Operation Manual

Acquiring Module

03.50.30

22.04.2020

Contents

Introduction

The WAY4™ acquiring module is used to enter and process client and contract data needed by the acquirer to work with merchants and bank offices and to perform client service operations.

This document is intended for WAY4™ users, bank and/or processing centre employees responsible for everyday operation of the Acquiring module. It contains information about the basic operations for entering and processing data on acquirer clients, client contracts, client devices, and slips.

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

- Documents.
- Merchant Statements.
- DB Manager Manual.
- Issuing Module User Manual.
- Card and PIN Production.
- Products and Contract Subtypes.
- WAY4™ Accounting Schemes.
- WAY4™ Service Packages.
- Standing Payment Orders.
- Interchange Routing.
- WAY4™ Transaction Switch. Platform Overview.
- WAY4™ NetServer.
- POS Terminal Network Management.
- ATM Controller.
- Alert Notification Messaging (supplied with the corresponding module).
- WAY4™ Dictionaries.
- Terminal Key Management.
- WAY4™ Client and Contract Classifiers.
- Advanced Applications R2.
- Importing and Exporting Advanced Applications R2 (XML Format).
- WAY4™ UFX Interchange.

- UFX Host-to-Host Interchange.

- Usage Limiters.

- Financial Institutions.

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 the use of arrows, such as Acquiring →Acquiring Contracts →Client.

- Item selection sequences, in the system menu, are shown with the use of different arrows such as Database => Change password.

- Keys and key combinations used while working with DB Manager are shown in angular brackets, like <Ctrl>+<F3>.

- Variable values like directory and file names and paths to them that may change from computer to computer are also shown in angular brackets, like <OWS_HOME>.

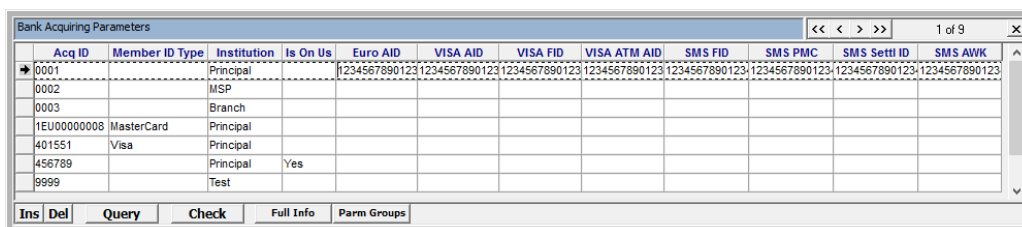Warnings about potentially hazardous situations or actions.

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

1 Defining Acquirer Parameters

Information about the procedure for registering financial institutions in WAY4, and about rules for interbranch and partner bank interchange is provided in the documents "Financial Institutions" and "Interchange Routing".

Financial institutions directly performing acquirer functions and financial institutions acting as partner banks providing interfaces to different payment systems can be registered in WAY4. Parameters for the interaction of participants in acquiring settlments with different bank and payment networks (systems) are defined in WAY4 in the "Bank Acquiring Parameters" dictionary (menu item "Full → Configuration Setup →Main Tables →Bank Acquiring Parameters").

Fig. 1. Form for configuring the interaction of settlement participant banks

A record is added to the "Bank Acquiring Parameters" form by clicking the [Ins] button. A record contains the following fields:

- *Acq ID* – settlement participant's identifier; the value in this field must match the value in the *Bank Code* field of the "Financial Institutions" table or the value in the *Member* field of the "BIN Table" table.

- *Member ID Type* – type of settlement participant in the context of conditions for interaction with the sponsor bank (H2H, Device H2H, transmission of information to a payment system); this field is used to define parameters for file exchange in the clearing process.

  A group of parameters for file exchange in a specific network (corresponding to the type set in the *Member ID Type* field) is selected in the "Parm Groups for Bank Acquiring Parameters" form opened with the [Parm Groups] button. Parameters sets are configured in the "NW Groups" form (menu item "Full →Configuration Setup →Main Tables →NW Groups").

- *Institution* – name of the financial institution (sponsor bank) used when searching for routing contracts.

- *Is On Us* – field with a drop-down list:

- ▪ "Yes" – participant (*Acq ID*) devices are registered in WAY4 (the appropriate contracts are searched for in the financial institution specified in the *Institution* field).

- ▪ "No" – there is no information in WAY4 about the devices of a third-party system (*Acq ID*) with which Host-to-Host communication is set up (for example, Device H2H).

- The *VISA AID*, *VISA FID, VISA ATM AID*, *SMS FID*, *SMS Settl ID*, *SMS PMC* and *SMS AWK* fields are filled in according to identifiers assigned to the financial institution by payment systems.

The *Euro AID* field remains for backward compatibility.

Parameters for online communication with other payment systems can be defined using various tags in the *Additional Parms* field of the "Full Info for Bank Acquiring Parameters" opened by clicking the [Full Info] button.

To ensure transactions for banks not registered in the "Bank Acquiring Parameters" form are processed correctly, it is recommended to define a set of parameters that will be used by default in this situation. To do so, add a record with the "default" value in the *Acq ID* field.

2 Client and Contract Data

This section describes data that is registered in the database and contains information on acquirer bank clients and the contracts created for each client.

> (i) A "client" is the term used in the WAY4™ acquiring module and in this document to describe a merchant or a bank office that accepts and issues cash.

Generally, to register new clients and contracts in the DB and subsequently edit this information, data is imported from special-format files (see "Entering Client and Contract Information from Files").

Applications to register new clients and contracts for subsequent import to the DB can be created using special screen forms that are provided according to an additional agreement with OpenWay. Online interfaces can also be provided for registering data through the Advanced Applications module.

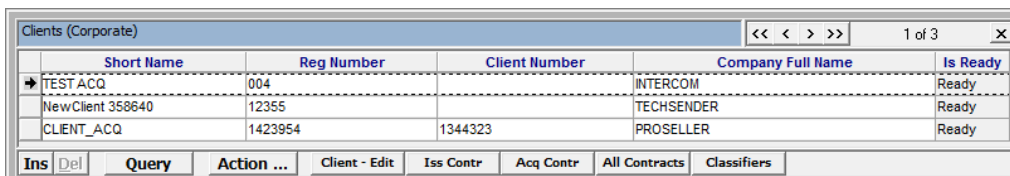Client and contract data is accessed through the "Acquiring →Acquiring Contracts" user menu group.

> (i) Before starting to work with forms, the user must make sure that the required financial institution and client type appear in the status line. If the user has been granted the privilege of working with several financial institutions and various client types, the necessary values may be set through the "Acquiring → Acquiring Contracts → Set Client Type" user menu item.

2.1 Client Information

To view information about registered clients, select the user menu item "Acquiring →Acquiring Contracts →Clients (Corporate)" from the user menu.

This will display the "Clients (Corporate)" form (see Fig. 2) with a list of clients.

Short Name	Reg Number	Client Number	Company Full Name	Is Ready
TEST ACQ	004		INTERCOM	Ready
NewClient 358640	12355		TECHSENDER	Ready
CLIENT_ACQ	1423954	1344323	PROSELLER	Ready

Ins Del | Query | Action ... | Client - Edit | Iss Contr | Acq Contr | All Contracts | Classifiers

Fig. 2. List of clients (Corporate)

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).

⚠ The fields in this form can only be edited in test mode. The standard method for editing client information is to run the procedure for importing applications from files (see "Entering Client and Contract Information from Files").

Fig. 3. Form with detailed client data

The information shown in this form is registered based on a merchant application and agreement in accordance with the policies of the acquirer bank.

The fields of this form are filled as follows:

- *Short Name* – client name that is used in WAY4 to facilitate the client search from the list of registered clients.

- *Registration #* – information that is used to identify the client record in the DB. This may be the number of the merchant agreement or the merchant's individual taxpayer number.

⚠ It is strongly recommended that the value in the *Registration #* field be unique within the financial institution.

- *Reg # Type* – data source used to create the client registration number.

- *Registration Dtls* – detailed information about the client.

- *Security Name* – a secret word used to identify the client over the phone or in similar situations.

- *Language* – client's language according to a dictionary value(see the "Full → Configuration Setup →Client Classifiers →Languages" dictionary). If the

names of operations have been translated into another language in the system, client statements will be generated in the language that is specified in this field(for more information, see the document "Documents").

- *Citizenship* – client's citizenship according to a dictionary value (see the "Full →Configuration Setup →Main Tables →Country Table" dictionary).

- *Legal Name* – business name.

- *Trade Name* – business trademark.

- In the *Contact Person* group of fields, data is entered on the merchant company employee serving as the contact person for the acquirer bank.

  - *Salutation* – client salutation (see the "Full →Configuration Setup →Client Classifiers →Client Salutations" dictionary).

  - *Last Name* – last name of the contact person.

  - *First Name* – first name of the contact person.

  - *Middle Name* – middle name of the contact person.

  - *Position* – job title of the contact person.

- *Client Number* – unique identifier of the client record in the RBS database.

- *Branch* – bank branch where the client will receive account statements (see the "Merchant statements" document).

- The *Base Address* group of fields contains information about the client's principal address.

  - *Country* – country name according to a value from the country dictionary (see the "Full → Configuration Setup → Main Tables → Country Table" dictionary). Note that only countries with the "Yes" value in the *Use In Bank* field of the "Country Table" dictionary are registered in the *Country* field of the client record.

  - *Phone*, *Fax*, *Mobile*, *Phone (add)* and *Fax (add)* fields – phone and fax numbers.

  - The four lines labeled *Mailing Address* are used for the client's mailing address. Certain banks require the use of structured addresses when entering data, checking data integrity and generating reports. Four separate address fields make structured addresses possible. For instance, the following format may be used:

    - Address Line 1 – any content.

    - Address Line 2 – street name.

    - Address Line 3 – building number.

    ♦ Address Line 4 – office number.

- ▪ *ZIP* – postal code.

- ▪ *City* – name of the city, town or village.

- ▪ *E-mail* field is for entering the client's e-mail address.

- ▪ *Delivery Type* – delivery method for reports, issued cards, PIN envelopes, etc. For instance, it may indicate delivery by mail, courier, e-mail, and other means. The value entered in this field may be used as additional criteria for dividing the files in batch reports.

- *Date Open* – date the client record was created.

- *Service Group* – additional client classification (see the list of registered client groups in the "Full →DB Administrator Utilities →Users & Grants → Service Groups" dictionary). This field may be used to configure various data filters. For instance, VIP clients may be grouped separately by an additional classification.

- For acquiring module clients, the fields of the *Embossing* group are left blank.

The [Add Info] button is used to view additional information, set in the form of special tags, about a client.

The [Addresses] button is used to view additional client addresses Rules for searching for an active address are described in the section "Address Search" of the document "WAY4™ Dictionaries".

The [Linked To] and [Linked From] buttons are used to view this client's links with other clients registered in the database (see the section "Linked Clients").

The [Acq Contr] button is used to view information about this client's contracts (see the section "Information about Accounting Contracts").

The [Iss Contr] button is used to view parameters of issuing module account contracts belonging to this client (see the section "Entering New Contracts for Corporations (Legal Persons)" of the document "Issuing Module. User Manual").

(i)   This functionality is available if the acquirer also issues its own cards.

To view information about classifiers assigned to a client, use the [Classifiers] button to open the "Classifiers for..." form. The "Classifiers for..." form is described in the section "Viewing Client and/or Contract Classifier Data" of the document "WAY4™ Client and Contract Classifiers".

Assigning classifiers is described in the section "Manually Changing Classifier Values" of the document "WAY4™ Client and Contract Classifiers".

2.1.1 Linked Clients

In WAY4, linked clients can be set (both for clients and contracts).

The linked clients mechanism can be used, for example, to specify that a merchant is related to an agent client searching new merchants for an acquiring bank. Information about registered links is shown in the "Linked Clients for..." form that is opened by clicking the [Linked To] and [Linked From] buttons in the "Client-Edit for..."form (see Fig. 4).

Fig. 4. Form with information about linked clients

The form contains the following fields:

- *Creation Date* – date and time of client link registration

- *Linked Client* – name of the client to whom the current client or contract is linked

- *Link Type* – link types (to see the list of link types registered in the system, select "Full → Configuration Setup → Client Classifiers → Linked Client Types")

- *Affiliation Source Reg Number* – the number of the external document (for example, a power-of-attorney) based on which this link is established.

- *Linked to Client* – name of the client for whom the current form was opened.

- *Linked to Contract* – number of the contract for which the current form was opened.

- *Is for sub* – indicates whether the the client link is used for the sub-contracts of the contract for which this form was opened.

- *Date From* and *Date To* fields – effective period of the link.

- *Is Active* – shows whether the link is active; if the field contains "Yes", the link is active, if "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 open the form for viewing data on the client whose name is specified in the *Linked to Client* field.

The [Contract] button is used to open the form for viewing data on the contract whose name is specified in the *Linked to Contract* field.

2.2 Acquiring Module Contract Hierarchy

The following four contract types are used with the WAY4™ acquiring module:

- The accounting contract, used to keep track of fund activity in contract accounts and device accounts created by the subcontracts of that accounting contract.

- The device contract, used to register transactions, keep track of fund activity and generate card authorisation requests.

- The ATM Retail contract linked to device contracts (ATM and POS contracts) to support additional online operations and prepaid services on these devices.

- Service card contracts used to authorize service cards.

WAY4™ allows users to create subcontracts, or child contracts subordinated to parent contracts, which may be used to build contract hierarchies.

