

Operation Manual

Menu Editor

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DB Manager users access forms and processes through the user menu.

The DB Manager user menu is a hierarchical structure in which separate elements (menu items) are brought together in groups in the same way as folders and files in MS Windows Explorer.

Each menu item has a corresponding sequence of actions executed by the program in order to provide access to information in the WAY4™ database and/or to start a system process.

The sequence of actions executed by the program is called a Menu Item Definition. A Menu Item Definition includes menu sub-items that either open editing windows (forms) for access to database information (records) or start certain processes.

Editing the menu means the following:

- Creating, deleting or renaming DB Manager user menu items.
- Creating, deleting or editing menu item definitions.

This document is intended for DB Manager users, bank or processing centre employees acting as system administrators.

While working with this document, it is recommended to refer to the following resources from the WAY4™ documentation series:

- DB Manager Manual
- Housekeeping
- Form Builder
- Scheduler R2
- DB Manager User Management

The following notation is used in this document:

- Field labels in screen forms are shown in *italics*.
- Screen form button labels are encased in square brackets, such as [Approve].
- Sequences for selecting user menu items are shown with arrows, as in "Issuing → Contracts Input & Update".
- Sequences for selection of system menu items are shown using another type of arrow, as in: "Database => Change password".
- Key combinations used when working with DB Manager are shown in angular brackets, for example <Ctrl>+<F3>.
- The names of directories, files and file paths that vary for each local instance of the program are also shown in angular brackets, as in <OWS_HOME>.



Warnings about potentially hazardous situations or actions.



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

1 Editing the User Menu

This section contains basic definitions and describes how to edit the user menu.



Note that DB Manager prohibit editing the standard menu structure (user menu groups and items) supplied with the system and entitled "OpenWay".

1.1 Menu Group

A menu group is an element of the user menu's hierarchical structure. It may contain menu groups of the next level down, menu items and links to menu groups and/or items contained in other sections of the user menu.

Menu groups are marked with  icons.

1.1.1 Adding a New Menu Group

To add a new menu group, right-click in the right-hand section of the "Menu Tree" user menu window and select the "Insert Menu" item from the context menu that opens (see Fig. 1),.

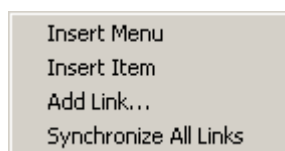


Fig. 1. Context menu for adding new user menu groups or items

This will create a new menu group named "New Menu" in the user menu.

1.1.2 Configuring Menu Groups

Information on menu group parameters is accessed through a context menu opened by right-clicking on the name of the corresponding group (see Fig. 2).

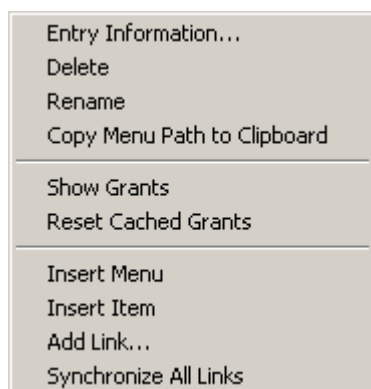


Fig. 2. Context menu of a group

This context menu makes it possible to:

- Receive information, using the "Entry Information" item, about the place of the selected group in the user menu's hierarchical structure and the date and time it was created and last modified.
- Delete a menu group using of the "Delete" menu item.
- Rename a menu group using the "Rename" menu item.
- Copy the name of a user menu group and the path to it into the clipboard, using the "Copy Menu Path to Clipboard" menu item.
- Receive information, using the "Show Grants" menu item, about the privileges required for a user to obtain access to this menu group.



Note that if the same menu group is called more than once during one DB Manager session, this command returns cached rather than actual data.

- Using the "Reset Cached Grants" menu item, clear data on required access privileges cached after execution of the "Show Grants" command.

1.1.3 Renaming Menu Groups

To rename a menu group, right-click on the name of the desired group and select "Rename" from the context menu (see Fig. 2).

1.1.4 Deleting Menu Groups

To delete a user menu group, right-click on the name of the desired group and select "Delete" from the context menu (see Fig. 2).



Caution should be exercised when deleting user menu groups as this may make some system resources inaccessible.

