in the database.

To mark cards by selection, click the [Mark] button. This will sequentially check the parameters of the selected contracts.

If "Not Ready" shows in the contract's *Is Ready* field, the error message "Card contract was not approved. Do you want to continue?" is created, offering to continue card marking (if [Yes] is clicked) or to interrupt the process (if [No] is clicked).

During card marking by selection, the system checks the contract status field value after checking the *Is Ready* field. If the value is other than "Card OK", the card marking is cancelled, and the error message "Card contract in bad status. Production impossible. Do you want to continue?" is displayed, offering to continue card marking (if [Yes] is clicked) or to interrupt the process (if [No] is clicked).

As a result of marking by selection, the *Production Status* field of these rows in the "Mark/Unmark by Selection" grid form, showing successfully checked parameters, and the *Plastic* field in the card contract will both show the "Marked" value.

It should be noted that, after clicking the [UnMark] button in the "Mark/Unmark by Selection" grid form, the "Marked" value in the *Production Status* field will change to "Ready" for all the contracts of that selection.

3.2 Renewing a Card

Cards are marked for renewal if the bankcard has been lost, is no longer fit for use, has expired, or if an error occurred during card production and the card was not issued.

To mark cards, select user menu item "Issuing → Mark/Unmark Card To Production →Mark/Unmark Single Card for Plastic Replacement" (to work with a single card) or "Issuing → Mark/Unmark Card To Production →Mark/Unmark for Plastic Replacement by Selection" (to work with all selected cards).

Cards are marked for renewal in the same way as marking for issuing (see "Marking Cards "), with the difference that the "Production Type" form will appear after clicking on the [Mark] button (see Fig. 37 in the "Changing Card Issuing Parameters" section), where the user should indicate the card issuing type and the card expiry date.

If a card for which an error occurred in production (in the "Plastics for <...>" form, the value of the *Status* field is "Rejected", see Fig. 33) is marked using the menu item "Issuing → Mark/Unmark Card To Production →Mark/Unmark Single Card", production parameters will not be changed. In this case, by default, the same production parameters will be used as in the initial attempt to produce the card

As in marking a card for issuing, it is impossible to mark a card for renewal if the card contract status field is not set to "Card OK". For instance, the status "No Renewal 50" does not affect accounting transactions and card contract authorisation but will decline automatic bankcard renewal when the card expires (see the "Modifying Contract Status" chapter in the Customer Service User Manual).

3.3 Marking Lost or Stolen Cards for Renewal

If the contract tree is used when a card issued under a child contract has been lost or stolen, a new card contract must be created to reissue the card.

This operation is executed by selecting the "Issuing → Mark/Unmark Card for Production → Mark/Unmark Lost/Stolen Card" menu item.

When this menu item is selected, the form for selecting the card contract to which the lost or stolen card belonged comes up on the screen (see Fig. 35).

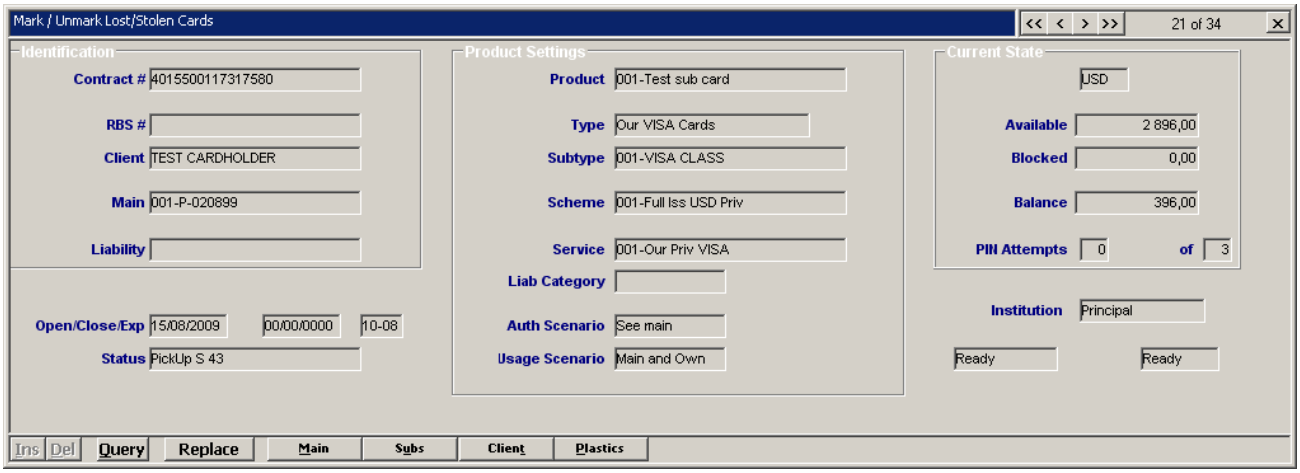

Fig. 35. Form for marking cards for contracts where cards have been lost or stolen

When the [Replace] button is clicked, the system creates a new card contract with identical parameters, whose field *Plastic* will contain the "Marked" value.

When reissuing lost or stolen cards that have the "Check" or Billing Limit" authorisation scenario, blocked amounts are restored in the new contract. Moreover, for cards with the "Check" authorisation scenario, account balances are restored. The RESTORE_CARD_BALANCE global parameter (see the document "WAY4™ Global Parameters") makes it possible to disable restoring financial information in a reissued card. To disable transfer of financial information to a new contract, the value of the RESTORE_CARD_BALANCE global parameter must be set to any value other than "Y".

3.4 Unmarking Cards

Cards can be unmarked in the following ways:

- In the "Mark/Unmark Single Card" grid form, click the [UnMark] button after selecting the desired contract. This operation ([UnMark] button} is only available when plastic for the card has not yet been issued and *Production Status* of the application to produce the card differs from "Locked" or "Ready".
- In the "Mark/Unmark by Selection" grid form, click the [UnMark] button for all cards in the current selection with "Marked" in the *Production Status* field to change their status to "Ready".
- After selecting the "Issuing → Unmark All" user menu path, all card contracts of the financial institution that have the "Marked" value in the *Plastic* field will become unmarked.

3.5 Postponed Marking

Postponed marking is used when an application is used to reissue a card early and the application requires the card contract's data to be changed. For example, an application to reissue a card contains a child application to change the last name in embossing parameters.

In postponed marking, first all applications, including the child application are processed and then the contract is marked.

The Event (Production Event, menu item "Full → Configuration Setup → Transaction Types → Production Events") used in postponed marking must have the SPLIT_MRK; tag.

3.6 Changing Card Issuing Parameters

Card issuing parameters can be changed after selecting the "Issuing → Mark/Unmark Card To Production → Update Production Type by Selection" user menu path (for working with all selected cards) or "Issuing → Mark/Unmark Card To Production → Update Single Card Production Type" (for working with individual cards).

After these items have been selected, the "Update Production Type by <...>" form will appear, with a list of all marked cards (see Fig. 36). To change issuing parameters by selection or for individual cards, click the [Change] button in the form.

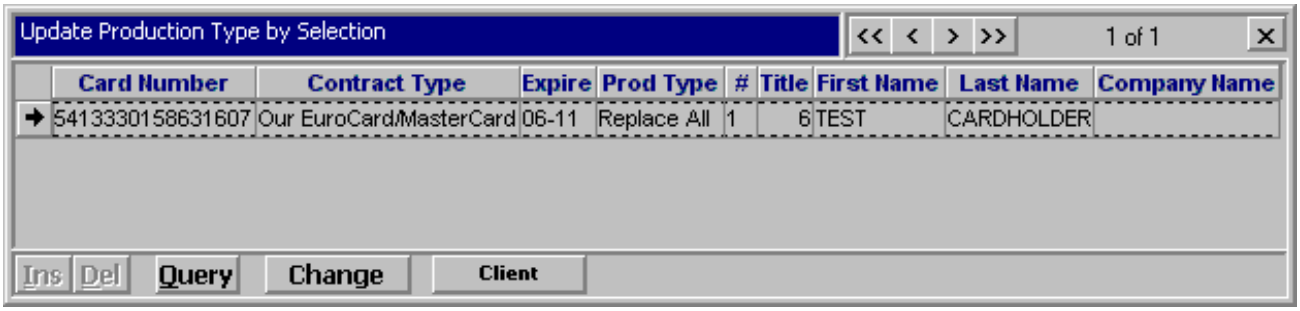

Fig. 36. Form containing the list of cards whose issuing parameters are to be changed

The "Production Type" form will open (see Fig. 37), where users can change the reason for issuing a bank card (in the *Card Event* field), the issuing type (in the *Production Type* field), the issuing event (in the *Production Event* field), the card expiry date (in the *Card Expire* field), the starting date of the card's effective period (in the *Date From* field; the field value is considered during smart card issuance), and the card issuing order number in the *Order #* field.