It is recommended that the following contract hierarchy structures be used:

- The two-level scheme with an accounting contract as the main contract and device contract/contracts as its subcontract/subcontracts (see Fig. 5).
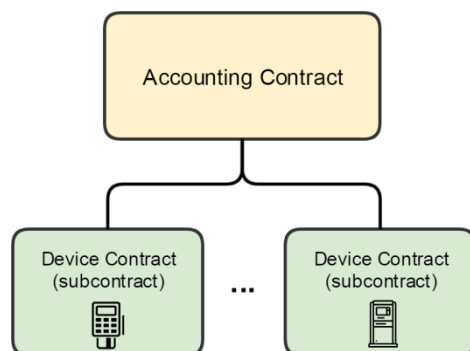

Fig. 5. Device contracts subordinated to an accounting main contact

The two-level scheme is normally used when creating contracts for small and medium-size merchant organisations. In this case, the merchant (service provider) for whom the accounting contract is created receives account statements and presentment amounts.

- A multilevel scheme includes a main accounting contract with child accounting subcontracts, and device contracts subordinated to the accounting subcontracts (see Fig. 6).
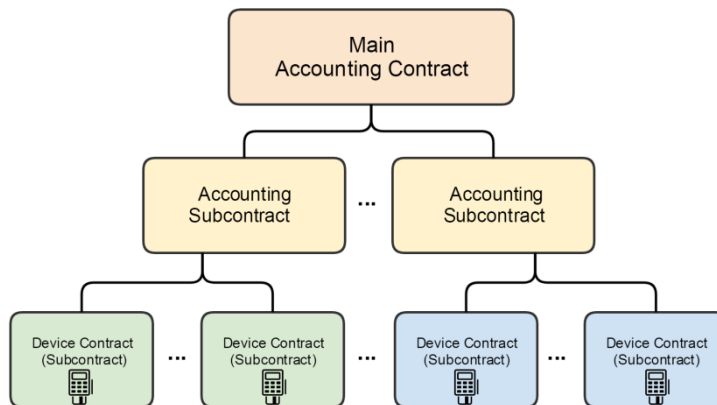
Fig. 6. Example of a three-level hierarchy of contracts

A multilevel scheme may be used for large merchant organisations with retail networks. In this case, depending on contract hierarchy settings, the head organisation or separate merchants can be reimbursed and/or get account statements.

An acquiring module contract hierarchy may use the following types of structure:

- "Main/Sub" – hierarchy in which the top contract is the main accounting contract that aggregates data for transactions that were made and, accordingly, subcontract balances. In this case, one Accounting Scheme is used for the entire contract tree and reimbursements is only possible for the main contract.

- "Liability" – hierarchy of contracts using different Accounting Schemes and making it possible to aggregate data and record its own balance with the subsequent generation of rembursements on a specified level of subcontracts.

When setting the relation type that is used in a contract hierarchy, it is necessary to consider the merchant's specifics (as concerns its structure and the business functions of its branches). It is highly recommended to use a "Liability" relation type when building multilevel hierarchies (three or more levels). The level for setting this relation must be determined by the need to generate payments (reimbursements) to the merchant from the accounts of the corresponding contracts.

The Fig. 7 shows an example of using both relation types in a three-level hierarchy. In this case, account contracts on the second level of the hierarchy accumulate data for the financial operations of subordinate devices, which makes it possible to generate reimbursements to specific shops within one merchant network. Depending on the set "Liability" type, the main contract in the hierarchy can be used to aggregate non-financial information for transactions (generation of

statistics reports) or management of usage limiters that define transaction rules for the entire merchant network.
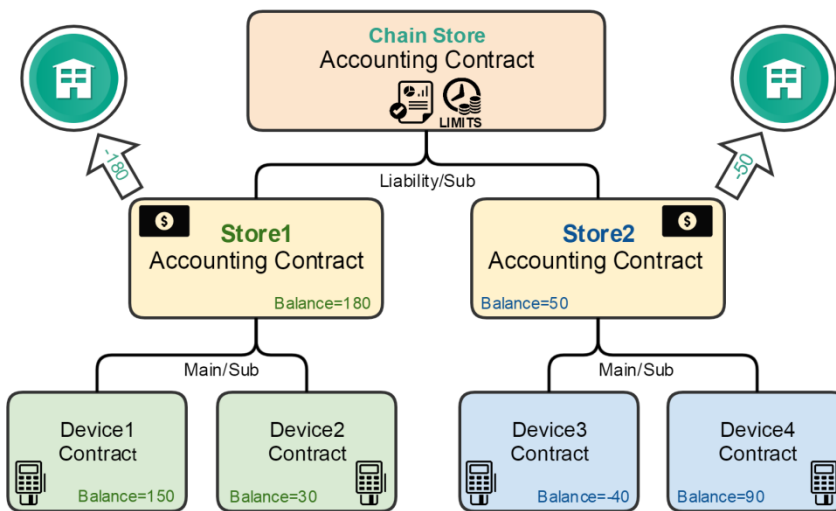

Fig. 7. Example of an acquiring contract hierarchy

If merchant reimbursements must be generated for interim results for the operation of certain payment terminals (for example, according to the results of POS terminal financial cycles), a "Liability" type should be set specifically for the contracts of these devices.

Note that a contract may have only one parent contract with a particular relation type: either "Main/Sub" or one of the "Liability" types.

2.3 Information about Accounting Contracts

To view information about registered account contracts, use the "Acquiring → Acquiring Contracts →Acquiring Contracts" user menu.

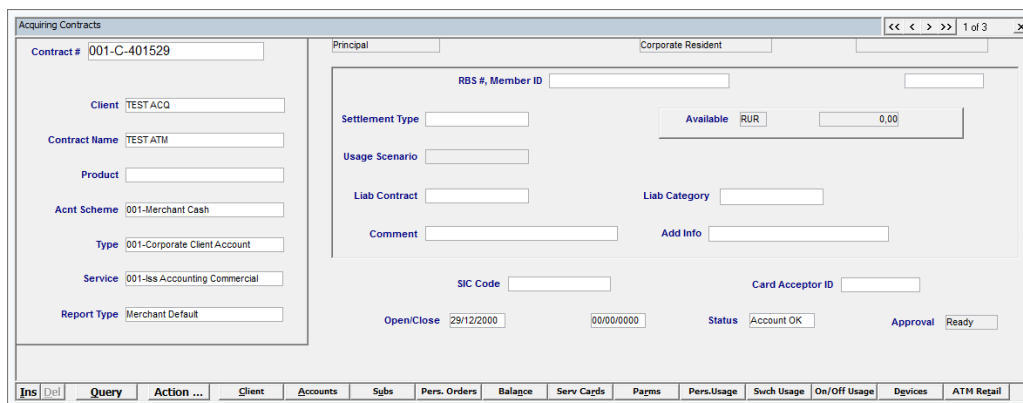This will open the "Acquiring Contracts" form (see Fig. 8).

Fig. 8. Form for entering information about an accounting contract

The information that is shown in this form is registered on the basis of data from a client's application or an agreement signed with a merchant organisation, according to the acquirer bank's policies.

The "Acquiring Contracts" form contains the following information:

- *Contract #* – accounting contract number, unique in WAY4. Depending on the selected contract subtype (see the "Contract Types and Subtypes" section of the document "Products and Contract Subtypes" document).

- *Client* – client for whom this contract is registered.

- *Contract Name* – name that is used to search for this contract in the list of registered contracts.

- *Product* – Product name from the list of products registered for the corresponding financial institution and client type.

  ▪ *Acnt Scheme* – name of the contract's Accounting Scheme (see the "Accounting Schemes" section of the "WAY4™ Accounting Schemes" document); from the list of Accounting Schemes registered in the system for the corresponding financial institutions and client categories.

  ▪ *Type* – subtype of the accounting contract from the list of subtypes.

  ▪ *Service* – name of the Service Package to which the selected subtype belongs (see the "WAY4™ Service Packages" document).

  ▪ *Report Type* – set of reports that corresponds to one of those configured through the "Full → Configuration Setup → Client Classifiers → Client Report Types" menu item.

- *RBS #* – number of the corresponding account in the bank system. When contracts subordinate to a higher-ranking contract in a "Main/Sub" hierarchy are registered, the *RBS #* value is automatically inherited from the higher-ranking contract. For subcontracts in a "Liability" hierarchy, the *RBS #* value from a higher-ranking contract is not inherited.

For backward compatibility, the *RBS #* field can store data required for custom account numeration.

- *Member Id* – payment system member ID assigned to the acquirer bank.

- *Comment* – additional information about the contract.

- *Settlement Type* – this field is reserved.

- If this contract has a higher-ranking contract in a "Liability" hierarchy:

  - The *Liab Contract* field contains the number of the higher-ranking contract in the "Liability" hierarchy.

  - The *Liab Category* field contains the type of link between this contract and the higher-ranking one in the Liability hierarchy ("Full Liability", "Affiliated", "Reporting" or "Only Check Balance").

- *SIC Code* – merchant category depending on business profile; the value corresponds to a value from the SIC Group dictionary (see section ""SIC Group" Dictionary" in the "WAY4™ Dictionaries Administrator Manual").

- *Card Acceptor ID* – Merchant ID; a value consisting of no more than 15 characters (printable ASCII characters) and unique within the processing centre.

- *Open* is the opening date of the contract. Its default value is the current banking date.

- *Close* is the closing date of the contract.

- *Status* is the status of the contract, which defines whether any operations involving this contract and all its subcontracts may be performed (when this contract is a parent of other contracts). An accounting acquiring contract may have one of the following statuses:

  - "Account OK" means that the contract is active.

  - "Account Closed" is the status of a closed contract.

  - "Account Decline". When a contract has this status, any authorisations performed through devices subordinated to it will be declined.

The [Client] button of the "Acquiring Contracts – New" form (see Fig. 8) is used to open the form with data about a client to which this contract is linked (see the section "Client Information").

The [Accounts] button is used to open the "Accounts for <contract name>" form used to view contract account data, including for working with standing payment orders (see "Standing Payment Orders").

The [Pers. Orders] button is used to open the "Pers. Orders for <name of current contract>" form with information about this contract's payment orders.

The [Subs] button is used to get information about accounting sub-contracts. The form's fields are the same as those shown in the Fig. 8.

The [Balance] button is used to open forms for viewing an account contract balance.

The [Serv Cards] button is used get information about service cards (see the section "Information about Service Card Contracts

The [Parms] button is used to view contract parameters, including those setaccording to the specifics of a particular payment system. (see the section "Device Parameters").

The [Pers.Usage], [Svch Usage], and [On/Off Usage] buttons are used to get information about usage limiters.

The [Devices] button is used get information about device contracts (see the section "Information about Device Contracts").

The [ATM Retail] button is used to get information about ATM Retail contracts (see the section "ATM Retail Contracts").

The [Address] button is used to get information about contract addresses.

The [AddParms] button is used to get information about additional contract parameters.

The [Aff Clients] button is used to get information about this contract's link with other clients who are registered in the database. The linked clients mechanism can be used, for example, to specify contacts for this acquirer. Clicking this button opens a form that is the same as the one shown in the Fig. 4.

The [Classifiers] button is used to open the "Classifiers for..." form, used to view classifiers assigned to a contract. Working with this form is described in the section "Viewing Client and/or Contract Classifier Data" of the document "WAY4™ Client and Contract Classifiers".

The [Liab Main] button is used to open the "Liab Main for <name of current contract>" form with information about the main contract in a liability hierarchy.

The [Liab Sub] button is used to open the "Liab Sub for <name of current contract>" form with information about a subcontract in a liability hierarchy.

The [Liab Device] button is used to open the "Liab Device for <name of current contract>" form with information about a subordinate device contract in a liability hierarchy.

The [Contract Parms] button is used to open the "Contract Parm for <contract number>" form to get information about contract parameters (see "Contract Custom Parameters").

2.3.1 Standing Payment Orders

2.3.1.1 General Standing Payment Orders

In the acquiring module, standing payment orders are used, for example, to create daily documents that will transfer the settlement amounts paid by card issuers to the merchant, from the merchant's contract accounts to the merchant's settlement accounts. General standing payment orders are used to perform these tasks. This type of order is created on the Accounting Scheme level and documents are generated for all contracts using this Accounting Scheme. For information on setup of general standing payment orders, see the sections "Parameters of General/Template Standing Payment Orders" and "Retail Payments" of the document "Standing Payment Orders".

ⓘ Standing payment orders for retail payments in the acquiring module are set up separately for all "Merchant Current" accounts in different currencies.

To view the parameters of general payment orders for a contract, do as follows:

- Click the [Accounts] button in the contract form (see Fig. 6 in the section "Information about Accounting Contracts"). The "Accounts for <contract name>" form will open, see Fig. 9. This form is described in the section "Viewing Contract Account Data" in the document "WAY4™ Accounting".

- Click the [Gen. Orders] button in the "Accounts for <contract name>" form. The "Gen. Orders for <account name>" form will open, showing general standing payment orders for the contract, see Fig. 10.