1.2 Menu Item

A menu item is an element of the user menu's hierarchical structure. A menu item is used to start a particular sequence of actions executed by the program.

1.2.1 Adding a New Menu Item

To add a new menu item, right-click in the right-hand section of the user menu window and select "Insert Item" from the context menu that appears (see Fig. 1).

The "Select Menu Item" window will be displayed (see Fig. 3). This window contains a list of menu item definitions created in DB Manager.

The list can be sorted using the *Sort* radio buttons:

- *Name* – by name.

- *Icon* – by the icon marking the items in the user menu.
- *Type* – by type.

A new menu item is added after selecting the desired definition from the list and clicking [OK].

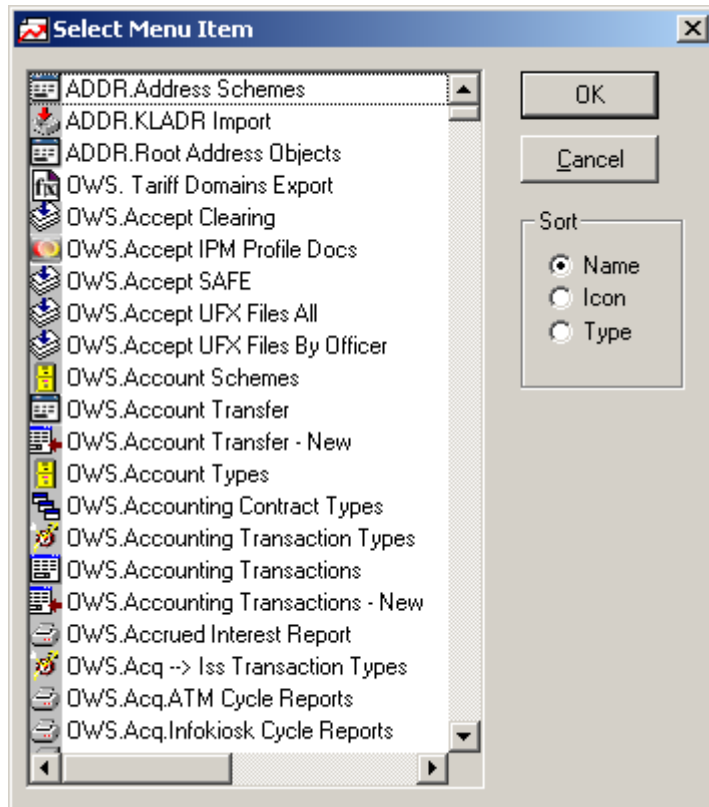


Fig. 3. List of DB Manager menu item definitions

To add a menu item with a new definition, first add the new menu item definition to the list (see "Creating a New Definition").

1.2.2 Renaming Menu Items

Menu items are renamed the same way menu item groups are renamed (see "Renaming Menu Groups").

1.2.3 Deleting Menu Items

To delete a menu item, right-click its name and select "Delete" from the context menu (see Fig. 4).

Menu Editor

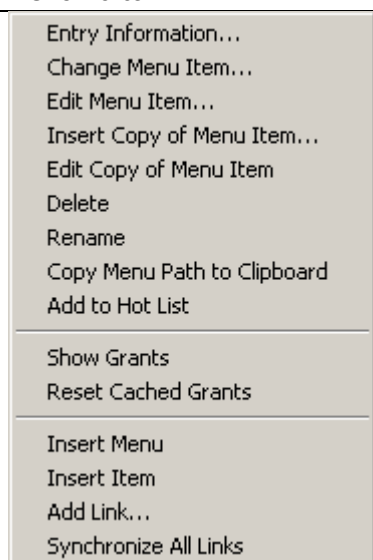


Fig. 4. Context menu of a user menu item



Caution should be exercised when deleting user menu items as this may make some system resources inaccessible. Note that deleting a menu item does not delete its definition from the list.

1.2.4 Adding Menu Items to the Hot List

To add a menu item to the Hot List, right-click its name and select "Add to Hot List" from the context menu (see Fig. 4).


The name of this menu item will be displayed at the top of the list that opens when the "Hot Items" item is selected from the system menu and a corresponding button will appear on the toolbar.

A menu item can be quick-started either by selecting the item from the "Hot Items" drop-down list or by clicking on its toolbar button.