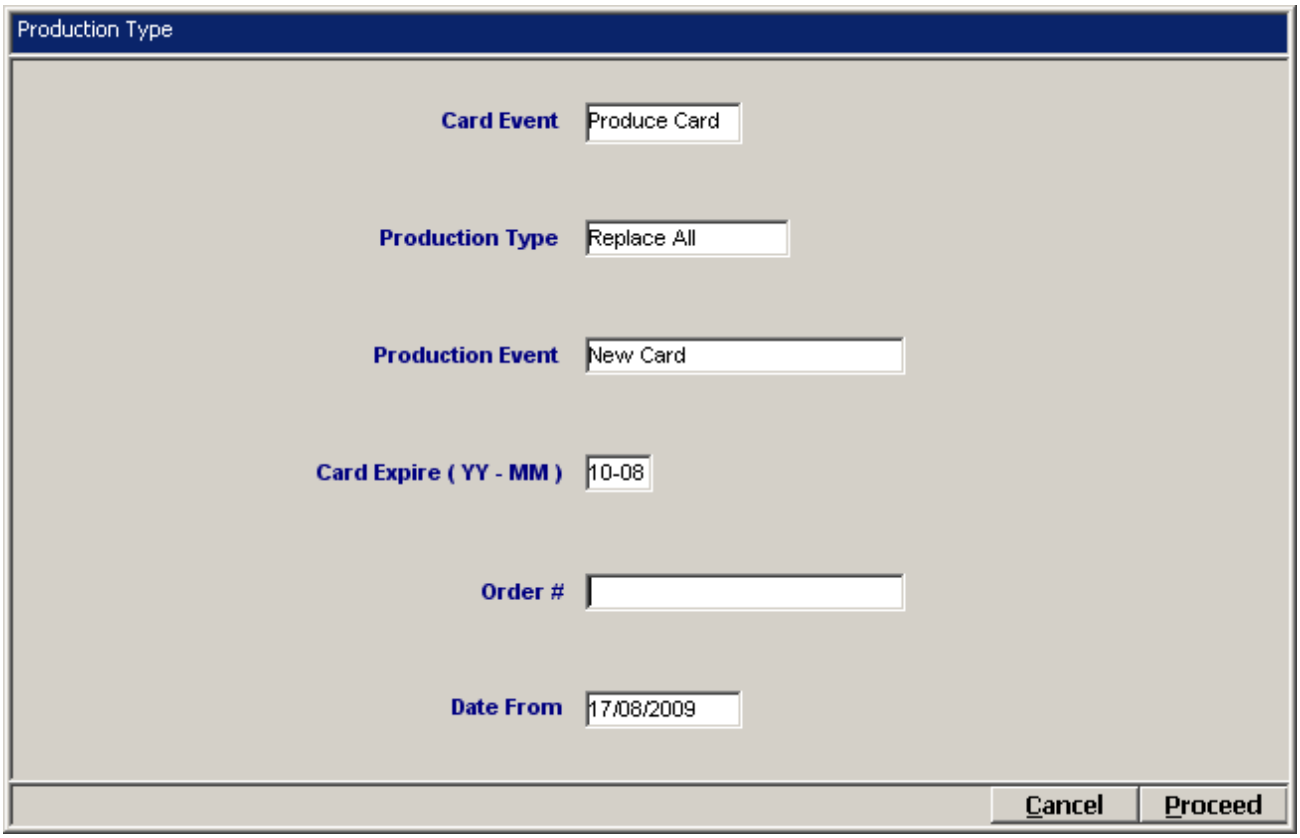

Fig. 37. Form for changing card issuing parameters

When filling in the *Production Type* field, make a selection from the following values:

- "Replace All" – both a new card will be issued and a PIN mailer will be printed, e.g. when a new card is issued or a stolen card is replaced
- "Replace Plastic" – only a card will be issued, e.g. to replace an expired card
- "Replace PIN" – the same PIN mailer will be printed again (this action is only allowed by a special agreement with the system vendor)
- "Replace CVV" – a card with a new CVV value will be issued
- "Reorder PIN" – a new PIN will be issued
- "Replace Add Parms" – additional card parameters, e.g. a list of one-time passwords, will be issued
- "Chip Data Only" – calculation of cryptographic values for smart cards (no PIN is generated and no PIN mailer is printed)

When reissuing a card, the values of global parameters that are used to determine rules for working with contract classifiers are considered (see the document "WAY4 Global Parameters):

- RSP – (Replace to Same Product) is analysed when reissuing a card if the card was lost or stolen,
- RNP – (Replace to New Product) is analysed when reissuing a card for which the Product is being changed (see the section "Changing a Product when Reissuing a Card" of the document "Products and Contract Subtypes").

If a Product has a contract classifier with a default value and this value changed during the card contract's lifecycle, the default value set in the Product can be restored when reissuing the card. To do so, set the SKIP_FOR_DUPLICATE tag in the classifier. For more information about classifier setup, see

the document "WAY4undefined Client and Contract Classifiers". If the SKIP_FOR_DUPLICATE tag is not set, the new card contract will inherit the classifier value from the old contract.

3.7 Exporting Card Data to PIN Management

Data prepared as the result of the marking process can be sent to the PIN Management subsystem for further processing. This is done by selecting the "Issuing → Send/Receive Production Batches → PIN Management File Export" user menu path.

After sending data, the *Plastic* field in the card contract forms from which batch information was sent to PIN Management, will read "Sent".

If data already sent needs to be resent, the user must select the "Issuing → Send/Receive Production Batches → Resend PIN Management File" menu item.

This "Resend PIN Management File" grid form will open (see Fig. 38), with a list of files in the issuing batch sent to PIN Management.

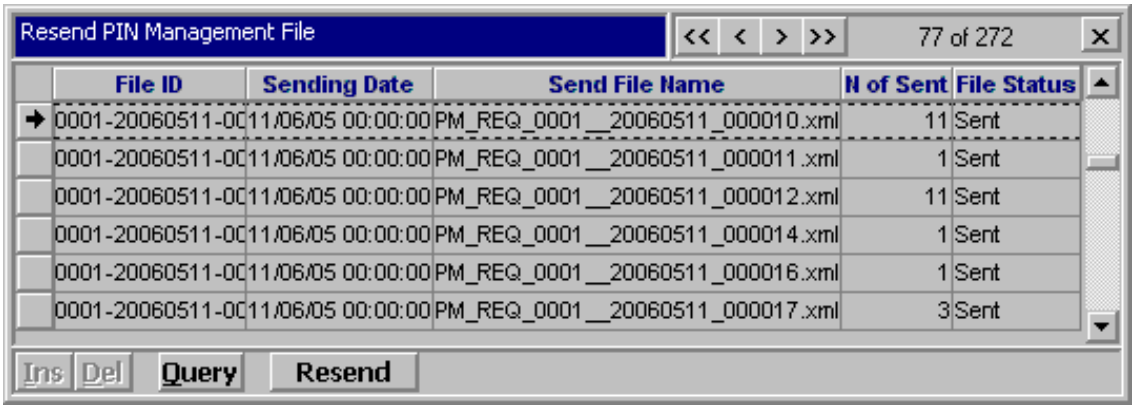

Fig. 38. Table of files selected for resending data to PIN Management

The following fields are used in this form:

- The N of Sent field contains the number of cards whose data has been sent in the corresponding file
- The File Status field contains status of the sent job file:
- "Sending" – the job file is ready for sending to PIN Management, but it has not been sent yet
- "Sent" – the job file has been sent to PIN Management
- "Received" – the job file has been processed by PIN Management and returned to the Issuing Module
- "Receiving" – an error occurred while processing the job file in PIN Management
- "Rolled Back" – processing the file in PIN Management has been cancelled
- "Refreshed" – the job file has been resent

To resend files, select the desired line and click the [Resend] button.

For further details on what cards provided the data sent in these files, click the [Card Record] button.

3.8 Purging Sent Files

If, for some reason, files sent to PIN Management must be purged, select the "Issuing → Send/Receive Production Batches → Undo PIN Management Files" user menu path (see "Exporting Card Data to PIN Management" section).

The "Undo PIN Management Files" grid form will open (see Fig. 39), with a list of the IDs of files already exported to PIN Management.