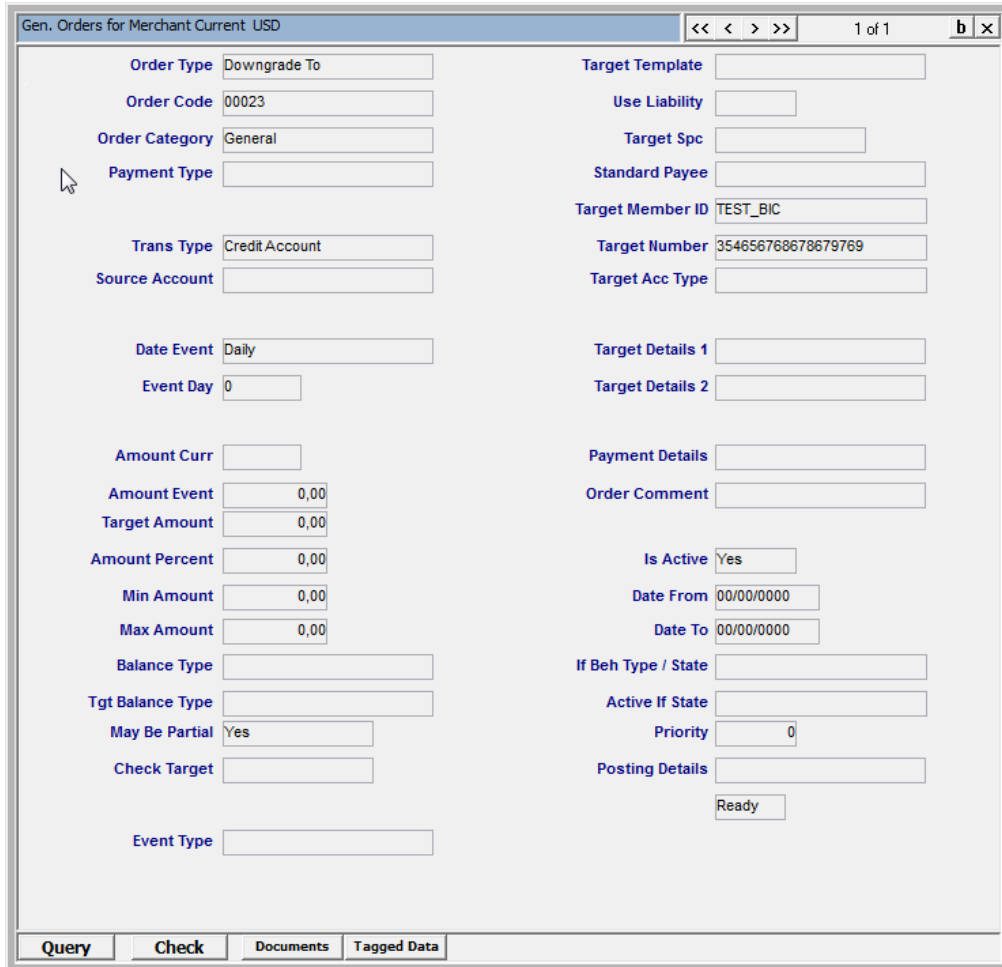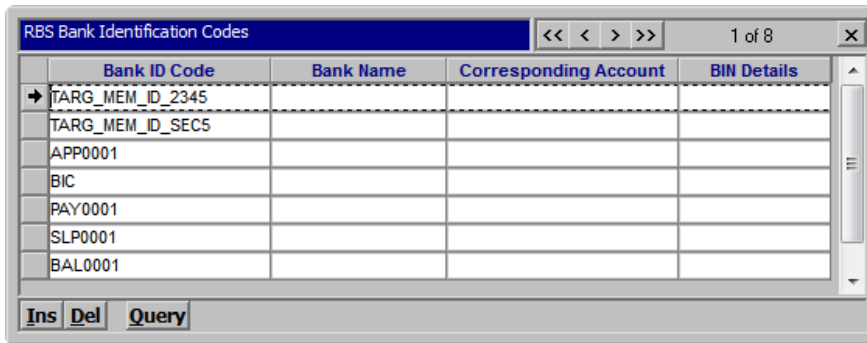| Account Name	Code	Curr	Balance	Int Rate	Account Number	GL Number	Due Type	Category	Is Am Av	Priority	Cycle Date From	N Of Cycle
Merchant Current	B	USD	0,00	0,00	4081784010001000003	47411810900010000	None	Other	Yes	0	03/01/2012	1
Merchant Receivable	X	USD	0,00	0,00	4741184030001200050	70606810400120005(	Value Date Due	Other	No	0	03/01/2012	1

Fig. 9. Information about contract accounts

Fig. 10. General standing payment order

2.3.1.2 BIC Table

The "RBS Bank Identification Codes" grid form is used to identify the correspondence account of the bank where the settlement account of a merchant is registered. When entries are added to this form, they are automatically included in the RBS BIN group, which allows the system to determine the routing contract when processing a document created from a payment order (see the "Configuring BIN Groups" section of the "Interchange Routing" document).

The grid form is invoked by selecting the "Full →Configuration Setup →Routing → RBS Bank Identification Codes" user menu item (see Fig. 11).

Fig. 11. BIC Table

The rows of the grid form that contain values with APP, PAY, SLP and BAL prefixes are used when working with the other modules of the system.

To work with payment orders, enter the bank's Bank Identification Code (BIC) after clicking the [Ins] button to insert a row into the grid form.

After entering the BIC of a bank, fill in the following fields:

- The BIC is entered in the *Bank ID Code* field, according to the current rules.

- In the *Bank Name* field, enter the name of the bank.

- In the *Corresponding Account* field, enter the number of the correspondence account of the recipient's bank associated with the recipient's account.

- The BIN Details field is used to enter additional information about a BIN table record.

2.4 Information about Device Contracts

The acquiring module is used for working with the following device types:

- An imprinter is a device used to transfer data embossed on a card to a sales slip with the use of carbon paper.

- A Point-of-Service (POS) terminal is a device used to read data from the magnetic strip or microchip of a bank card, enter data from a keypad, print checks and have bank cards authorised by their acquirer banks or processing centres via communications lines.

- An Automatic Teller Machine (ATM) is a device used to dispense cash, read data from the magnetic strip or microchip of a bank card, have bank cards authorised by their acquirer banks or processing centres via communications lines and print out information on transactions and available balances. Certain types of ATMs have cash-in functionality.

- An information kiosk is a self-service device connected to a communication channel to authorise bankcards, allowing cardholders to pay for services, make transfers, and receive balance information. Some types of information kiosks allow cardholders to credit their accounts.

In WAY4™, device contracts may exist only as subcontracts of accounting contracts.

Information about device contracts is shown in the "Device for ..." form (see Fig. 12) opened by clicking the [Devices] button in the accounting contract form (see Fig. 8 in the section "Information about Accounting Contracts").
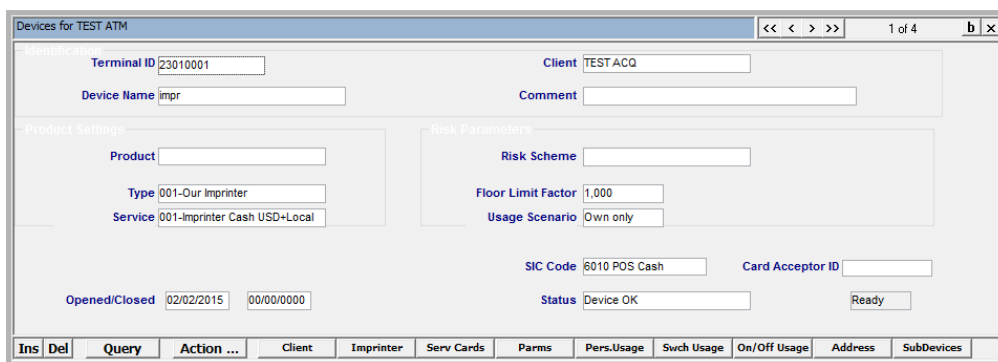
Fig. 12. Form for entering device contract data

This form's fields contain the following information:

- *Terminal ID* – device ID:

  ▪ For an imprinter contract, this field contains a sequence of symbols that corresponds to the Imprinter Plate Number. The length of this sequence must not exceed 8 symbols.

  ▪ For a POS terminal contract, this field contains a sequence of 8 symbols that is unique within the *Terminal ID* field values.

  ▪ For an ATM contract, the field usually contains a sequence of 8 digits that is unique within the *Terminal ID* field values. Certain ATM models may use Latin letters as the first 3 symbols of their IDs.

  ⓘ If the value if the *Terminal ID* field was not specified when creating a contract, a value will be generated automatically according to the parameters of the contract subtype indicated in the *Type* field of the *Product Settings* field group (see below).

  In WAY4 transactions can be processed when performing operations at POS terminals with the same identification codes (with Terminal IDs that are not unique). In this case, the following parameters are used to identify a terminal device:

- Terminal ID (TID) – device identifier.

- Merchant ID (MID) – merchant identifier.

- Acquirer Member ID (MBR) – code of the financial institution acquiring the device (it is assumed that the combination of MID and TID is unique for each MBR).

Rules for using these parameters as key attributes when searching for the required contract on the acquirer side are defined by the settings of the controller interacting with the corresponding terminal device. In the controller configuration, a mask for matching is specified that determines which of the MBR, MID, TID attributes must be used to search for a device contract. By default, a search is made by TID. This functionality is currently used for the Device H2H channel. For support on other channels, contact the WAY4 vendor.

- *Product* – name of a Product registered in the system for device subcontracts of accounting contracts.

  Within the WAY4™ environment, when the name of a Product is present in the Product field, the Type and Service fields are filled in which the names of the contract subtype and Service Package related to it.

- *Type* – contract subtype registered in WAY4 for this type of device.

- *Service* – the name of the Service Package registered in WAY4 for this type of device.

  Dependng on the specific device contract subtype, the form may contain the [ATM], [POS], [Infokiosk], or [Imprinter] buttons for getting information about the parameters of the corresponding devices(see the "Information about Devices" section).

- *Risk Parameters* group:

  - *Risk Scheme* field – risk scheme.

  - *Floor Limit Factor* – multiplier of the "Floor Limit" parameter indicated in the device contract services configurations; usually, this value equals 1.00.

  - *Usage Scenario* – accounting algorithm for authorisation limiters. The values have the following meaning:

    - The "Main and Own" value means that the system recognises limiters set for both the subcontract and its parent contract.

    - The "Own only" value means that the system recognises limiters set for only this contract.

- *SIC Code* – merchant category, depending on the type of business: this value corresponds to a category registered in the "SIC Group" dictionary, for which the value of the *Use In Bank* field is "Yes" (see the section "SIC Group Dictionary" of the document "WAY4™ Dictionaries".

> (i) For ATM device contracts the, the code corresponding to the "Financial Institution" SIC group (Full → Configuration Setup → Main Tables → SIC Groups) is specified in the *SIC Code* field.

- *Card Acceptor ID* – Merchant ID; this is a value consisting of no more than 15 characters (printable ASCII characters).

- *Status* – device contract status:

  ▪ "Device OK" – contract is active.

  ▪ "Device Closed" – status assigned to a contract when it is closed.

- *Approval* – contract state that determines whether it can be used for transactions on the device ("Ready" – contract parameters meet transaction conditions, "Not Ready" – contract parameters were not approved).

  After a device contract has been approved and it has the "Ready" state (Approval field), it can go to the "Not Ready" state if certain parameters in the contract hierarchy change (including the current device contract). The acquiring module will continue to process transaction messages from the corresponding devices, except for when the following parameters of a contract from the hierarchy have changed:

  ▪ *Acnt Scheme* – Accounting Scheme

  ▪ *Service* – Service Package

  ▪ *Currency* – contract currency

  ▪ *Liab Contract* – higher-ranking contract in a "Liability" hierarchy.

  ▪ *Product* – Product.

  If these parameters change and the contract's state becomes "Not Ready", all attempts to make transactions on the corresponding terminal will be rejected.

2.5 Information about Devices

Information about devices that are registered in the acquiring module is available in forms opened by clicking the [Imprinter], [POS], [Infokiosk], or [ATM] button in the "Devices for <client name>" form (see Fig. 12 in the section "Information about

Device Contracts"). The button appears depending on contract subtype that is selected in the *Type* field.

The fields of the form for configuring devices are described in the "Imprinter", "POS Terminals", "Information Kiosks", and "ATM" sections.

2.5.1 Imprinters

The form with information about registered imprinters (see Fig. 13) is opened by clicking the [Imprinter] button in the form of the device contract (see Fig. 12 in section "Information about Device Contracts").
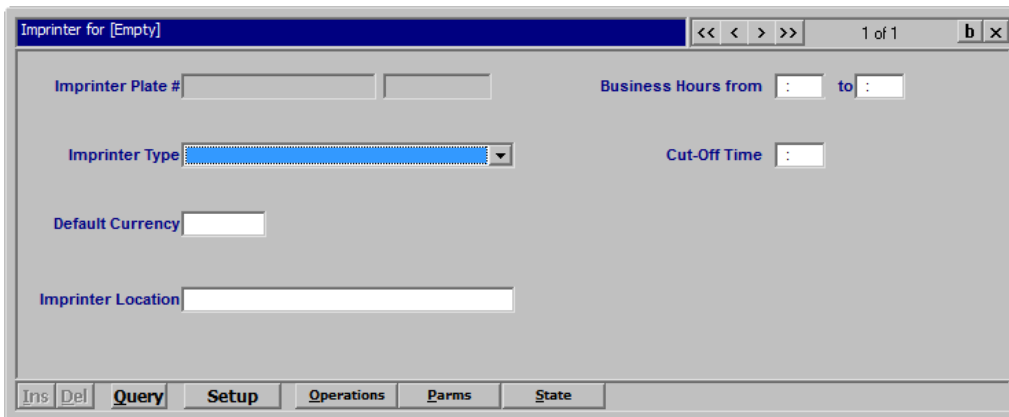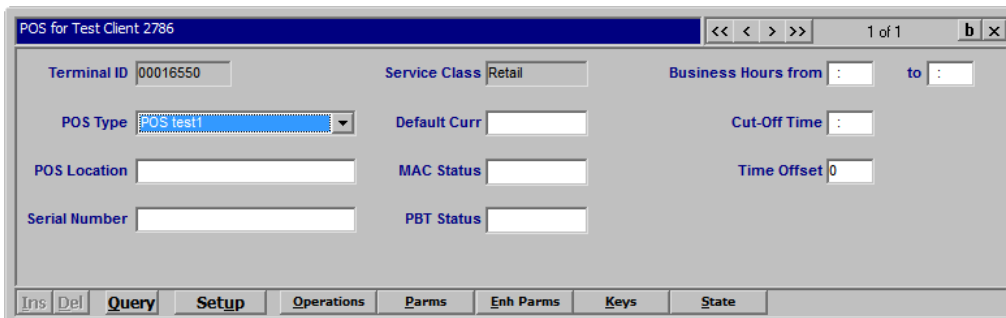

Fig. 13. Form with information about imprinters

When this form is opened, the "State for..." form automatically opens, showing information about the device status

The form's fields contain the following information:

- *Imprinter Type* – imprinter type:
  - ▪ "Standard" indicates that a standard imprinter is used.
  - ▪ "MailOrder" indicates that the imprinter is used for mail orders.
  - ▪ "PhoneOrder" indicates that the imprinter is used for telephone orders.
- *Default Currency* – default currency in which transactions on this device are made.
- *Imprinter Location* – geographical location of the imprinter.
- *Business Hours* – business hours when the imprinter is used, in 24-hour format. The imprinter business hours are set by the system clock of the message server through which the voice authorisation device interacts with WAY4™, without accounting for the time zone difference. Voice authorisation is possible for transactions performed with this device only within the time interval indicated in the following fields:
  - ▪ *from* – the time work begins.