For more information on changing the order of and deleting menu items from the "Hot Items" list see the "System Menu" section of the "DB Manager Manual" document.

1.3 Links

Users can configure the user menu according to their needs by using links to menu groups and items.

Creating links means adding shortcuts to the user menu that refer to menu groups and items. Shortcuts are marked with  signs added to group or item icons.

The system of links makes it possible to regroup menu items as desired by the user without altering the structure of the menu supplied by WAY4™ vendors.

The user menu may change as the result of a system upgrade or upgrade of the menu itself (see "Importing and Exporting User Menus"). For changes in the user menu resulting from an upgrade to be reflected in links, select "Synchronize All Links" from a link's context menu (see Fig. 5).

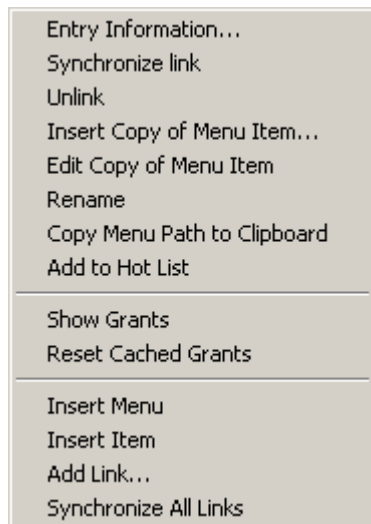


Fig. 5. Context menu of a link

1.3.1 Adding New Links

To add a new link, right-click in the right-hand section of the "Menu Tree" user menu window and select "Add Link" (see Fig. 1) from the context menu.

The "Select Menu" window will be displayed, showing the user menu tree. In this window, select the menu group or item that requires a link and click the [OK] button.

1.3.2 Renaming Links

When a link to a menu group needs to be renamed, its connection with the menu element it refers to should be severed first. To do so, right-click the link and select "Unlink" from the context menu that opens (see Fig. 5). If this isn't done, the old name of the link will be restored when "Synchronize All Links" is selected from the context menu.



Note that when a link to a menu group is renamed, its links with menu elements remain unbroken.

1.3.3 Deleting Links

To delete a link, right-click the name of the link and select "Unlink" on the context menu (see Fig. 5) that appears.

This will break connection between the link and the element to which it refers. The link may now be deleted as described in the "Deleting Menu Items" section.

1.3.4 Adding Links to the Hot List

Links are added to the Hot List in the same way as described in the "Adding Menu Items to the Hot List" section.

2 Working with Menu Editor

This section describes the principles of working with Menu Editor.



Note that DB Manager prohibit editing the standard menu structure (user menu groups and items) supplied with the system and entitled "OpenWay".

2.1 Starting Menu Editor



Menu Editor is a DB Manager tool intended for creating and editing menu items and Menu Item Definitions.

Menu Editor may be started in two ways:

- By selecting the "Database => Menu Items" item from the system menu (pressing the <F7> key)
- By right-clicking a menu item in the right-hand section of the user menu and then selecting "Edit Menu Item" from the context menu that opens (see Fig. 4).

2.2 Menu Editor Window

The Menu Editor window (see Fig. 6) contains three sections:

- Menu Item Definitions – an alphabetic list of menu item definitions available in the system.
- Selected Items Definition – parameters of the currently selected menu item, its name and the name of its icon file.
- Sub-items for Current Item – a list of current menu item definition's sub-items, showing their parameters. Sections with sub-item parameters are separated from each other by horizontal lines. The left upper corner of each section contains a box with the sub-item's serial number the number of the currently selected sub-item is shown in bold font. To navigate between sub-items, click their numbers. The order of sub-items can be changed by clicking the  (execute earlier) and  (execute later) buttons