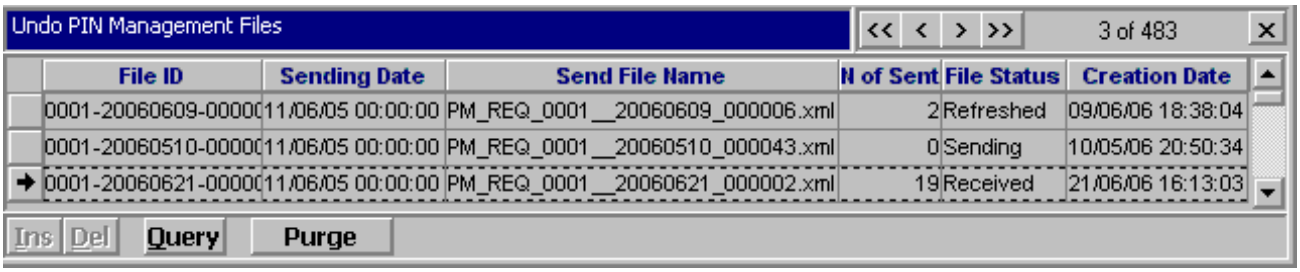

Fig. 39. List of files sent to PIN Management

The fields used in this form are identical to the fields of the "Resend PIN Management File" form (see Fig. 38 in the "Exporting Card Data to PIN Management" section).

To purge a sent file, select the row containing that file and click the [Purge] button.

After purging a file, the *Plastic* field in the form of the purged file's card contracts will show the "Marked" value.

3.9 Receiving Cards from PIN Management

Cards can be received from PIN Management by selecting the "Issuing → Send/Receive Production Batches → PIN Management Response File Import" user menu path.

As a result, exporting batch files is started, and the user should select the names of the files to be received from the "Load Files" form (see Fig. 40).

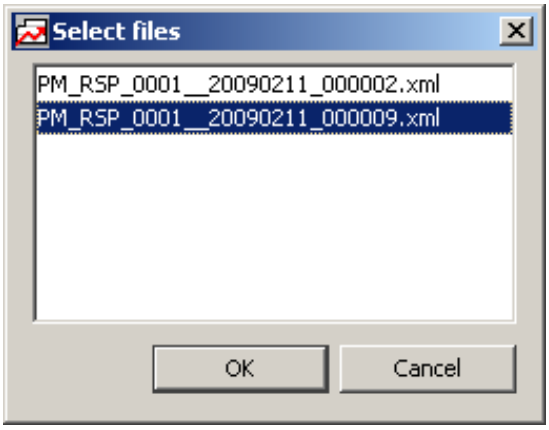

Fig. 40. Selection of files to be received from PIN Management

Files can be selected from the list of files to be received by clicking them while holding down the <Ctrl> button.

After selecting the desired files, click the [OK] button.

When the data has been received from PIN Management, the *Status* field in the "Plastics for <name of client>" form for the corresponding cards will change to "Active" (if the data has been successfully processed in PIN Management) or "Decline" (if errors have been found when processing).

After the cards have been received from PIN Management, the *Plastic* field in the forms of the corresponding card contracts will change from "Sent" to "Ready".

3.10 Locking and Unlocking Bankcards in Transit

The section describes the reasons for locking and how to unlock bankcards.

3.10.1 Locking Reissued Bankcards in Transit

To avoid the unsanctioned use of reissued bankcards received from PIN Management until they are received by the client, the system allows for immediate locking of cards after issuing.

Locked cards will show the "Locked" value in the *Status* field of the plastic's record in the "Plastics for <name of client> form (see Fig. 33). The indicated status does not allow the reissued card to be used. At the same time, the old bankcard that is being replaced by the new one can still be used.

To lock cards, specify the "INITIAL_LOCK;" value in the *Validation Type* field of the "Subtypes for <name of card contract type>" form (see the "Card Contract Subtypes Form" section of the Products and Contract Subtypes Administrator Manual).

3.10.2 Unlocking Issued Bankcards in Transit

Cards can be unlocked in one of the following ways:

- Groups of reissued cards, contained in one file after processing by PIN Management, can be unlocked. Groups can be unlocked according to the issuing bank's regulations, for instance, after a message from a bank office that cards have been received. This can be done through the "Issuing → Send/Receive Production Batches → Unlock Card Plastics" user menu item.
  This menu item opens the "Unlock Card Plastics" form with a list of files loaded after issuing.
  By selecting a loaded file and clicking on the [Card Record] button, users access the form containing a list of bankcards whose data is contained in that file. This grid allows users to see the statuses of issued bankcards.
  To unlock reissued plastics, select the desired file in the "Unlock Card Plastics" form and click the [Unlock] button. As a result, the status of the locked bankcard will change to "Card OK".

This procedure will unlock all plastics in the loaded file.

The group unlocking procedure is affected by the value of the "UNLOCK_CARDS_MODE" global parameter (see the WAY4™ Global Parameters Administrator Manual).

- To selectively unlock cards, use the "Issuing → Mark / Unmark Card To Production → Unlock Single Card" procedure. This will display the "Unlock Single Card" grid form with a list of issued and locked cards. To unlock reissued cards, select the desired card in the "Unlock Single Card" grid form and click the [Unlock] button. This will change the status of the selected card to "Card OK".
- The system allows cards to be automatically unlocked after the first successful PBT (PIN-based transaction). For this purpose, the Validation Type field in the "Subtypes for <name of card contract type>" should contain the "U_PBT;" value (see the "Card Contract Subtypes Form" section of the Products and Contract Subtypes Administrator Manual).

Note that the global parameter "UNLOCK_PLASTIC_FOR_VALID_CONTRACT_ONLY" (see the WAY4™ Global Parameters Administrator Manual) affects checking contract status when unlocking plastic.

3.11 Statuses of Reissued Bankcards

When bankcards are reissued, the values of a card contract's field *Plastic* and a plastic's field *Status* are determined by tags "INITIAL_LOCK" (see "Locking Reissued Bankcards in Transit") and "U_PBT" (see "Unlocking Issued Bankcards in Transit") and the value of the "CLOSE_PREV_PLASTIC" global parameter (see the WAY4™ Global Parameters Administrator Manual).

Table 2 The table bellow shows how reissued bankcard statuses and card contracts' field *Plastic* change depending on these parameters.

Table 2. Statuses of reissued bankcards

CLOSE_PREV_PLASTIC	INITIAL_LOCK	U_PBT	Field	Value	Capability of performing card transactions
Y	Set	Not set	Plastic	Locked	The new card can only be unlocked manually (as tag U_PBT is not set). After the first transaction is performed using the new card, the old card is locked.
			Status_Old	Closed	
			Status_New	Locked	

CLOSE_PREV_PLASTIC	INITIAL_LOCK	U_PBT	Field	Value	Capability of performing card transactions
Y	Set	Set	Plastic	Locked	The new card is unlocked after performing the first PIN-based transaction. After this, the old card is locked.
			Status_Old	Closed	
			Status_New	Locked	
Y	Not set	Insignificant	Plastic	Ready	The new card is inactive. After the first transaction is performed using the new card, the old card is locked.
			Status_Old	Closed	
			Status_New	Active	
N	Set	Not set	Plastic	Locked	The new card can only be unlocked manually (as tag U_PBT is not set). The old card is active.
			Status_Old	Closed	
			Status_New	Locked	
N	Set	Set	Plastic	Locked	The new card is unlocked after performing the first PIN-based transaction. The old card is active.
			Status_Old	Closed	
			Status_New	Locked	
N	Not set	Insignificant	Plastic	Ready	Both new and old cards are active.
			Status_Old	Closed	
			Status_New	Active	

The following conventions are used in this table:

- Plastic – field *Plastic* of a card contract
- Status_Old – field *Status* of an old plastic card
- Status_New – field *Status* of a new (reissued) plastic card
- The column "Value" contains values of fields *Plastic* and *Status* when specific parameter values are set. For example, if the CLOSE_PREV_PLASTIC global parameter is set to "Y" and field *Validation Type* of the "SubTypes for <name of card contract type>" form contains tag "INITIAL_LOCK;", but does not contain tag "U_PBT", then a card contract's field *Plastic* will be set

to "Locked", and the *Status* field of the old and new cards will contain values "Closed" and "Locked", respectively.

After a card is marked for reissuance and before data is imported into the system after it is processed by the PIN Management module, field *Status* of the old plastic card contains value "Inactive", but the card is acquired without limitations.

When closing an old plastic, an Event with the predefined code "CLOSE_PLASTIC_TRANS_STATUS" opens. The time of blocking the old card is determined by the "CLOSE_PREV_PLASTIC" parameter (see the document "WAY4™ Global Parameters").

When a card is reissued with the same expiry date as the old card, if insufficient information was sent to the system, it will not be possible to identify the plastic when a transaction is made.

These situations are possible if the transaction was made with a magnetic stripe read without reading information from a chip, if PAN and Expiry Date were entered manually, or the acquirer did not report the plastic's number (Card Sequence Number).

In this case, it is strongly recommended to recall the old card before giving the new plastic to the client.

4 Entering Batch Payments

The section provides a description of the methods for entering batch payments.

4.1 Entering Batch Payments Manually

Batch payments can be entered manually through the "Full → Documents Input & Update → Batch Documents" user menu path.

To enter information on a new batch, select the "Full → Documents Input & Update → Batch Documents → Payments New" user menu item.

The "Define Transaction Type" form will open (see Fig. 41). This form is used to l indicate the type of financial transaction corresponding to the entered payment.