- *to* – the time work ends. If the value in this field precedes that indicated in the *from* field, night hours are included in the work time interval.

- *Cut-Off Time* – time in 24-hour format before which the authorizations of transactions involving this device are registered under the current banking date. The time is set by the system clock of the message server used by the device for communicating with WAY4™, without accounting for the time zone difference.

> (i) This functionality should be used if the device is located in a time zone different from that of the acquirer bank or if it is required by the bank's accounting rules.
>
> The value shown in the *Cut-Off Time* field will only be considered if the value of the global parameter USE_CUT_OFF_TIME is "Y" (see the section "Acquiring Parameters" of the document "WAY4 Global Parameters").The [Parms] button is used to open the form used to enter imprinter parameters (see the section "Information about Devices").

The [Parms] button is used to open a form that shows imprinter parameters (see "Device Parameters").

The [State] button is used to open the form showing the device status. Only two values are used for imprinters:

- "OK" – the imprinter is in service.
- "Not Configured" – the device is out of service.

The [Operations] button is used to open the form containing information about the operations permitted for the device.

2.5.2 POS Terminals

The form with information about POS terminals (see Fig. 14) is opened by clicking the [POS] button in the device contract form (see Fig. 12 in section "Information about Device Contracts").

Fig. 14. Form with information about POS terminals

The fields of this form are used as follows:

- *POS Type* – POS terminal type, corresponding to a type registered in WAY4 (see the "POS Types Dictionary" section of the "POS Network Management" document).

- *POS Location* – geographical location of the POS terminal.

- *Serial Number* – serial number of the device. This field is optional.

- *Default Currency* – default currency of operations performed through the terminal. This field is filled if the terminal software or the communication protocol between the terminal and POS controller does not send data on transaction currency to the processing centre.

- *MAC Status* – condition for the verification of message authentication codes (MAC). These conditions are as follows:

  - "Mandatory" indicates that requests from the terminal will be rejected if they do not contain message authentication codes (MAC).

  - "Optional" indicates that the presence of message authentication codes in messages is optional.

  - "None" indicates that requests from the terminal are rejected if they contain message authentication codes.

- *PBT Status* – condition for processing PIN-Based Transactions (PBT) should be indicated:

  - "Mandatory" indicates that requests from the terminal are rejected if they do not contain PIN blocks.

  - "Optional" indicates that the presence of PIN blocks in messages is optional.

  - "None" indicates that requests from the terminal are rejected if they contain PIN blocks.

> (i) The value of this field can be redefined depending on transaction conditions using the DEV tag (Subfield YYYY, see the document " Acquiring Module Terminal Device Attribute Setup ") by the parameter that is specified as redefining for the corresponding device type. For more information, see the section "Mandatory PIN Mode" of the document "POS Network Management".

- *Business Hours* – business hours when the terminal is used in 24-hour format. The terminal business hours are set by the system clock of the POS controller through which this device communicates with WAY4™ (see the "POS Network Management" document), without accounting for the time

zone difference. Authorisation is only possible for transactions performed through this device within the time interval indicated in the following fields:

- *from* – the time work begins.

- *to* – the time work ends. If the value in this field precedes that indicated in the *from* field, night hours are included in the work time interval.

- *Cut-Off Time* – time,in 24-hour format, before which the authorisations of transactions involving this device are registered under the current banking date. The time is set by the system clock of the POS controller used by the device for communicating with WAY4™, without accounting for the time zone difference.

> ⓘ This functionality should be used if the device is located in a time zone different from that of the acquirer bank or if it is required by the bank's accounting rules.
>
> The value shown in the *Cut-Off Time* field will only be considered if the value of the global parameter USE_CUT_OFF_TIME is "Y" or "B" (see the section "Acquiring parameters" of the document "WAY4™ Global Parameters").
>
> If functionality is used for waiting for financial cycles to close before processing documents (determined by the global parameter WAIT_BATCH_UPLOAD), it is not recommended to use the *Cut-Off Time* field when the value of the global parameter USE_CUT_OFF_TIME is "Y".

- *Time Offset* – time difference between the time zones where the device and POS controller are located.

- *Working Time* – time intervals during which a terminal operates (processes incoming requests) with the ability to link these intervals to days of the week. Sequence numbers for days of the week (or number ranges) are specified in this field, as well as time intervals during which the terminal can operate. "W" or "H" can be specified in the *Working Time* field instead of numbers for days of the week. "W" means the device only operates on days that the business calendar defines as working days (see the section "Business Calendar" of the document "WAY4™ Dictionaries"). "H" means that the device operates on weekends/holidays.

Examples of possible values in the *Working Time* field:

- "0900-2000;" – operations are allowed daily from 09:00 to 20:00.

- "W:0900-2000;" – operations are allowed on working days from 09:00 to 20:00.

- ▪ "H:0900-2000;" – operations are allowed on weekends/holidays from 09:00 to 20:00.

- ▪ "1-3:0900-2000;" – operations are allowed from the first to the third day of the week (inclusively) from 09:00 to 20:00.

- ▪ "4:0900-2000;" – operations are allowed on the fourth day of the week from 09:00 to 20:00.

  The value of the *Working Time* field has a lower priority than the value of the *Business Hours* field. If the *Working Time* and *Business Hours* fields are empty, there are no time restrictions for the terminal's operation.

The [State] button is used to open the form showing the device status. The following values are used for POS terminals:

- • "OK" indicates that the terminal is in service

- • "Information" indicates that the POS terminal is in service but the statuses of one or more its system devices are "Warning".

- • "Warning" indicates that the POS terminal is in service but the statuses of one or more its system devices contain "Error".

- • "Not Configured' indicates that the device is out of service.

- • "Error" indicates that the device is out of service due to an error.

To set the "OK" status for a POS terminal, in the form with information about the POS terminal,click the [Setup] button and select "Set to OK" in the context menu.

The [Parms] button is used to view POS terminal parameters (see the "Information about Devices" section).
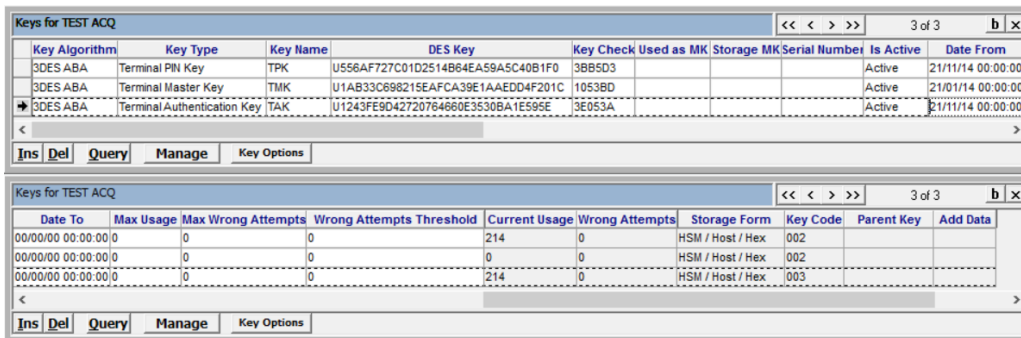
The [Enh Parms] button is used to view additional parameters for a POS terminal.

The [Keys] button is used to open the form with information about a POS terminal's cryptographic keys (see "POS Terminal Cryptographic Keys").

The [Operations] button is used to view operations permitted for the POS terminal (see the section "Configuring Permitted Operations for POS Terminals" of the document "Managing the POS Terminal Network").

2.5.2.1 POS Terminal Cryptographic Keys

The [Keys] button in the form with information about a POS terminal (see Fig. 14 in the section "POS Terminals") is used to open the "Keys for <POS terminal name>" form (see Fig. 15). The form shows information about a device's cryptographic keys.

Fig. 15. Form with information about POS terminal cryptographic keys

In the acquiring module, records for the following key types are registered (for detailed information about the keys see the "Terminal Key Management" document):

- TMK (Terminal Master Key) is the key used to encrypt all the other keys of the device.

- TPK (Terminal PIN Key) is the key used to decrypt PIN blocks.

- TAK (Terminal Authentication Key) is the key used to generate and check the authenticity of transaction messages signatures through MAC (Message Authentication Code).

Each record about cryptographic keys contains the following fields:

- *Key Algorithm* – encryption algorithm.

  The 3DES ABA algorithm is used for POS terminal keys.

- *Key Type* – key type.

- *Key Name* – key name.

- *DES Key* and *DES Key Check* – store encrypted keys and their checksums.

- *Used as MK* – indicates whether or not the key is the master key.

- *Storage MK* – name of the master key used to encrypt the given key.

- *Serial Number* – key identifier determining its serial number among keys of the same type.

- *Is Active* – indicates whether the key is active.

- *Date From* and *Date To* – indicate the key validity period. After the date in the *Date To* field, the key is considered expired and must be replaced.

- *Max Usage* – maximum number of times the key may be used is indicated. After the key has been used the indicated number of times, it is considered expired and must be replaced.

- *Max Wrong Attempts* – number of attempts to incorrectly use the key, after which it is blocked.

- *Wrong Attempts Threshold* – number of attempts to incorrectly use the key after which an alert of such is made.

- *Current Usage* – current value of this key's usage counter.

- *Wrong Attempts* – counter for attempts to incorrectly use the key.

- *Storage Form* – information about the form for storing the key in the database.

- *Key Code* – *Key Type* value shown in the form specified in the *Storage Form* field.

- *Parent Key* – link to the parent key.

- *Add Data* – additional data.

2.5.3 ATMs

The form with information about registered ATMs (see Fig. 16) is opened by clicking the [ATM] button in the device contract form (see Fig. 12 in the section "Information about Device Contracts").
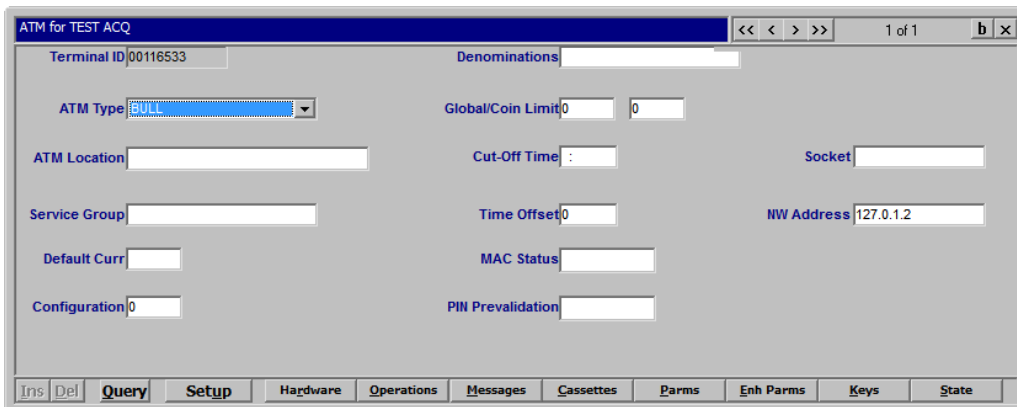
Fig. 16. Form with ATM informatoin

When this form is opened, the "State for…" form showing information about the device status automatically opens.

The ATM information form contains the following fields:

- *ATM Type* – ATM type registered in WAY4 (see the "ATM Types Dictionary" section of the "ATM Controller" document).

- *ATM Location* – geographical location of the ATM.

- *Service Group* – name of a service group; the field may be used:

  ▪ For additional classification of devices, to filter the list of devices in forms.

- To indicate the service contract (if one has been configured for the service group) that may be considered the target of alert notifications on ATM status messages if a notification system has been configured. If no service contract has been configured for the service group or the *Service Group* field is left blank, the ATM contract becomes the notification target. The service contract is indicated in the *Service Contract* field of the table found at "Full →DB Administrator Utilities →Users & Grants → Service Groups" (see the "Configuring Standard Notifications" section of the "Alert Notification Messaging" document).

- *Default Curr* – currency of operations involving the device. This field is filled in if the ATM software does not send transaction currency data to the processing centre.

- *Configuration* – identifier of the ATM configuration.

- *Denominations* – name ofthe ATM's cash denominations from a list (see the "ATM Denominations Dictionary" section of the "ATM Controller" document).

- *Global/Coin Limit* – maximum number of banknotes/coins the ATM may dispense during one operation. Its value depends on the technical design of the ATM's banknote dispenser.

- *Cut-Off Time* – time in 24-hour format before which the authorisations for transactions involving the ATM are registered under the current banking date. The time is set by the system clock of the ATM controller used by the device for communicating with WAY4™ system (see the "ATM Controller" document), without accounting for time zone difference.

> ⓘ This functionality should be used if the device is located in a different time zone than the acquiring bank, or pursuant to the bank's accounting requirements.
>
> The value shown in the Cut-Off Time field will only be considered if the value of the USE_CUT_OFF_TIME parameter is "Y" (see the section "Acquiring parameters" in the document "WAY4™ Global Parameters").