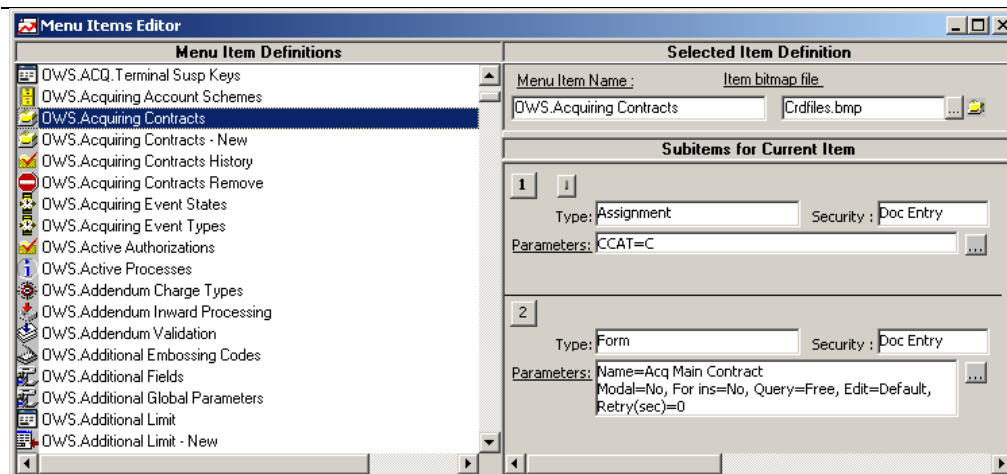


Fig. 6. Menu Editor window

2.3 Changing Menu Item Definitions

2.3.1 Creating a New Definition

A new menu item definition can be added to the list of those available in the system in two ways:

- By creating a new item definition.
- By copying an existing item definition.

To create a new item definition, select the "Items Editor => Insert Item Definition" item from the system menu (or press <Alt>+<I>) or right-click inside the Menu Editor section containing the list of item definitions (see Fig. 6) and select "Add Item Definition" from the context menu that appears (see Fig. 7).

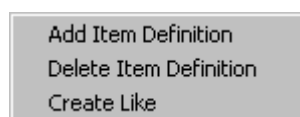


Fig. 7. The context menu for editing the list of item definitions

A new definition named "New Item", containing no sub-items, will be added to the list.

To copy an existing item definition, right-click the one to be copied and select "Create Like" from the context menu that appears.

A new definition with the same parameters and list of sub-items as the original will be added to the list.

2.3.2 Deleting a Definition from the List

To delete an item definition, click on its name in the list and select "Items Editor => Delete Item" from the system menu (or press <Alt>+<D>). It is also possible to also right-click the name of the definition and select "Delete Item Definition" from the context menu (see Fig. 7).

To confirm deletion of this item definition, click [OK] in the "Deletion" window that appears (see Fig. 8).

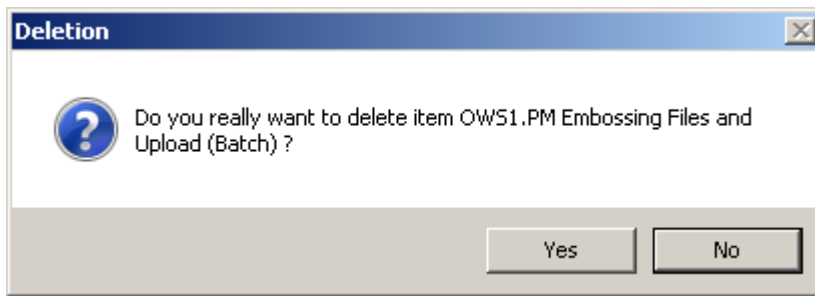


Fig. 8. Dialogue window for confirming the deletion of an item definition



Before deleting a menu item definition from the list, ensure that no menu item has been created on its basis or the definition is not associated with an existing menu item (see the "Search by Reference (the "Dependencies" window)" section of the "DB Manager Manual" document). If this is not the case, the menu item definition cannot be deleted.



Note that the deletion of menu items may have serious consequences, causing certain system resources to become unavailable.

2.4 Editing Menu Item Definitions

2.4.1 Renaming Menu Item Definitions


To rename a menu item definition, select the desired definition by clicking on it in the list. Edit its name in the *Menu Item Name* field of the "Selected Item Definition" section of the Menu Editor window (see Fig. 6).



Note that after renaming a menu item definition, it is necessary to make corresponding changes in all the menu item sub-items that have the changed definition name as a parameter (see ""Menu Item" Type").