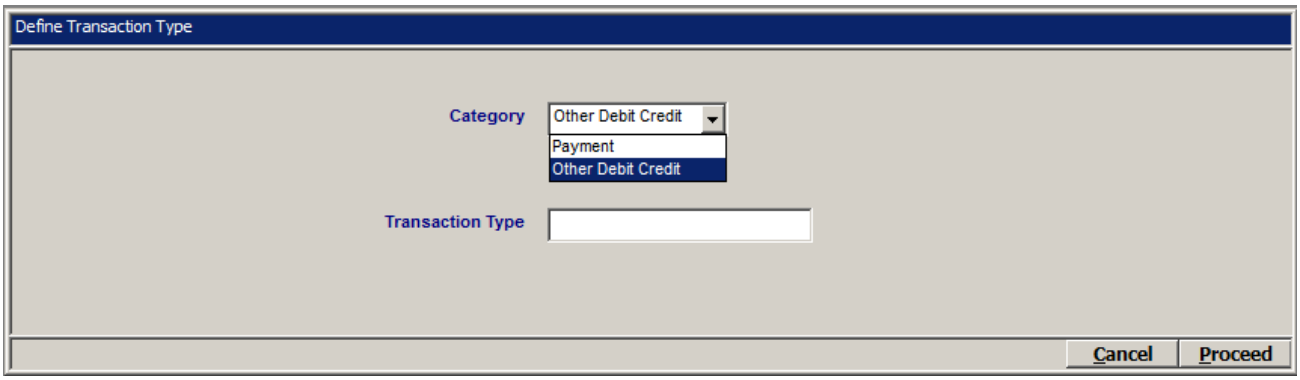

Fig. 41. Form for setting up the payment transaction type

When filling in these fields, select the "Payment" value from the drop-down list in the *Category* field, if the payment is made to a client account, or "Other Debit Credit", in all other cases, and indicate the desired transaction type in the *Transaction Type* field. Standard system setup supports the following types of transactions for the "Payment" category:

- Payment To Client Contract – payment to a contract account
- Payment To Security Deposit – payment to a security deposit
  It is not recommended to include transaction types that are not client account replenishments in this category. The category makes it possible to separate out account replenishment transactions (MTR_PAYMENT tag) in notifications sent to clients. For more information, see the section "Events" of the "SET_CREDIT Configuring WAY4™ for Message Exchange with the Mobile Bank module. Notifications".

For the "Other Debit Credit" category:

- Credit Amount – payment to a contract account.
- Credit Limit – set a credit limit for a contract.
- Debit Account – debit a contract account.
- Payment From Client Contract – payment from contract account.

This category may include all transaction types independently configured by the user.

After filling in the form, click the [Proceed] button to bring the "Payments - New" form to the screen (see Fig. 42).

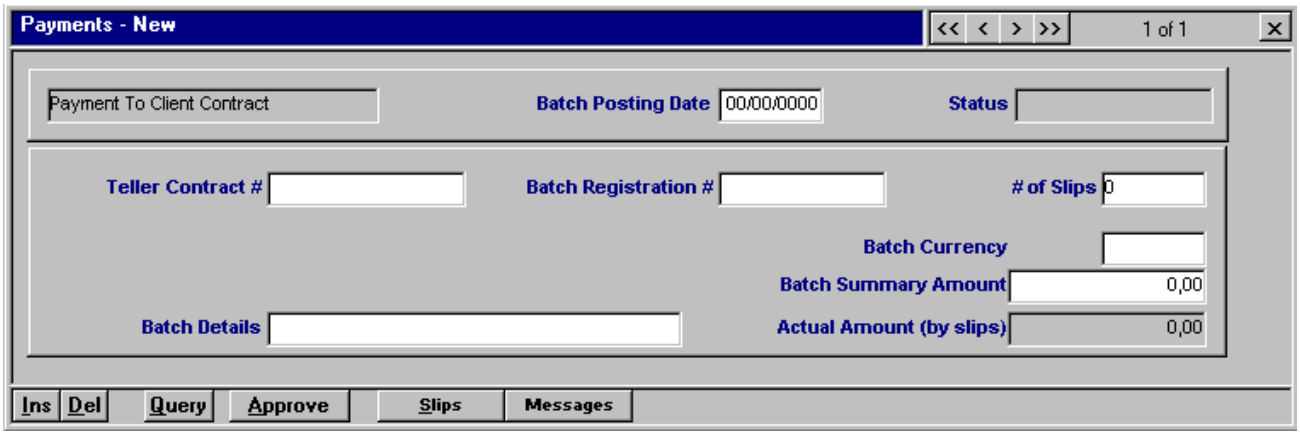

Fig. 42. Form for entering payments

In this form, users should fill in the following fields:

- *Batch Posting Date* – bank date when the payment was posted to contract accounts (if not indicated, the current banking date will be used)
- *Teller Contract #* – bank contract number from whose account (or to whose account) the payment is made
- *Batch Registration #* – registration number of the payment batch (this field is optional)
- *# of Slips* – number of slips in the batch
- *Batch Currency* – batch currency
- *Batch Summary Amount* – batch amount
- *Batch Details* – additional information (this field is optional)

After filling in the "Payments" form, enter information on the payment batch slips. To do this, click the [Slips] button to open the "Slips for Payments" grid form (see Fig. 43).

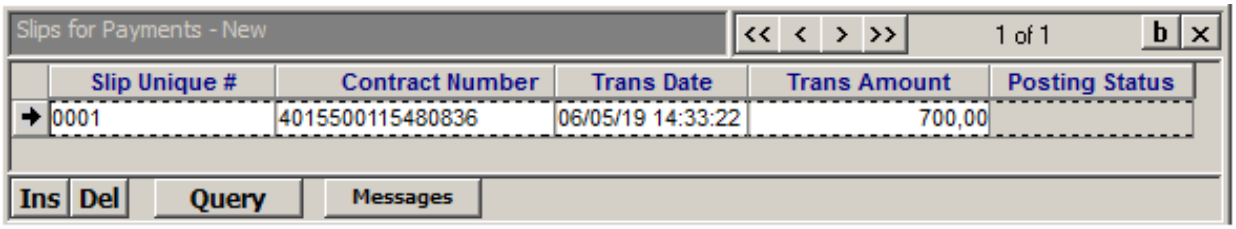

Fig. 43. Form for entering information on payment slips

By default, one row in the table indicates one slip, and to enter the desired number of rows users must click the [Ins] button (the number of rows in the table should equal the number of slips indicated in the *# of Slips* field in the "Payments" form).

Every row in the "Slips for Payments" table should show the card number (in the *Contract Number* field) and the document's payment amount (in the *Trans Amount* field).

It should be kept in mind that the total amount for all batch slips in this form should agree with the value in the *Batch Summary Amount* field in the "Payments" form.

After filling in the "Slips for Payment" table, click the [Approve] button in the "Payments" form to register the payment batch.

If registration has been successfully completed, the payment batch and all its slips take on the "Waiting" status.

If the data has been entered incorrectly, batch registration is interrupted, the rejected documents take on the "Decline" status, and the screen displays an error message.

If the batch is rejected due to an error in the package's main document, click the [Messages] button in the "Payments" form.

If the batch is rejected due to a payment slip error, users can discover the reason for rejection by selecting the row containing the rejected slip and clicking on the [Messages] button in the "Slips for Payment" table.

Charge documents can be entered manually as follows:

- To enter a fixed amount charge document, use the "Full → Documents Input & Update → Batch Documents → Fixed Amount Charge – New" user menu path;
- To enter a free amount charge document, use the "Full → Documents Input & Update → Batch Documents → Free Amount Charge – New" user menu path.

Charge documents are entered in the same way as payment batches, with the difference being that users select the fee type from the list instead of indicating the transaction type, and there is no bank contract field in the form where batch payment parameters are entered.

4.2 Importing Payment Batches

It is possible to import data to the database on contract account payments from specially formatted files based on payment documents.

4.2.1 Payment Import Procedure

To initiate the batch import procedure, select the "Full → Daily Procedures → RBS Inward Processing Step by Step → RBS Payments Import" user menu path.

This will display the "Load Files" window with the list of files ready to be loaded (see Fig. 44).

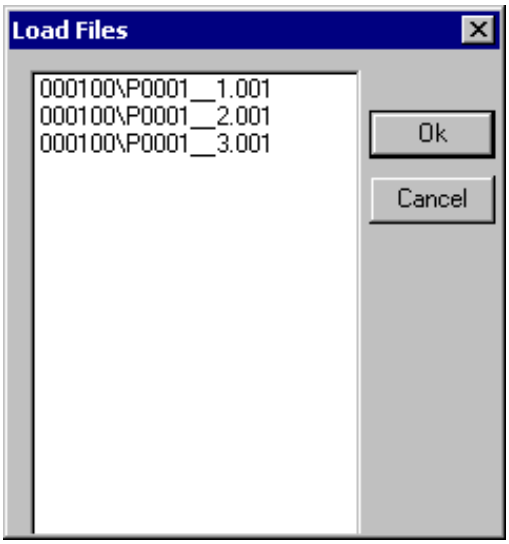

Fig. 44. Selection of loadable files

Select files for loading from this list by clicking them while holding down the <Ctrl> key.