- *Time Offset* – time zone difference between the locations of the ATM and ATM controller.

- *MAC Status* – condition for verification of message authentication codes, which are as follows:

  - "Mandatory" – message authentication code verification is mandatory.

  - "None" – no verification of message authentication code.

- *PIN Prevalidation* – "None".

- *Working Time* – time intervals during which the ATM operates (incoming requests are processed). Sequence numbers of days of the week (or number ranges) and time intervals during which the ATM can operate are specified in this field Instead of sequence numbers of days of the week, "W" or "H" can also be specified in the *Working Time* field. "W" means that the ATM only operates on days defined by the business calendar as working days (see the section "Business Calendar" of the document "WAY™ Dictionaries"). "H" indicates that the ATM operates on non-working days.

  Examples of possible values for the *Working Time* field:

  - "0900-2000;" – operations are permitted daily from 09:00 to 20:00.

  - "W:0900-2000;" – operations are permitted on working days from 09:00 to 20:00.

  - "H:0900-2000;" – operations are permitted on holidays/weekends from 09:00 to 20:00.

  - "1-3:0900-2000;" – operations are permitted from the first to the third day of the week (inclusively) from 09:00 to 20:00.

  - "4:0900-2000;" – operations are permitted on the fourth day of the week from 09:00 to 20:00.

  An empty *Working Time* value indicates there are no time restrictions for the ATM's operation.

- *Socket* field – mnemonic connection name unique within the system. For instance, when using the Motorola protocol adapter, enter a value in the YYYxxx format, where YYY is the internal address of the node+1 and xxx is the number of the protocol adapter. If the TCP/IP protocol is used, enter the port number.

- *NW Address* – network address of the ATM in an X.25 or TCP/IP network. For ATMs connected via TCP/IP protocol the presence of their network address in this field is mandatory.

The [State] button in the "ATM for..." (see Fig. 16) is used to open the form showing information about the device's state.

The *Status* field of this form shows the status of the device. The following status values are used for ATMs:

- "OK" indicates that the ATM is in service.

- "Information" indicates that the ATM is in service but one or more of its system devices have a "Warning" status.
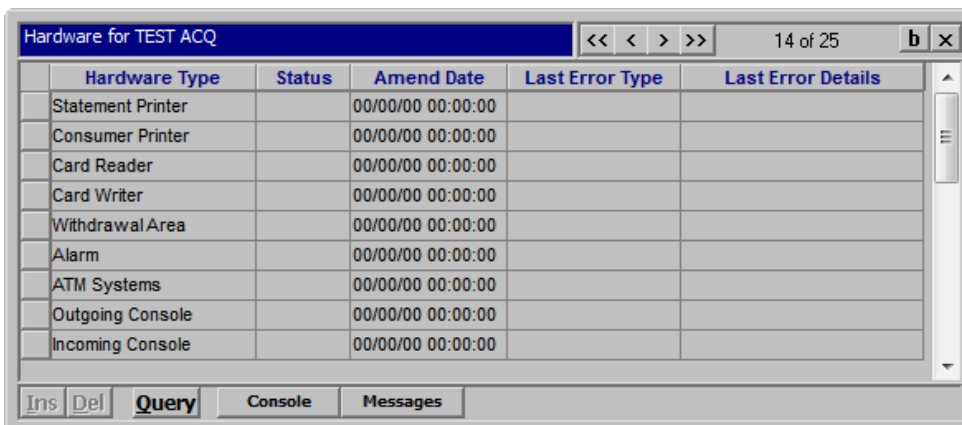
- "Warning" indicates that the ATM is in service but one or more of its system devices have an "Error" status.
- "Not Configured' indicates that the device is out of service.
- "Error" indicates that the device is out of service due to an error.

The *Online* field of this form shows if the bank is connected ("Yes") or not connected "No" with the host.

The *Online Service* field of this form shows the identifier of the node processing messages and the name of the channel/service with which the connection is established.

To set the "OK" status for an ATM in the ATM configuration form, click the [Setup] button and select "Set to OK" in the context menu.

The [Hardware] button in the "ATM for …" form (see Fig. 16) is used to open the "Hardware for…" form (see Fig. 17) used to work with ATM components (see the section ATM Components (Hardware) of the document "ATM Monitoring").

Fig. 17. Form for working with ATM components (hardware)

For an ATM to assume the required status, select the row in the form and click the [Console] button. This will bring the "Console for <device name>" form to the screen (see Fig. 18).
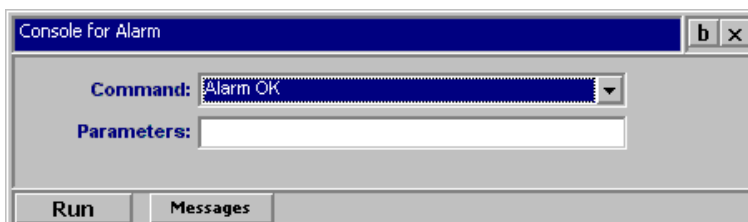
Fig. 18. Form for assigning statuses to ATM hardware components.

ATM management is described in more detail in the section "Changing ATM Status and Managing ATMs" of the document "ATM Monitoring".

The [Operations] button of the "ATM for ..." form (see Fig. 16) is used to configure the allowed operations for ATMs (see the "Setting up the Executable Range of ATM Operations" section of the "ATM Controller" document).

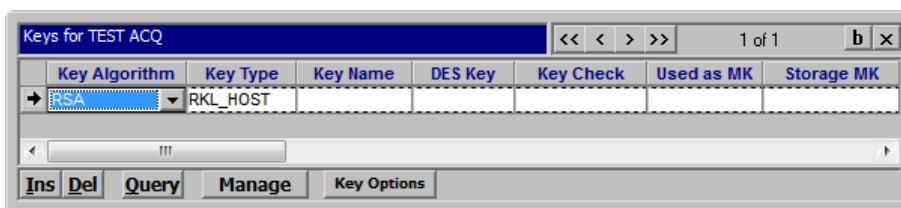The [Parms] button is used to view ATM parameters (see "Device Parameters").

The [Enh Parms] button is used to view additional ATM parameters.

The [Cassettes] button is used to invoke the form containing information about the cassettes included in an ATM' s configuration (see the section "Currency Cassette Status" of the document "ATM Monitoring").

The [Keys] button is used to open the form with information about the ATM's cryptographic keys (see "ATM Cryptographic Keys").

2.5.3.1 ATM Cryptographic Keys

The [Keys] button in the ATM configuration form (see Fig. 16 in the section "ATMs") is used to open the "Keys for <ATM name>" form (see Fig. 19) with information about ATM cryptographic keys.

Fig. 19. Form with information about ATM cryptographic keys

In the acquiring module, a record is registered for the TMK (Terminal Master Key) – this is the key used to encrypt the ATM's other keys (for more details see the document "Terminal Key Management").

The fields of this form are the same as those described for POS terminals (see "POS Terminal Cryptographic Keys").

2.5.4 Information Kiosks

The form for viewing information about registered information kiosks (see Fig. 20) is opened by clicking the [Infokiosk] button in the device contract form (see Fig. 12 in section "Information about Device Contracts").
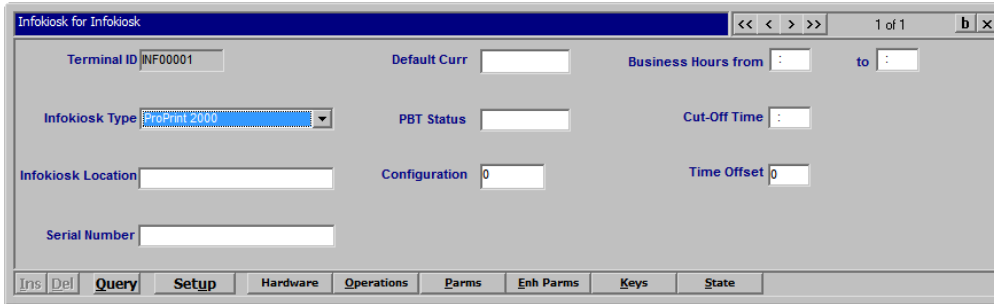
Fig. 20. Form with information about kiosks

When this form opens, the form "State for..." form showing information about the device status will open automatically.

Buttons and fields used in the form with kiosk information (except for the [Hardware] button) are used the same way as buttons and fields in the form for configuring POS terminals (see the section "POS Terminals").

The [Hardware] button is used to open the form containing a list of information kiosk components (as in the form shown in Fig. 17 in the section "POS Terminals").

The [State] button is used to open the form showing device status. The following values are used for information kiosks:

- "OK" indicates that the kiosk is in service.

- "Information" indicates that the kiosk is in service but one or more of its system devices have a "Warning" status.

- "Warning" indicates that the kiosk is in service but one or more of its system devices have an "Error" status.

- "Not Configured' indicates that the kiosk is out of service.

- "Error" indicates that the kiosk is out of service due to an error.

To set the "OK" status for a kiosk, in the kiosk configuration form click the [Setup] button and select the "Set to OK" context menu item.

2.5.5 Device Parameters

The characteristics of registered devices is determined by the set of the following parameters:

- *Sic Code* and *Card Acceptor ID* from the corresponding fields of forms for acquiring contracts.

- *Merchant Name (43.s1)*, *Location (43.s2)*, *Country, State, ZIP,* and *City* from the corresponding fields of the "Address for ..." form (see Fig. 21) opened by clicking the [Address] button in the form for the corresponding contract. Field *Type* of the form must contain "Address for Payment Scheme".

- *Country* – country name according to the "Country Table" dictionary (see the section "Configuring Country Areas" of the document "WAY4™ Dictionaries"). This field is mandatory. Note that only a country with the "Yes" value in the *Use In Bank* field of "Country Table" dictionary is specified in the *Country* field.

- *ZIP* – postal (ZIP) code. The value may not exceed 10 characters (printable ASCII characters).

- *State* – state (region) code. The value may not exceed 3 characters (Latin letters, digits, and spaces are permissible).

- *City* – city name. The value may not exceed 32 characters (Latin letters, digits, and spaces are permissible).

- *Merchant Name (43.s1*) – merchant name. The length of the name is limited by the value of the MERCHANT_NAME_LENGTH global parameter (see the section "Acquiring" of the document "WAY4™ Global Parameters"). Printable ASCII characters with the exception of "\", "/", and ">" are acceptable.

> (i) For an ATM contract, the name of the ATM owner and/or address at which the ATM is installed is specified as the *Merchant Name (43.s1*) value.

- *Location (43.s2)* – merchant address. The value may not exceed 40 characters. Printable ASCII characters with the exception of "\", "/", and ">" are used. The use of commas (";") in this field's value is not recommended.
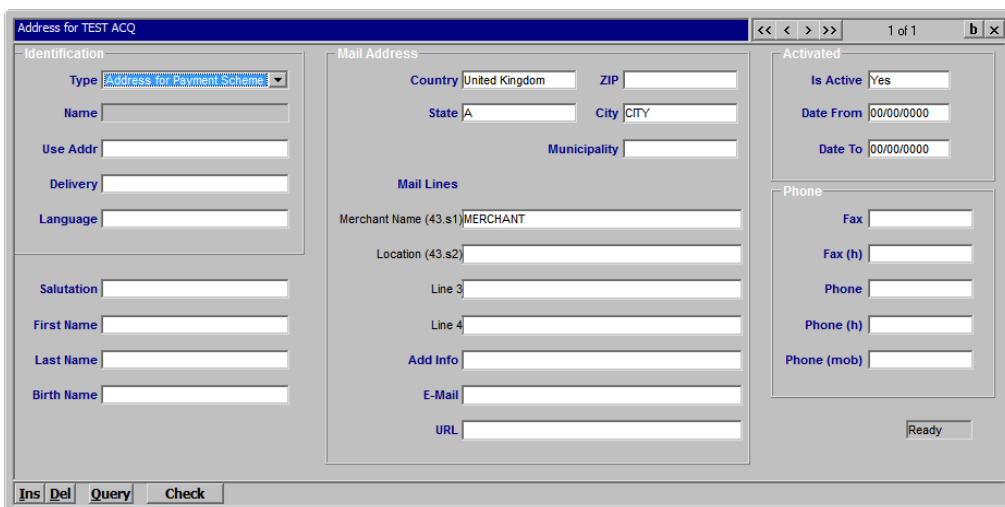
Fig. 21. Form with merchant address or device location data

Generally, subcontract parameter values are by default inherited from higher-ranking contracts. When subcontracts have their own values, these values will have a higher priority.

Thse parameters are shown in the additional information field (lower field) of the "Parms for ..." form (see Fig. 22) in the following format "TRANS_LOCATION=<value of the *Location (43.s2)* field>;POSTAL_CODE=<value of the *ZIP* field>";

Device parameters are accessed through the "Parms for ..." form (see Fig. 22) opened by clicking the [Parms] button in the form with information about the device (see Fig. 16 in the section "ATMs").
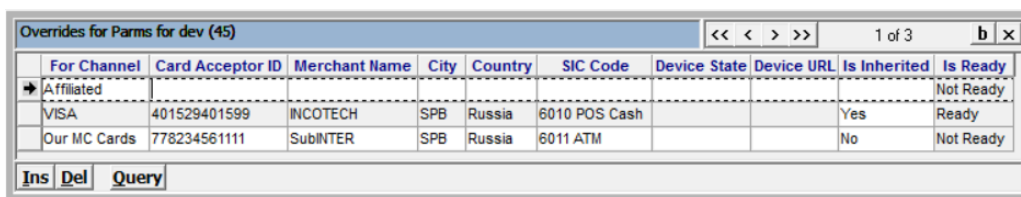
Fig. 22. Form with information about device parameters

If it is necessary to view the device parameter values that are specific to a certain payment system, , click the [Override] button in the "Parms for..." form.

Device parameters specific to particular payment systems can be defined for the top contract and inherited by all device subcontracts after the main contract is approved during import of contract data (see the section "Information about Device Contracts").

Clicking the [Overrides] button displays the "Overrides for Parms for ..." form (see Fig. 23).

Fig. 23. Form with device parameters as required by certain payment systems

This form may contain a contract's own records as well as those inherited from a higher-ranking contract.

The *For Channel* field contains the name of the service channel for the payment system that requires parameters to be redefined.

When the value of the global parameter ENABLE_MERCH_NAME_VAR_LENGTH is "Y", the maximum length of the *Merchant Name* field value for the specific channel

is limited by the value of the corresponding global parameter (see the section "Acquiring" of the document "WAY4™ Global Parameters").

The other fields contain parameters that are the same as those set in the "Parms for ..." form, with values that meet payment system requirements.

The *Is Inherited* field indicates whether parameters are inherited from the parent contract:

- "Yes" indicates that the record inherits a higher-ranking contract's parameters. If the original record is edited or deleted for the higher-ranking contract, the corresponding changes are reflected in the current record (after the main contract has been approved).

- "No" indiccates that a higher-ranking contract's parameters are not inherited. In this case, changes to the original record for the higher-ranking contract do not influence the current record after the main contract has been approved.

2.6 ATM Retail Contracts

ATM Retail contracts are used to support additional online operations such as payments for mobile communications services, prepaid services, etc. through devices like POS terminals or ATMs.

Contracts of this kind are created as subcontracts of accounting contracts registered for mobile phone operators, providers of prepaid services, etc. When an ATM Retail contract is created, a reference must be made to the device through which the services will be dispensed. A WAY4 ATM Retail contract is referred to as a related contract because it is related to a device contract.

To create a related contract, a corresponding contract relation type must be first registered in the system. In this case, a contract relation identifies the payment target, such as a mobile phone operator or a prepaid services provider (see Fig. 24).
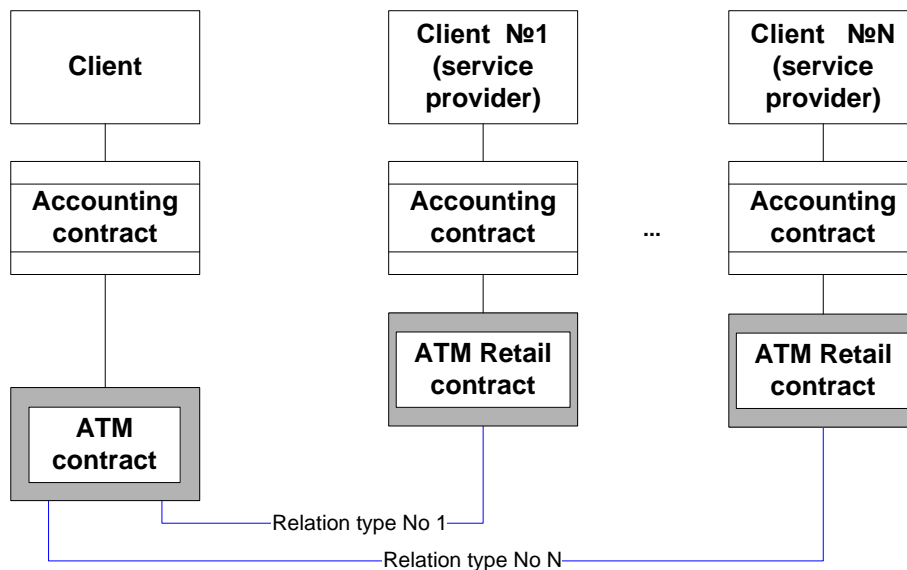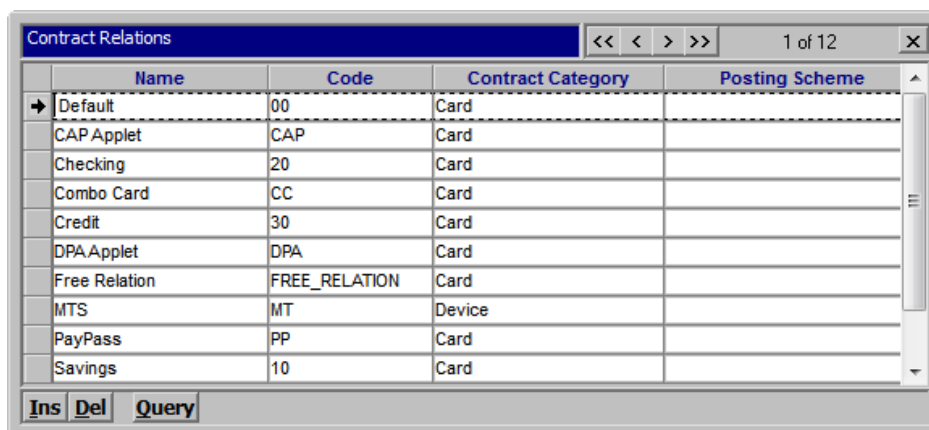
Fig. 24. Relations between ATM Retail contracts and ATM contracts

In order to register a new contract relation type, select the "Full →Configuration Setup →Accounting Setup →Contract Relations" user menu item, which will invoke the "Contract Relations" form (see Fig. 25).

Fig. 25. Form for registering contract relation types

In this grid form, create a row by clicking the [Ins] button and fill the fields as follows:

- The *Name* field contains the name of the relation type. It is recommended that the ID of a service provider be used here.

- The *Code* field contains the code of the contract relation type. This field is optional.

- In the *Contract Category* field, select the "Device" value from the list.

To get information about an ATM Retail contract, click the [ATM Retail] button in the form of the accounting contract created for the provider of a certain service (see Fig. 8 in the section "Information about Accounting Contracts")..
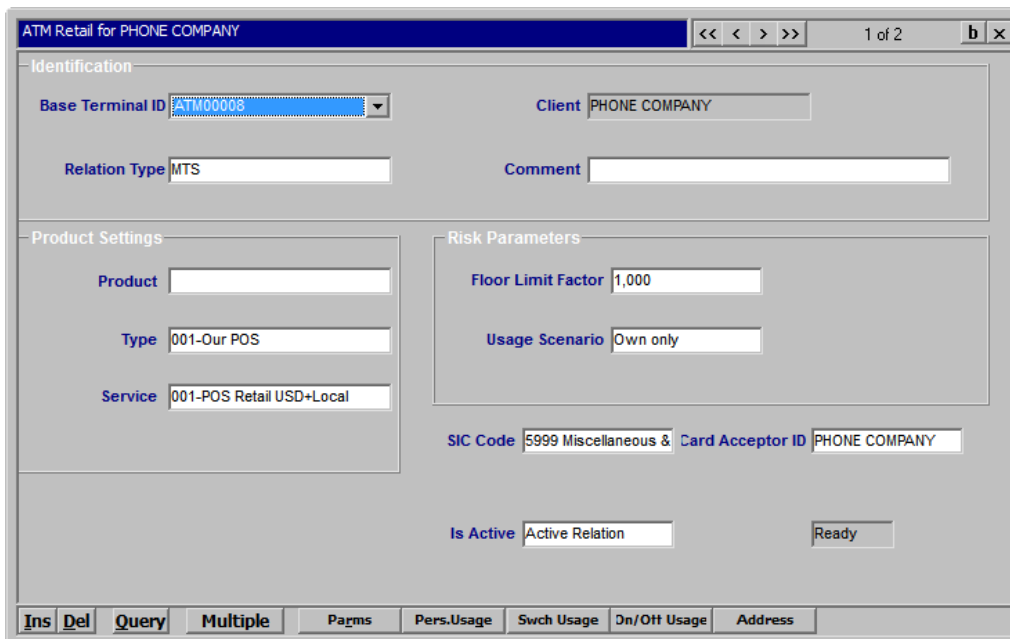
Fig. 26. Form for getting information about ATM Retail

This form contains the following fields:

- *Base Terminal ID* – device ID. This contract is a related contract for the contract of the selected device.

- *Relation Type* – type of relation with the device contract, registered in the "Contract Relations" table.

- *Comment* – additional information about the contract.

- *Product* – Product name.

- *Type* – contract subtype corresponding to the subcontract of the POS terminal (Our POS).

- *Service* – contract Service Package corresponding to the Service Package of the retail POS terminal (POS Retail).

- *Floor Limit Factor* – this field is not used for ATM Retail contracts.

- *Usage Scenario* – usage. When the value is "Own only", only usage limiters set for this contract are considered. When the "Main and Own" value is selected, usage limiters set for higher-ranking contracts will be considered also.

- *SIC Code* – merchant category according to type of business (based on the "SIC Group" dictionary (Full→Configuration Setup→Main Tables→SIC Groups)).

- *Card Acceptor ID* – Merchant ID. This number contains no more than 15 digits and is unique in the processing centre.

- *Is Active* – indicates whether the relation type selected in the *Relation Type* field is active: "Active Relation" – the relation is active, "Inactive Relation" in this field means the relation between the contracts is deactivated and the operation may not be performed.

The [Parms] button of this form is used to access additional parameters of the ATM Retail contract (same as the window shown in Fig. 22 in the section "Device Parameters"). After an ATM Retail device contract has been created, its parameter values can be inherited as follows:

- *SIC, Card Acceptor ID* – from the higher-ranking account contract, if the corresponding values were not specified in "ATM Retail for..." form fields.

- *Merchant Name* and *URL* – from the upper-level acquiring contract.

- *Country*, *City*, *Location*, *Postal Code* and *Phone* – from the related device contract.

The buttons [Pers.Usage], [Swch Usage], and [On/Off Usage] are used to work with contract usage limiters.

(i) Remember that an individual ATM Retail contract must be created in the system for each online operation supported by a device. For instance, 200 related ATM Retail contracts must be created for 100 ATMs supporting two separate online operations each, that is, 2 ATM Retail contracts for each ATM contract.

2.6.1 Copying ATM Retail Contract Parameters

To simplify the procedure for creating related contracts, the system allows users to copy the parameters of once created ATM Retail contracts. This allows users to create similar ATM Retail contracts for all the required ATM contracts at once.

The parameters of a created ATM Retail contract are copied by clicking the [Multiple] button in the form where the ATM Retail contract was created (see Fig. 26 in the "ATM Retail Contracts" section). This opens a window containing the list of ATM contracts in its *Copy Regime* field (see Fig. 27).
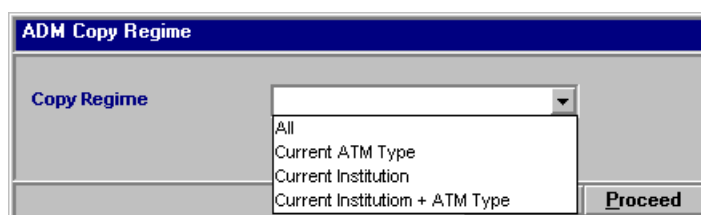

Fig. 27. List of values for copying ATM Retail contract parameters.

The selection list contains the following values:

- "All" means that the parameters of this ATM Retail contract are to be copied to the contracts of all ATMs registered in the system.

- "Current ATM Type" means that the parameters of this ATM Retail contract are to be copied to the contracts of all ATMs of the same type as the ATM whose contract is related to this contract.

- "Current Institution" means that the parameters of this ATM Retail contract are to be copied to the contracts of all ATMs registered in this financial institution.

- "Current Institution + ATM Type" means that the parameters of this ATM Retail contract are to be copied to the contracts of all ATMs of this institution as long as they are of the same type as the ATM whose contract is related to this contract.

Having selected the required element of the list, click the [Proceed] button to start the copying procedure.

After the parameters of the ATM Retail contract have been copied, the changes must be approved by clicking the [Approve] button in the form of the parent accounting contract.

2.7 Information about Service Card Contracts

A service card is a plastic card with a magnetic strip used to identify a user allowed to work with acquirer devices. For instance, a service card is needed to replenish ATM cassettes and perform operations for crediting cardholder accounts or returning purchases through a POS terminal.

The contract of a service card may be created as a subcontract of an accounting contract or as a subcontract of a device contract.

When the contract of a service card is a subcontract of an accounting contract, the card is valid for servicing all devices whose contracts are subcontracts of that accounting contract. If the contract of a service card is a subcontract of a device contract, the card is valid for servicing that device only.

To get information about a service card contract, click the [Serv Cards] button in the accounting contract form (see Fig. 8 in the section "Information about Accounting Contracts") or in the device form (see Fig. 12 in the section "Information about Device Contracts").

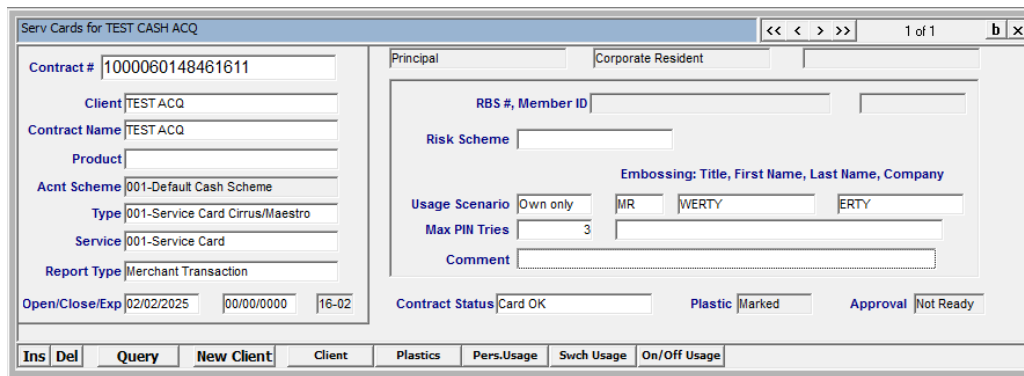The "Serv Cards for <contract name>" form will open (see Fig. 28).