After selecting the desired files, click the [OK] button.

4.2.2 Analysing Payment Import Results

When payment import has been completed, the screen will display the "Payments Import Results" window (see Fig. 45), reporting import results.

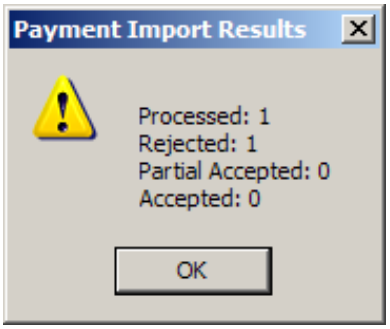

Fig. 45. Information on payment import results

This window contains the following information:

- Processed – number of loaded files
- Rejected – number of files rejected during loading
- Partial Accepted – number of files where data was partially accepted
- Accepted – number of accepted files

Additional information on file import results can be obtained as described below in the "Analysing File Import Results" section.

5 Changing the Credit Limit

Types of limits used in WAY4:

- Permanent credit limit (Credit Limit).
- Temporary credit limit
- Additional authorisation limit (Additional Credit Limit)
- Hidden additional authorisation limit (Shadow Credit Limit)
- Limits set using Usage Limiters.
- Percentage of a parent accounting contract's credit limit.

A permanent credit limit is set by the issuing contract (card or accounting) according to the client agreement.

A temporary credit limit is assigned to an issuing contract (card or account) for a certain effective period and is used instead of the permanent limit.

If a contract already has a temporary limit, and a new one is required whose effective period overlaps with that of the existing one, the temporary limit assigned later will be effective and the temporary limit assigned earlier will be annulled.

An additional authorisation limit used to increase a contract's amount available during authorisation. If the authorisation amount is larger than the unused credit limit but less than the amount of the unused credit limit and the additional authorisation limit, authorisation will be permitted. The amount that exceeds the credit limit will be reflected on an overlimit account. Information about an additional authorisation limit is shown in the interface (for example, in customer support workbench) and provided to the client.

A Shadow Credit Limit is used to increase a contract's amount available during authorisation. A Shadow Credit Limit is set in a tariff (*Tariff Role* = "Threshold", *Tariff Type* = "OVL_THRESHOLD") as a percentage of the permanent credit limit; its maximum amount may be limited. A Shadow Credit Limit does not increase the contract's amount available shown in the interface (for example in customer support workbench).

The use of "Overdraft" usage limiters for increasing amounts available is supported for backward compatibility. To increase a contract's amount available, it is recommended to use a Shadow Credit Limit (*Tariff Role* = "Threshold", *Tariff Type* = "OVL_THRESHOLD"). Setting both an "Overdraft" limiter and additional limit is not recommended. For more information about limiters and their setup, see the document "Usage Limiters".

A percentage of a parent accounting contract's credit limit can be defined for child card contracts whose Auth Scenario value is "Check" or Billing Limit". This type of credit limit is assigned with the PARENT_LIMIT_PART tag set in a card contract's Product (see the section "Tags used when configuring Products and contract subtypes" of the document "Setup Tags").

> Additional credit limits and temporary credit limits for issuing contracts are assigned and edited by entering an application to change a credit limit (see the section "Credit Limit (Limit" of the document "Issuing Advanced Applications R2").

In WAY4, permanent credit limits can be assigned and changed in one of two ways: using forms to edit issuing contract properties (only allowed in test systems) or with applications.

Setting a permanent contract's credit limit will create a document (DOC table record with field values IS_AUTHORIZATION= "Y", SERVICE_CLASS= "C" – "credit limit") (see the section Documents Administrator Manual). Credit limits will be reflected in contract accounts through macrotransactions for the document that transfer funds from the bank contract account to the corresponding issuing contract account. The value of the CREDIT_LIMIT_POSTING global parameter determines whether or not credit limits will be reflected in the issuing contract accounts (see the WAY4 Global Parameters Administrator Manual). If the "CREDIT_LIMIT_POSTING" parameter value is "Y", but the corresponding account has not been opened in the issuing contract, an error message will be generated when assigning or changing a credit limit. For more information about classification of account types, see the section "Classification of Account Types (Account Roles)" of the document "WAY4™ Accounting Schemes".

If it is necessary to change a permanent credit limit set earlier, it is sufficient to indicate the new credit limit amount in the form for editing the contract. The system will create a document for the difference between the new and old credit limits.

5.1 Setting the Credit Limit through the Contract Form

To set or change the credit limit manually (only allowed in test systems), click the [Credit Limit] button in the contract edit form (a card or accounting contract), and the screen will display the "Credit Limit for <contract name>" form (see Fig. 46).

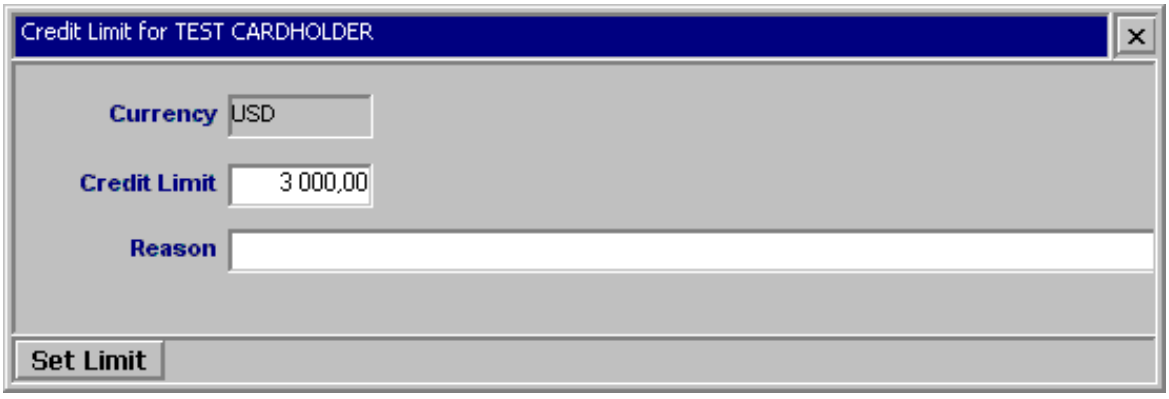

Fig. 46. Form for setting credit limit

In the "Credit Limit for <contract name>" form, the user must indicate the credit limit in the *Credit Limit* field and the basis for setting or changing the credit limit in the *Reason* field.

Click the [Set Limit] button to activate the new credit limit.

5.2 Changing the Credit Limit through a Document

It is recommended to change a credit limit by entering an application to change the credit limit (see the section "Credit Limit (Limit)" of the document "Issuing Advanced Applications R2").

A credit limit for an issuing contract can also be changed manually (only allowed in test systems) through the "Full → Document Input&Update → Single Documents → Credit Limits-Deprecated → Credit Limit – New" user menu item.

This will display the "Credit Limit - New" form (see Fig. 47).

> ⚠ Note that when a credit limit is changed in this way, no check is made of whether the effective periods for the new limit and limit set earlier overlap, which may have undesirable consequences.

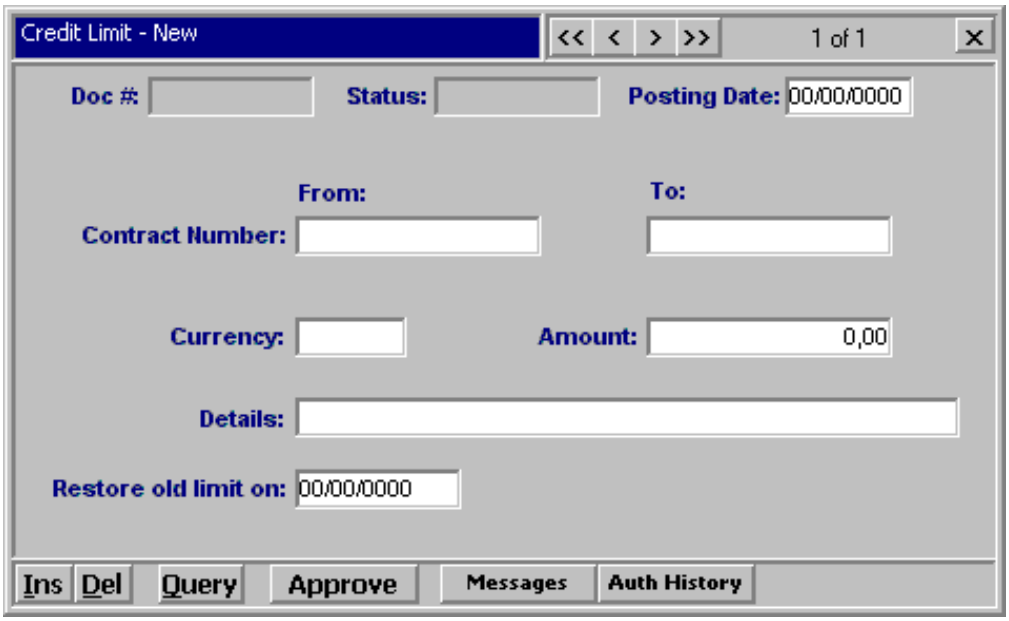

Fig. 47. Form for entering the card contract's credit limit

Users should fill in the following form fields:

- *Posting Date* is the banking date on which the credit limit should change (if this is not set, it will be the current banking date).
- *Contract Number*:
- When increasing the credit limit:
- *To* is the client (card or account) contract number.
- The *From* field is used if the credit limit is being increased for the main client contract. This field can indicate the bank number of the contract where the credit limit is reflected. If the number is undefined, the branch deposit number of the client contract's financial institution is used by default. If the credit limit of a subcontract is being increased, this field is not used.

- When decreasing the credit limit:
- *To* – if the credit limit of a main client contract is being decreased, this field can indicate the bank number of the contract where the credit limit is reflected. If the number is not defined, the number of the branch deposit contract of the financial institution to which the client contract belongs will be used by default. When decreasing the credit limit of a subcontract, this field is not used.
- *From* is the client (card or account) contract number.
- *Currency* is the currency of the decreased/increased amount.
- *Amount* is the amount decreased/increased on the credit limit of a card contract.
- *Details* is for comments (this field is optional).
- *Restore old Limit on* is the banking date on which the old credit limit should be automatically restored (this field is optional).

The method for changing a credit limit, in which the source contract and recipient contract change is not preferred and is supported for backward compatibility. To change a credit limit, it is recommended to specify the bank contract number in the *From* field, the client contract number in the *To* field and the following in the *Amount* field:

For an amount increase, specify the amount of the change.
For an amount decrease, specify the amount of the change with a "-" character.

After filling in the form, click the [Approve] button to save the changes in the database.

5.3 Shadow Credit Limit Use Case

Use of a Shadow Credit Limit depends on contract hierarchy ("Main/Sub", "Liability") and Auth Scenario.

For a "Main/Sub" hierarchy:

- Auth Scenario="See Main"; in this case, a card contract's Shadow Credit Limit is not considered during a transaction. Only the Shadow Credit Limit of the higher-ranking contract is considered.
  $Amount\_Available_{Auth} = (Amount\_Available_{Main} + ShadowCL_{Main})$
- Auth Scenario="Check" or "Billing Limit"; in this case, a card contract's Shadow Credit Limit is considered during a transaction.
  $Amount\_Available_{Auth} = min(Amount\_Available_{Own} + ShadowCL_{Own}, Amount\_Available_{Main} + ShadowCL_{Main})$

For "Liability" hierarchies with the "Full Liability" or "Only Check Balance" relation type, a Shadow Credit Limit is considered in the top contract.

For configurations in a "Liability" hierarchy and "Affiliated" or "Reporting" relation types when personal tariffs are used with *Tariff Role* = "Threshold", *Tariff Type* = "OVL_THRESHOLD", the tag PERS_DOMAIN_LEVEL=CURRENT; must be configured. For more information about limiting searches for personal tariffs in the contract tree, see the section "Tariffs with the "Threshold" Role" of the document "WAY4 Advanced Tariff Management".

An example of calculating amounts available for a "Liability" hierarchy with "Full Liability" or "Only Check Balance" relation types is shown below (see Fig. 48).

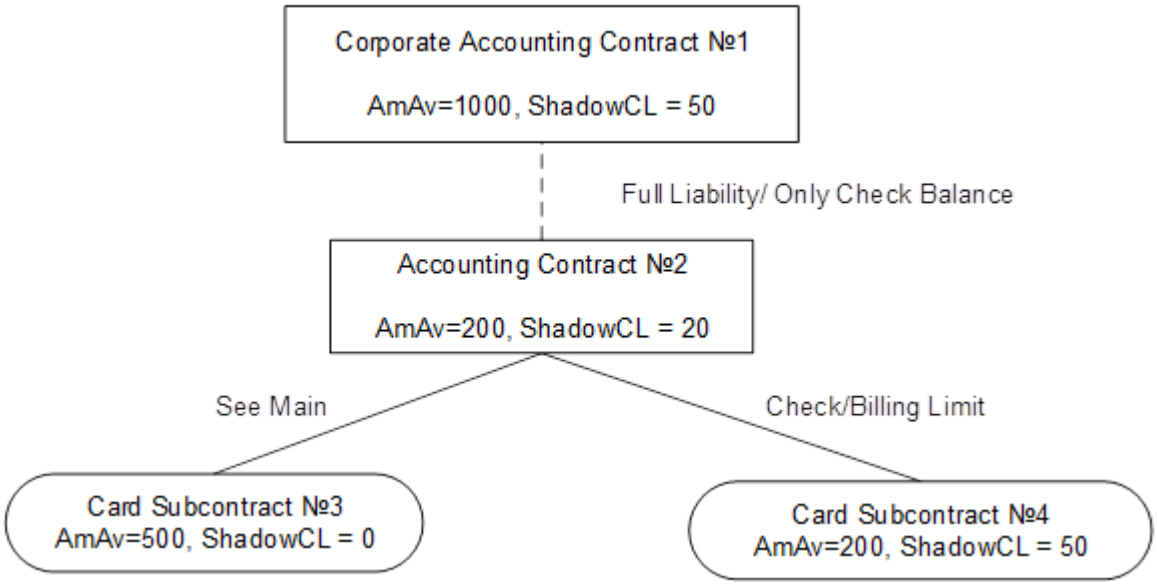

Fig. 48. Use of a Shadow Credit Limit in a "Liability" hierarchy with "Full Liability"/"Only Check Balance" relation types

Use of abbreviations:

- AmAv – Amount Available
- Shadow CL – Shadow Credit Limit

The amount available for contract 3 when making a transaction is calculated according to the following formula:

$Amount\_Available_{Auth\_Card№3}$ = min($Amount\_Available_{Iss№2}$+ $ShadowCL_{Iss№2}$, $Amount\_Available_{Iss№1}$+ $ShadowCL_{Iss№1}$)=min(200+20, 1000+50)=220.

The amount available and Shadow Credit Limit of contract 3 itself are not considered.

The amount available for contract 4 when making a transaction is calculated according to the following formula:

$Amount\_Available_{Auth\_Card№4}$ = min($Amount\_Available_{Card№4}$ + $ShadowCL_{Card№4}$, $Amount\_Available_{Iss№2}$+ $ShadowCL_{Iss№2}$, $Amount\_Available_{Iss№1}$+ $ShadowCL_{Iss№1}$)=min(200+50, 200+20, 1000+50)=220.

Contract 4's own amount available and Shadow Credit Limit are considered.

If a payment of 1000 euros is made to account contract 2 and its AmAv=1200, ShadowCL=20, the amount available for card 3 will be:

$Amount\_Available_{Auth\_CardN°3}$ = min($Amount\_Available_{IssN°2}$+ $ShadowCL_{IssN°2}$, $Amount\_Available_{IssN°1}$+ $ShadowCL_{ssN°1}$)=min(1200+20, 1000+50)=1050

In this case, the amount available for contract 4 will be:

$Amount\_Available_{Auth\_CardN°4}$ = min($Amount\_Available_{CardN°4}$ + $ShadowCL_{CardN°4}$, $Amount\_Available_{IssN°2}$+ $ShadowCL_{IssN°2}$, $Amount\_Available_{IssN°1}$+ $ShadowCL_{ssN°1}$)=min(200+50, 1200+20, 1000+50)=250.

An example of calculating an amount available for a "Liability" hierarchy with "Affiliated" or "Reporting" relation types is shown below (see Fig. 49).