Fig. 28. Form with information about service card contracts

Information shown in this form's fields is registered on the basis of a client application or an agreement signed with a merchant organisation, in accordance with the policies of the acquirer bank.

The set of fields in the left-hand part of the form corresponds to the same set of fields in the accounting contract.

The right-hand part of the form contains fields belonging to the service card.

- *Risk Scheme* – risk scheme.

- *Usage Scenario* – specifies the rule for considering limits whenmaking a card transaction:

  ▪ "Main and Own" – the set of limiters for the contract using this Product as well as for its main contract is checked.

  ▪ "Own only" – only limiters set for the contract using this Product are checked.

- *Max PIN Tries* – maximum number of PIN attempts.

- *Embossing* –the fields of this group are used to enter information for embossing on the card.

- *Comment* – additional information for the service card contract.

- *Contract Status* – status of the service card contract. The contract status affects the possibility of making operations with the card.

The [Client] button is used to open forms for viewing client data (in this case – about the service card user).

The [Plastics] button is used to open the form containing information about plastic cards that can be issued (see the section "Issuing Service Cards").

The buttons [Pers.Usage], [Swch Usage], and [On/Off Usage] are used to work with contract usage limiters.

> ℹ️ If several devices with separate accounting contracts must be serviced using one service card (for example, devices belonging to one branch), the following contract hierarchy must be used:
>
> - A separate acquiring accounting contract (see the section "Information about Accounting Contracts") for which a service card has been issued (see the section "Issuing Service Cards").
>
> - Accounting contracts of devices to be serviced with one service card must be linked with this service card's accounting contract (see "Information about Accounting Contracts") by a liability relation with the "Reporting" category (*Liab Category* field).

2.8 Contract Custom Parameters

Detailed information about working with contract and client custom parameters is provided in the section "Contract and Client Custom Parameters" of the document "WAY4™ Client and Contract Classifiers".
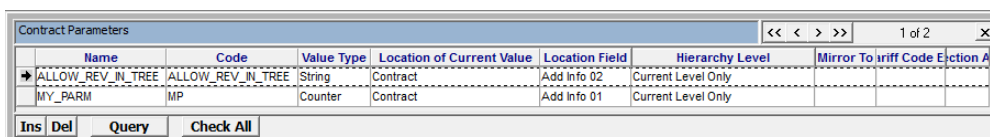
The "Contract Parm for <contract number>" form is used to work with acquiring module contract parameters. This form is opened by clicking on the [Contract Parm] button in the "Acquiring Contracts" form (menu item "Acquiring →Acquiring Contracts →Acquiring Contracts").

> ℹ️ The "Contract Parm for <contract number>" form does not support work with custom parameters for tariffs or calculated parameters.

To add a new parameter, do as follows:

1. Register a custom parameter in the "Contract Parameters" form (see Fig. 29), menu item "Full → Configuration Setup → Common Handbooks → Contract Parameters".

Contract Parameters						<< < > >>	1 of 2	✕
Name	**Code**	**Value Type**	**Location of Current Value**	**Location Field**	**Hierarchy Level**	**Mirror To**	**Tariff Code E**	**ction A**
➡ ALLOW_REV_IN_TREE	ALLOW_REV_IN_TREE	String	Contract	Add Info 02	Current Level Only			
MY_PARM	MP	Counter	Contract	Add Info 01	Current Level Only			
Ins Del Query Check All								

Fig. 29. Registering a contract parameter

2. Select the required contract in the "Acquiring Contracts" form (menu item "Acquiring →Acquiring Contracts →Acquiring Contracts") and click on the [Contract Parm] button.

3. In the "Contract Parm for <contract number>" form (see Fig. 30), select the parameter created earlier, and click on the [Edit] button.

Fig. 30. List of conract parameters

4. In the *New Value* field of the "Contract Parameter – Set <data type>" form (see Fig. 31), specify the parameter value and click on the [Proceed] button to save the changes to the database.

Fig. 31. Entering the value of a contract parameter

ⓘ   The description above uses the example of adding the ALLOW_REV_IN_TREE custom parameter. This parameter allows the same parameter of a financial institution or the same global parameter to be redefined for a certain contract (see the description of the global paramenter "ALLOW_REV_IN_TREE" in the "Acquiring" chapter of the document WAY4™ Global Parameters"). The parameter value is only analysed if contracts participating in transactions have one common main contract. If ALLOW_REV_IN_TREE="Y" is set for a contract that participated in the original transaction (Advice), this transaction can be reversed regardless of the value of this parameter for the contract participating in the reversal.

2.9 Closing Contracts

A closed contract that is registered in the acquiring module is shown in the form with information about the contract as follows:

- The appropriate value is set in the *Contract Status* field:
  - For a main account contract or subcontract: "Account Closed".
  - For a device contract: "Device Closed".
  - For a service card contract: "Card Closed"
- The contract's closing date is specified in the *Closed* field.

These actions prohibit authorisations for contracts for which the closed contract is higher up in the hierarchy, although the statuses of these contracts will remain unchanged.

On the specified closing date, when the CDU (Contracts Daily Update) procedure is performed, "Closed" will be set in the *Approval* field and operations with this contract (including the hierarchy below it) will be prohibited.

3 Entering Sales Slips Manually

To enter sales slip packages, use the menu items in the "Full →Documents Input & Update →Batch Documents" user menu group.

It is recommended that the "Full → Documents Input & Update → Batch Documents →Merchant Batch New" menu item be used to enter new sales slips.

When this item is selected, the "Get Transaction Type" form comes up on the screen (see Fig. 32). It is used to indicate the type of the financial transaction reflected in the sales slip or slips being entered.
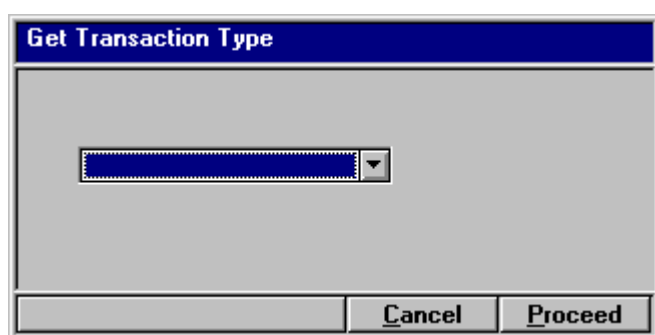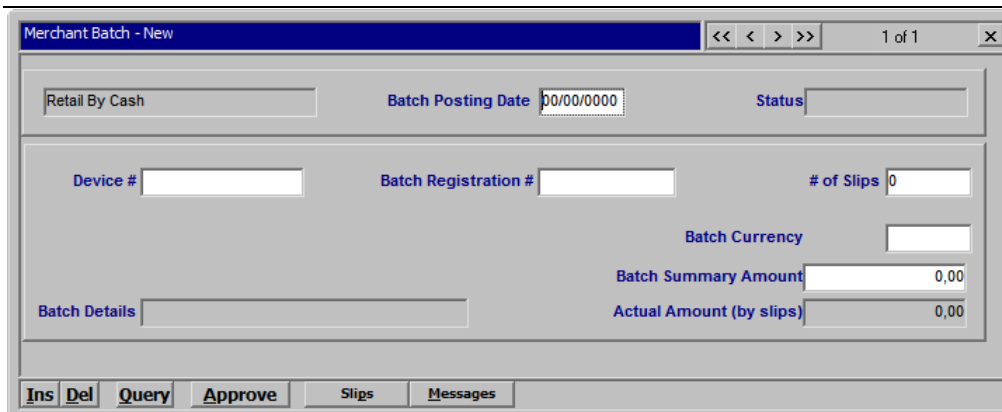
Fig. 32. Form for indicating the types of financial transactions while entering sales slips

When entering the type of a financial transaction, the following values may be selected:

- *Cash* - cash dispense transaction.
- *Credit* – the return of a purchase or other transactions crediting a cardholder's account.
- *Retail* – a retail operation.
- *Unique* –operations executed at casinos, etc.

After indicating the transaction type, click the [Proceed] button to invoke the "Merchant Batch - New" form (see Fig. 33).

Fig. 33. Form for entering batches of sales slips

This form contains the following editable fields:

- *Batch Posting Date* is the banking date on which the accounts of the contracts are either credited or debited as the result of the transactions. If no date is indicated, the current banking date is used instead.

- *Device #* is the number of the device, which is the value entered in the *Terminal ID* field of the form of the contract of the device involved in the transaction.

- *Batch Registration #* is the registration number of the batch of sales slips. This field is optional.

- *# of Slips* is the number of sales slips in the batch.

- *Batch Currency* is the currency of the transactions in the batch.

- *Batch Summary Amount* is the total amount of all the transactions in the batch.

After the "Merchant Batch - New" grid form has been filled out, data concerning the slips in the batch should be entered. To do that, invoke the "Slips for Merchant Batch - New" form (see Fig. 34) by clicking the [Slips] button.

Fig. 34. Form for entering data concerning the slips in a batch

By default, there is only one row in this form. The required number of rows can be added by clicking the [Ins] button. The number of lines must be the same as the number of slips indicated in the *# of Slips* field of the "Merchant Batch - New" form.

The following data must be entered in the fields of each line of the "Slips for Merchant Batch - New" form:

- In the *Card Number* field, enter the number of the bankcard.

- In the *Expire* field, enter the expiration date of the card. This field may be left blank if the transaction is completed using a card issued and acquired by the same bank.

- In the *Amount* field, enter the amount of the transaction reflected in the slip.

- In the *Trans Date* field, enter the date of the transaction.

- In the *AuthCode* field, enter the authorisation code. If the transaction amount is within the "Floor Limit" and requires no authorization, the field is not filled in.

It should be remembered that the total amount of all the entered transactions must be the same as the amount entered in the *Batch Summary Amount* field of the "Merchant Batch - New" form.

When the "Slips for Merchant Batch - New" form has been filled out, register the batch of slips by clicking the [Approve] button in the "Merchant Batch - New" form.

If the registration is successful, the slip batch and every slip in it will assume the "Waiting" status.

If incorrect data have been entered, the slip batch registration will be interrupted; the rejected slips will assume the "Decline" status and an error message will be displayed on the screen.

If a batch is rejected due to an error in its main document, click the [Messages] button of the "Merchant Batch - New" form to find out the reasons for the rejection.

If a batch is rejected due to an error in one of its slips, put the cursor on the line of the rejected slip and click the [Messages] button of the "Slips for Merchant Batch - New" form to find out the reasons for the rejection.

4 Entering Client and Contract Information from Files

In general, information about new acquiring module clients and contracts is registered in the WAY4 DB by importing data from special WAY4™ format files (see the document "Importing and Exporting Advanced Applications (XML Format)". that are created on the basis of client applications and agreements. If registered data must be changed, this is also done by importing the corresponding applications.

To start the procedure of importing applications from files, select the user menu item "OpenWay →Advanced Applications R2 →Application Processing →Acquiring XML Applications Import".

As a result, the window "Select Files" will be displayed with a list of files prepared for import (see Fig. 35).
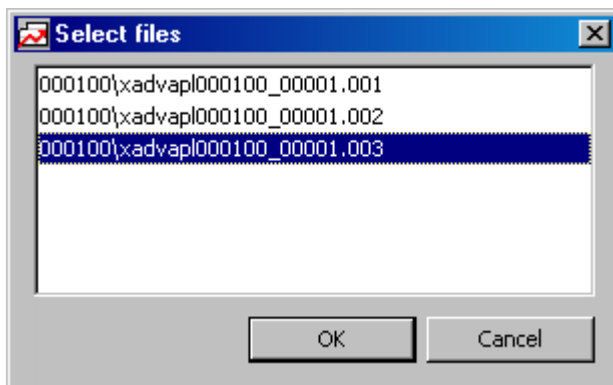
Fig. 35. List of files for import

Select files from this list by clicking on the file name while holding down the <Ctrl> key.

After selecting the required files, click [OK].

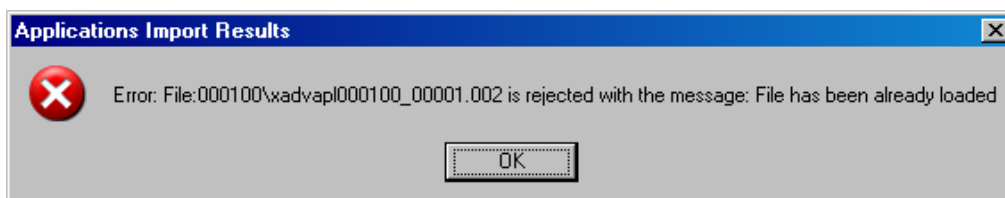If the selected file has already been imported, an error message will be displayed (see Fig. 36).

Fig. 36. Message about an attempt to import a file that has already been loaded

Monitoring of application file processing is described in the section "Monitoring File Processing" of the document "Advanced Applications R2".

5 Entering Sales Slips from External Files

Transaction data may be loaded into the database from special format files generated from payment documents (see the document "CBS Interface (UFX Format)").

File format and the parameters of pipes for importing documents is described in the document "WAY4™ UFX Interchange").

To import incoming documents from the banking system, use the menu group "Full →Core Banking Interface →CBS. Daily Procedures →CBS. Inward Processing". The import procedure is described in the section "Importing Documents from the CBS" of the document "CBS Interface (UFX Format)").

Analysis of the results of importing slips from external documents is described in the section "Analysing File Import Results" of " of the document "CBS Interface (UFX Format)").

6 Issuing Service Cards

A service card is issued after its card contract is registered in the DB (see "Information about Service Card Contracts"). Data needed to issue a service card is generated by a process called card marking.