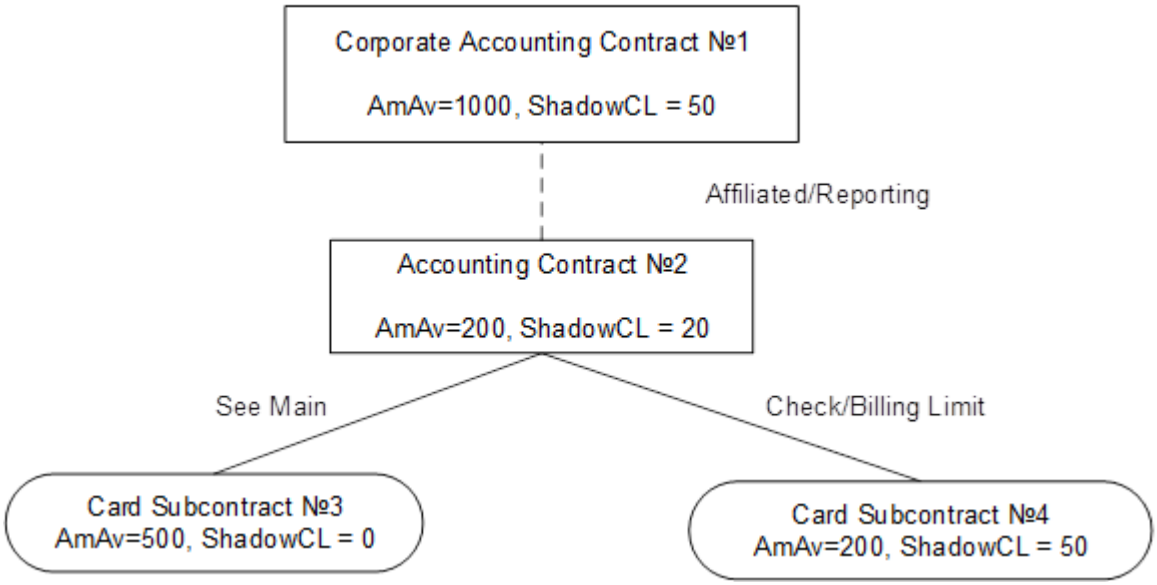

Fig. 49. Using a shadow credit limit in a "Liability" hierarchy with "Affiliated"/"Reporting" relation types

Amounts available when making a transaction for contract 3 are calculated using the formula:

$Amount\_Available_{Auth\_CardN°3}$ = $Amount\_Available_{IssN°2}$+ $ShadowCL_{IssN°2}$ = 200+20 =220.

Amounts available when making a transaction for contract 4 are calculated using the formula:

$Amount\_Available_{Auth\_CardN°4}$ = min($Amount\_Available_{CardN°4}$ + $ShadowCL_{CardN°4}$, $Amount\_Available_{IssN°2}$+ $ShadowCL_{IssN°2}$)=min(200+50, 200+20)=220.

If a payment of 1000 is made to account contract 2 and its AmAv=1200, ShadowCL=20, then:

$Amount\_Available_{Auth\_CardN°3}$ = $Amount\_Available_{IssN°2}$+ $ShadowCL_{IssN°2}$ = 1200+20 =1220

$Amount\_Available_{Auth\_CardN°4}$ = min($Amount\_Available_{CardN°4}$ + $ShadowCL_{CardN°4}$, $Amount\_Available_{IssN°2}$+ $ShadowCL_{IssN°2}$)=min(200+50, 1200+20)=250.

5.4 Viewing and canceling credit limits that have a future date

> To cancel credit limits that were mistakenly set, it is recommended to use applications for changing credit limits (see the section "Credit Limit (Limit)undefined" of the document "Issuing Advanced Applications R2"). Manual change of credit limits is only allowed in a test system.

Information about credit limits that are set for the current contract are shown in the form "Cr Limit for..." form (see Fig. 50) of the menu item:

- "Issuing Contracts (Private)", menu item "Issuing Contracts Input & Update Issuing Contracts (Private) Balance Cr Limit".
- "Issuing Contracts (Private)", menu item "Issuing Contracts Input & Update Single Cards Balance Cr Limit".

In addition to information about a permanent credit limit, the form shows information about planned changes to temporary credit limits and additional credit limits (see Fig. 50).

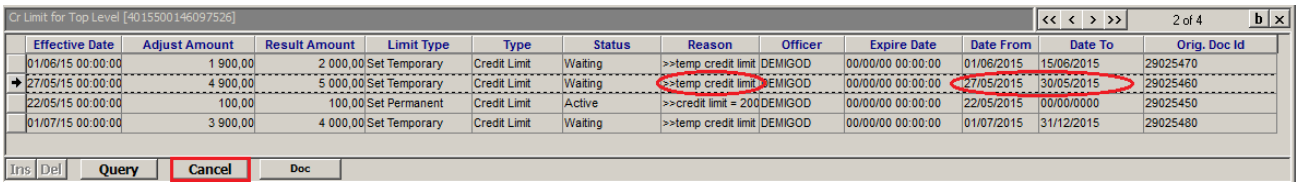

Fig. 50. Credit limits that are set for a contract

To cancel a credit limit that was mistakenly set (temporary credit limit or additional credit limit) and that has a future date, select the necessary record, click the [Cancel] button.

This results in the generation of a Request Category = "Reversal" document. The status of the record (value in the *Status* field) in the "Cr Limit for ..." form will be changed from "Waiting" to "Inactive".

6 Generating Issuer Scripts

An issuer can send issuer scripts to a smart card during the card's entire validity period (see the section "Issuer Scripts" of the document "Configuring WAY4™ for Smart Card Issuing"). These scripts are as follows:

- Change PIN
- Unblock PIN
- Block PIN code
- Block card
- Block application
- Unblock application
- Change Risk Scheme parameters

Issuer scripts can be generated for cards either manually and automatically. In the latter case, this happens when the parameters of a Risk Scheme are changed.

> The set of issuer scripts is generated by the WAY4™ vendor.

Issuer scripts are manually generated in the "EMV Issuer Script Parms" form (see Fig. 51), opened by clicking the [EMV Scripts] button in the "Plastics for <contract name>" form. The "Plastics for <contract name>" form is opened by clicking the [Plastics] button in the "Issuing Contract Info" form, which is opened by selecting the menu item "EMV Smart Cards → Documents → Issuing Contract Info".

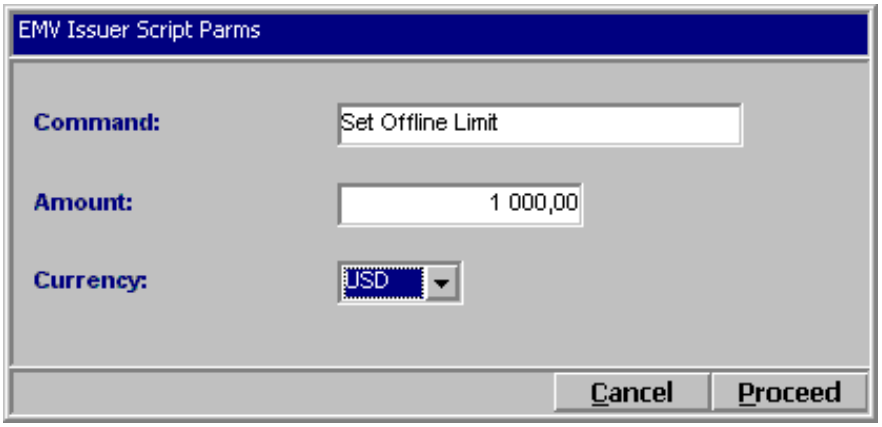

Fig. 51. Form for manually generating issuer scripts

"EMV Issuer Script Parms" form fields:

- *Command* – field for selecting an issuer script from a drop-down list.
- *Amount* and *Currency* – fields for indicating the amount and currency of the transaction limiter. These fields are filled in if issuer scripts are used to set restrictions, for example on card transactions.

After an issuer script is generated manually, it is saved in the system and sent to the card the next time an online transaction request from the card is processed.

An issuer script is automatically generated when any changes are made to Risk Scheme parameters or if the "Risk Factor" parameter is changed (see the section "Configuring Smart Card Risk Schemes" in the document "Configuring WAY4™ for Smart Card Issuing"). When this happens, an issuer script is generated and sent to the card the next time an online transaction request from the card is processed.

Confirmation of the received script's execution is sent by the card to the issuer when processing the next online transaction request.

Information about an issuer script and the results of its execution is available in the "Card Data for <contract name>" form opened by clicking the [Card Data] button in the "Plastics for <contract name>" form, which contains information about the card contract's plastic. This form's *Status* field can contain the following values for the current status of the issuer script:

- "To be sent" – the issuer script has been generated, but not sent to the card.
- "Sent" – the issuer script has been sent to the card, but confirmation of its execution has not been received.
- "Settled" – the issuer script has been sent and successfully executed.
- "Suspended" – the issuer script was generated but not sent to the smart card because the maximum length of the script being sent was exceeded. The script will be sent on the next transaction.
- "Rejected" – the issuer script has been sent but was not executed successfully. In this case, use the process log to analyse the cause of the error (see the section "Process Log" in the document "DB Manager Manual").

7 Erase PIN

> The functionality is delivered according to a separate license agreement.

If a card's PIN is set, or issuer scripts (see the section "Generating Issuer Scripts") have not yet been sent to the card, the [Erase PIN] button will be available for the card.

The [Erase PIN] button is available in the "Plastic" form. The "Plastic" form is available in the forms:

- The "Cards" form – the card contract is issued under the client's account, menu "Issuing → Contracts Input & Update → Issuing Contracts (Private) → [Cards] → [Plastics]".
- The "Single Cards" form – the card contract is independent, menu "Issuing → Contracts Input & Update → Single Cards → [Plastics]" (see Fig. 52).

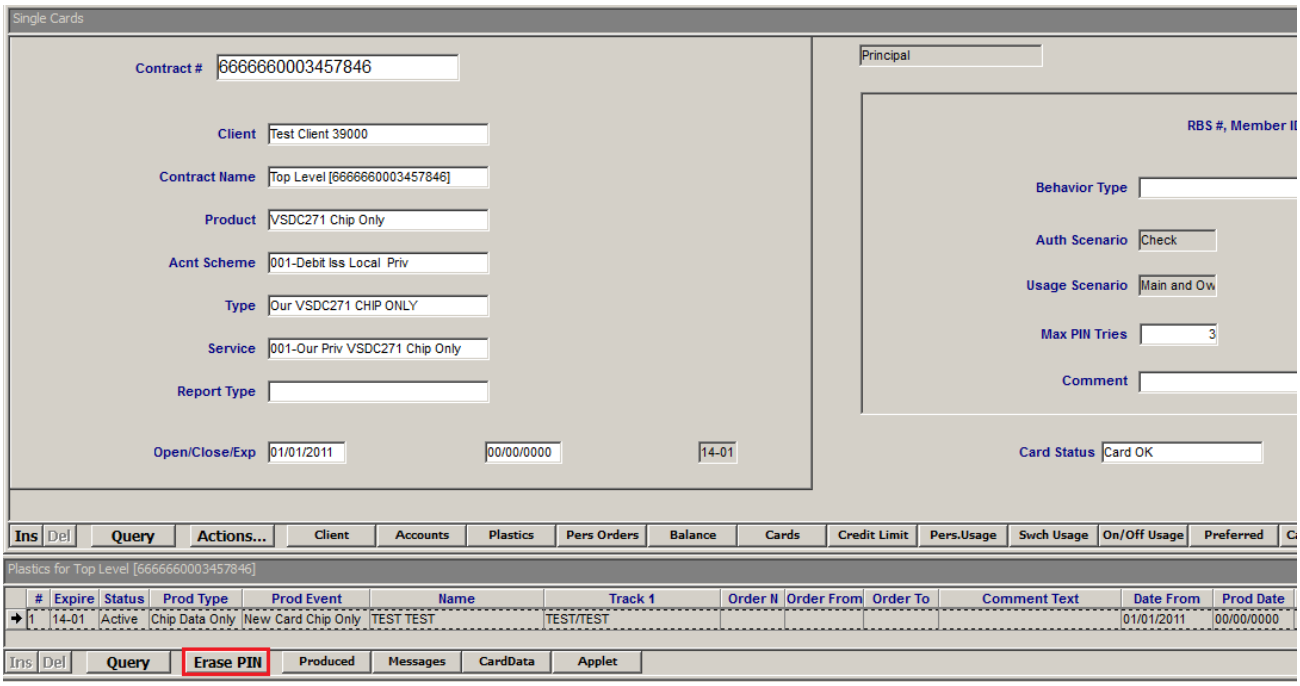

Fig. 52 "Erase PIN" command in the "Plastic" form

After clicking on the "Erase PIN" command, the reason for erasing the PIN must be specified in the "Reason" form. An information message will be generated as a result (see. Fig. 53). After the command has been successfully executed, the activity to set a new PIN will be available.

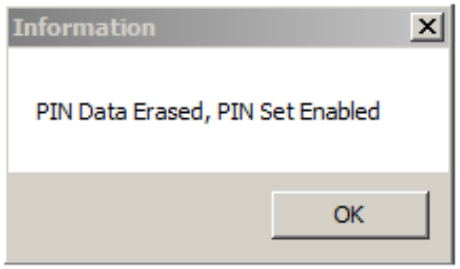

Fig. 53. Information message about the ability to set a new PIN

8 Closing Contracts

A contract is closed when a client states that they will no longer use their card. The client hands over the card, after which the status of the card contract must be changed to "Card Closed". This also initiates resolution through account closure and the return of funds to the client (or loan repayment by the client) after a set period of time.

According to the current Way4 concept, the system uses hierarchical contract structure with a main accounting contract and a card subcontract.

Changing the main accounting contract status to "Account Closed" will affect authorisation for all card subcontracts, and the processing of all financial presentments.

An accounting contract's status is changed to "Account Closed" manually or using the Advanced Applications module X days after the client (for whom the contract is registered) states that they will no longer use bankcards for all this account contract's card subcontracts. The number of days until the contract is closed depends on the Bank's business processes and is usually no more than 40-60 days, since during this period financial presentments may be received from payment systems.

The system provides two ways to change a contract status. One involves client support personnel and is a special procedure that changes the status by entering certain text. Detailed instructions on this procedure can be found in the "Modifying Contract Status" section in the Customer Service User Manual (Customer_Service.pdf).

Detailed instructions on the other way can be found in the "Changing Card Status" section in the Customer Support Manual (Customer_Support.pdf).From the date on which the client's application to terminate the service agreement is received until the contract closing date (when the accounting contract gets the "Account Closed" status), accounting transactions involving the accounts (withdrawals and deposits) continue. Interest is accrued or retained in the account until the contract closing date – over regular billing cycles. In this case, the contract status only affects the authorisation process.

An account can be excluded from the Bank's daily procedures. To do so, the "Account Closed" status in the "Contract Statuses" form Statuses ("Full → Configuration Setup → Contract Types → Contract Statuses") must be mapped with a special tag CLOSE_ACNT; according to which the contract's "IsReady" field is changed to "Closed" (see Fig. 54).

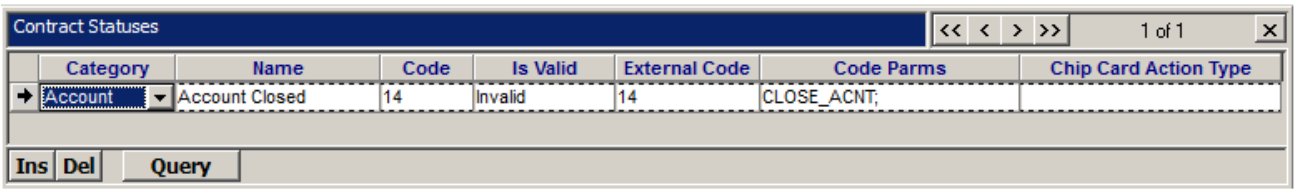

Fig. 54. "Account Closed" status

In this case, when the day on which this contract status was set closes, interest is accrued. Dates for accruing interest are calculated according to the values set for the *Interest in Cycle* and *Interest Delay* parameters. Interest is accrued or retained when the day closes even when the value of the *Interest in Cycle* parameter is "No" (for more details on these parameters, see the document "Interest Accrual").

After the contract closes on this date, no operations involving the accounts of the contract can be performed. To hand over the amount remaining in the account to the client (or to accept repayment of loans from the client), funds must be transferred from the client contract to the deposit contract with the financial institution to which the contract belongs.

To do this, select the "Issuing → Contracts Input & Update → Closed Issuing Contract" user menu path. The "Closed Issuing Contract" form will be displayed (see Fig. 55). After selecting the necessary client contract, click the [Clean Out] button, and funds will be transferred.

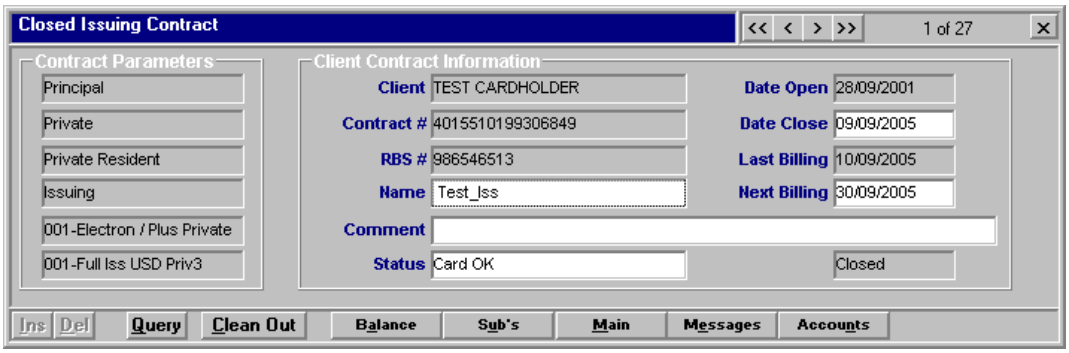

Fig. 55. Form for working with closed contracts

If the closed client contract has a credit balance, funds will be transferred from the client's contract account to a deposit contract account with the financial institution.

If the closed client contract has a debit balance, funds will be transferred from the financial institution's deposit contract account to the client's contract account.