Card marking changes the status of the card contract and creates a record in the DB, which is used when sending data for processing to the PIN Management module.
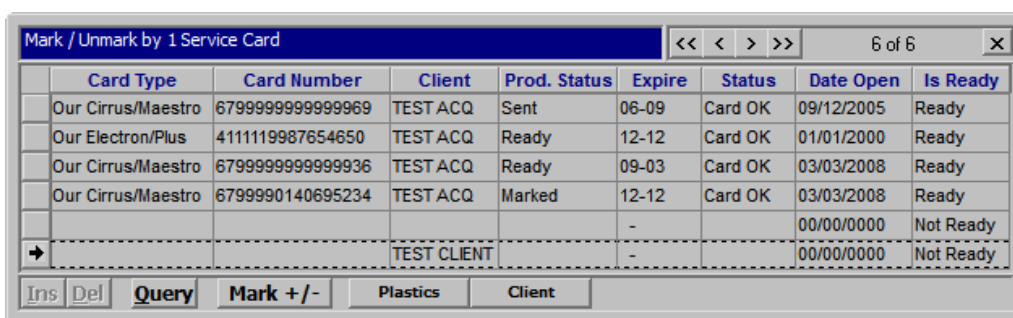
6.1 Marking Cards for Issuing

To mark a card, use the menu items in the "Acquiring →Service Card Production" user menu group.

ⓘ Before marking cards, the user should make sure that the required financial institution and client category appear in the status line. If the user has been granted the privilege of working with several financial institutions, the required values are set by selecting the "Acquiring → Service Card Production → Set Financial Institution" user menu item.

To mark cards, the "Acquiring →Service Card Production →Mark/Unmark by 1 Service Card" user menu item must be selected.

This will invoke the "Mark/Unmark by 1 Service Card" grid form (see Fig. 37). Its lines represent service card contracts registered in the database.

Card Type	Card Number	Client	Prod. Status	Expire	Status	Date Open	Is Ready
Our Cirrus/Maestro	6799999999999969	TEST ACQ	Sent	06-09	Card OK	09/12/2005	Ready
Our Electron/Plus	4111119987654650	TEST ACQ	Ready	12-12	Card OK	01/01/2000	Ready
Our Cirrus/Maestro	6799999999999936	TEST ACQ	Ready	09-03	Card OK	03/03/2008	Ready
Our Cirrus/Maestro	6799990140695234	TEST ACQ	Marked	12-12	Card OK	03/03/2008	Ready
				-		00/00/0000	Not Ready
		TEST CLIENT		-		00/00/0000	Not Ready

Mark / Unmark by 1 Service Card   << < > >>   6 of 6   ✕

Ins Del   **Query**   **Mark +/-**   **Plastics**   **Client**

Fig. 37. The grid form for marking service cards

To mark a card, move the cursor to the line representing the needed card contract and click the [Mark +/−] button. When this is done, the parameters of the selected card contract are checked.

If for issuing a card the corresponding Service is not specified in the Service Package of the card contract, a Production Event code must be specified. This can be done in one of two ways:

- When configuring the service card contract subtype, by specifying a tag in the *Add Parms* field (see the description of the tags NEW and RENEW in the section "Tags used when configuring Products and contract subtypes" of the document "Setup Tags").

- Using the global parameter CARD_PROD_ENABLED_EVENTS (see the section "Card Production" of the document "WAY4™ Global Parameters").

- If a value other than "Card OK" is found in the contract status field, card marking is cancelled and an error message appears on the screen (see Fig. 38).

Fig. 38. Error message during card marking

If the parameters check is successful, the "Marked" value appears in the *Prod. Status* field of the selected line of the form and in the field of the same name of the card contract.

When a card or cards have been marked, an entry in the "Plastics for <card_number>" form is created (see Fig. 39). This entry is used when sending data for processing to the PIN Management module.

The "Plastics for..." form is invoked by clicking the [Plastics] button in the "Mark/Unmark by 1" form or the corresponding card contract form (see the section "Information about Service Card Contracts").
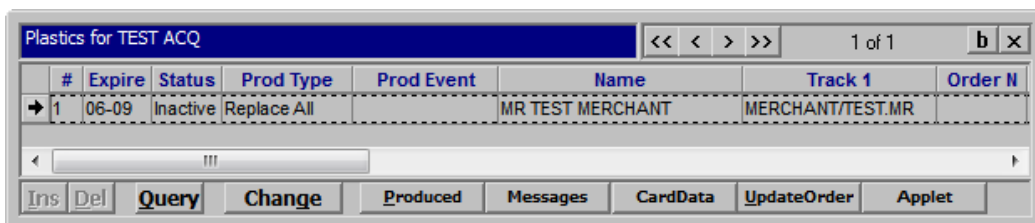

Fig. 39. An entry made in the "Plastics for..." form after the marking of a card

After a card has been marked, the default value in the *Status* field of the newly generated entry in the "Plastics for ..." form is "Inactive". Certain fields of such entries may be edited after clicking the [Change] and [Update Order] buttons.

When the [Change] button is clicked, the "Production Type" form is invoked (see Fig. 40). In this form, the user may change the issuing parameters of a card.
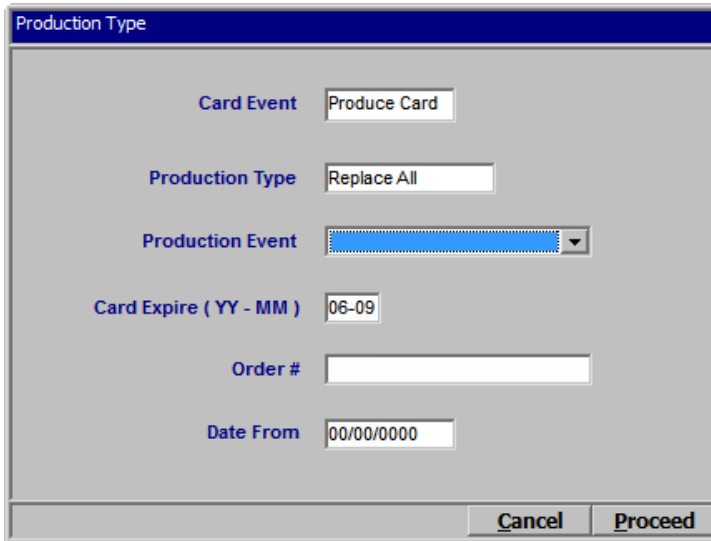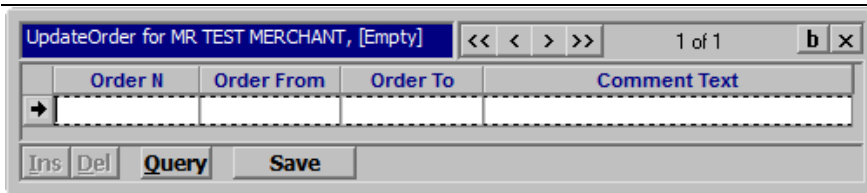

Fig. 40. The form for changing the issuing parameters of cards

The "Production Type" form allows users to change the reason for issuing a service card (*Card Event* field), the production type (*Production Type* field, the Event for production type (*Production Event* field), the card expiry date (*Card Expire* field) and to enter the card production order number in the *Order#* field.

When filling the *Production Type* field, the following values may be selected:

- "Replace All" will issue a service card and a PIN mailer when a new card is issued.

- "Replace Plastic" – issue plastic only, for example, when reissuing an expired card.

- "Replace PIN" – reprint PIN mailer (this is only possible by special agreement with the system vendor).

- "Replace CVV" – issue plastic with a new CVV.

- "Reorder PIN" – issue a new PIN.

- "Replace Add Parms" – issue additional parameters for a plastic card, for example, PIN2.

- "Chip Data Only" – calculate cryptographic values for smart cards (no PIN is generated and no PIN mailer is printed).

Clicking the [Update Order] button of the "Plastics for ..." form opens the "Update Order for ..." form, which is used to edit the order parameters of a service card (see Fig. 41).

Fig. 41. The form for editing the order parameters of a service card to be issued

The following fields of this form should be filled:

- *Order N* is the card issue order number.

- *Order from* is the name of the office the order comes from.

- *Order to* is the name of the office to which the issued card and PIN mailer must be sent.

- *Comment Text* contains comments about the order.

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

It should be remembered that when users activate a card contract by clicking the [Approve] button in the form of the higher-ranking accounting contract, the card is marked automatically (see "Information about Service Card Contracts").

To cancel card marking, put the cursor in the required row of the "Mark/Unmark by 1 Service Card" grid form and click on the [Mark +/−] button. This activity is only available if plastic for the card has not yet been issued, and *Production Status* of the application to produce the card is not "Locked" or "Ready". The "Marked" value in the *Production Status* changes to "Ready" and the corresponding record will be deleted from the "Plastics for <...>" form.
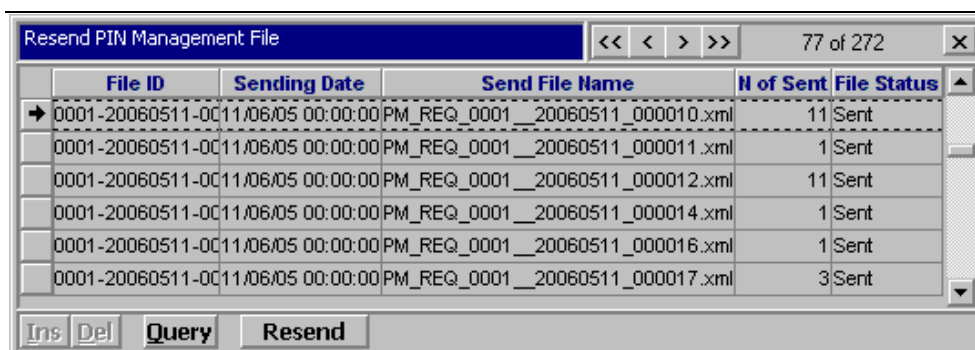
6.2 Exporting Card Data for Processing by the PIN Management Module

Data prepared by marking are exported to the PIN Management module by selecting the user menu item "Acquiring →Send/Receive Production Batches →PIN Management File Export".

After data have been exported, "Sent" will be set in the *Plastic* field of the form for card contracts whose information was sent to the PIN Management module for processing.

If data that have already been exported must be re-exported, select the user menu item "Acquiring →Send/Receive Production Batches →Resend PIN Management File".

The "Resend PIN Management File" grid form will be displayed (see Fig. 42). This form contains a list of files sent to the PIN Management module for processing.

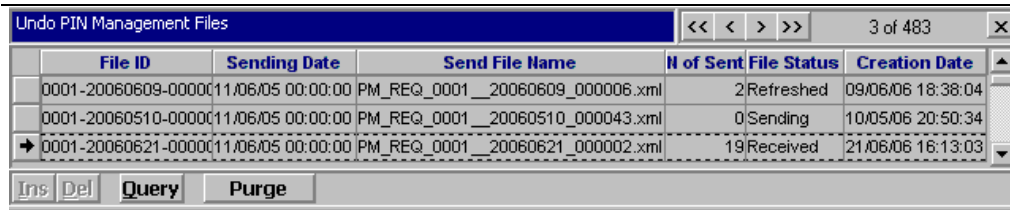*Fig. 42. Form for selecting files to be resent to the PIN Management module*

In addition to fields with a sent file's parameters, this form contains the following fields:

- *N of Sent* – number of service cards whose data were exported in the corresponding file.

- *File Status* – status of an exported job file:

  - "Sending" - the job file has been prepared for sending to the PIN Management module, but has not been set.

  - "Sent" – the job file has been sent to the PIN Management module.

  - "Received" – the job file was processed by the PIN Management module and a file with the results of processing has been sent to the acquiring module.

  - "Receiving" – the job file was processed by the PIN Management module, but an error occurred during processing.

  - "Rolled Back" – processing of the file was cancelled.

  - "Refreshed" – the job file was resent.

To resend a file, put the cursor on the required row and click on the [Resend] button.

If for some reason it is necessary to cancel the results of exporting data for processing by the PIN Management module, select the user menu item "Acquiring →Send/Receive Production Batches →Undo PIN Management Files".

When this menu item is run, the "Undo PIN Management Files" form will be displayed on the screen (see Fig. 43). This form contains a list of files sent to the PIN Management module for processing.

Fig. 43. List of files sent to the PIN Management module for processing

The fields in this form are the same as those in the "Resend PIN Management File" form.To cancel an exported file's jobs, put the cursor on the row corresponding to the required file and click on the [Purge] button.

After the exported file's jobs have been cancelled, the "Marked" value will be restored in the *Plastic* field of the forms for those card contracts whose card issuing jobs were cancelled.

6.3 Importing Card Data after Processing by the PIN Management Module

Service card data received after processing by the PIN Management module are imported by selecting the user menu item "Acquiring →Send/Receive Production Batches →PIN Management Response File Import".

This starts a process for importing data, during which the user should select the names of the files being imported in the "Load Files" form (see Fig. 44).
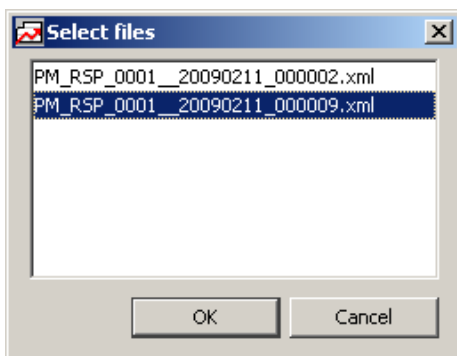

Fig. 44. Selecting files for importing data from the PIN Management module

Files for import are selected from this list by clicking on the file and pressing <Ctrl>.

After the required files have been selected, click on the [OK] button.

When data are imported after processing by the PIN Management module, the "Inactive" value of the *Status* field in the "Plastics for <...>" form for cards whose data were imported will change to "Active" (if data were successfully processed in the PIN Management module) or "Decline" (if an error occurred when processing data).

After importing data from the PIN Management module, the "Sent" value in the *Plastic* field of the forms for card contracts whose information was received will change to "Ready".