The presence of the "OWS" prefix in a name shows that this definition is among those supplied by the system vendor. Menu item definitions with this prefix can be updated during a system upgrade (see "Importing and Exporting User Menus"). Therefore, users are prohibited from editing these menu definitions. If changes are necessary, new menu item definitions without the "OWS" prefix in their names should be created. Such definitions will not be updated during a system upgrade.


2.4.2 Replacing Menu Item Icons

To set an icon for a menu item, specify the name of the graphic file that contains it in the *Item bitmap file* field, (if the file is located in the default directory) or click the  button to the right of the field and select the name of the graphic file and

the path to it. By default, these files are stored in the directory "<OWS_Home>\Client\Shared\Bmp".

2.5 Changing the List of Menu Item Definition Sub-items

2.5.1 Creating a New Sub-item

To create a new menu item definition sub-item, select the definition to be edited by clicking it and then select the "Items Editor => Add Subitem" from the system menu or press (<Ctrl>+<I>). It is also possible to right-click inside the section containing the sub-items of the currently selected definition (see Fig. 6) and select [Add Subitem] from the context menu that opens (see Fig. 9) or click the  [Insert Subitem] button on the toolbar.

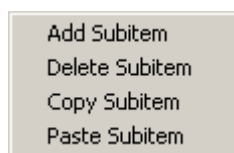


Fig. 9. The context menu for editing the list of sub-items

A new sub-item will be added to the section with the list of sub-items (see Fig. 10).

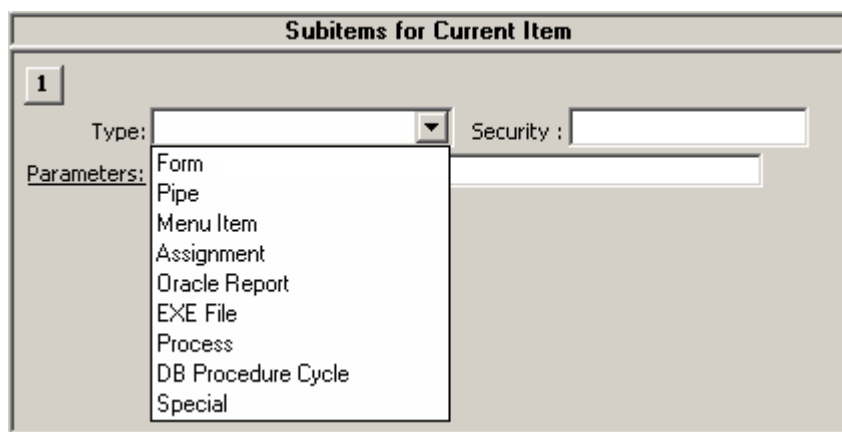



Fig. 10. Adding a new menu sub-item

After a new sub-item has been added, select its type from the *Type* field drop-down list and fill in the parameter fields, depending on the sub-item type (see "Editing Menu Sub-items").

2.5.2 Deleting Sub-items

To delete a sub-item, select it by clicking on any of its fields or on the box with the sub-item's number and then select "Items Editor => Delete Subitem" from the system menu (<Ctrl>+<D>), or click the  [Delete Subitem] button on the toolbar. It is also possible to right-click the sub-item and select "Delete Subitem" from the context menu that opens (see Fig. 9).

To confirm deletion of the sub-item, select [Yes] in the "Deletion" window (see Fig. 11).

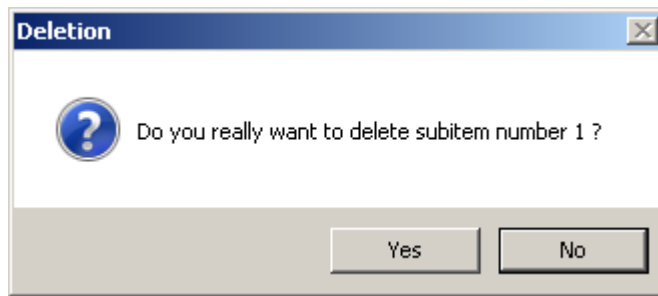


Fig. 11. Confirmation dialog window that appears when deleting menu sub-items



Note that the deletion of a menu sub-item may have serious consequences, causing certain system resources to become unavailable.

2.6 Editing Menu Sub-items

The sub-item type is specified in the drop-down list of the *Type* field (see Fig. 12).

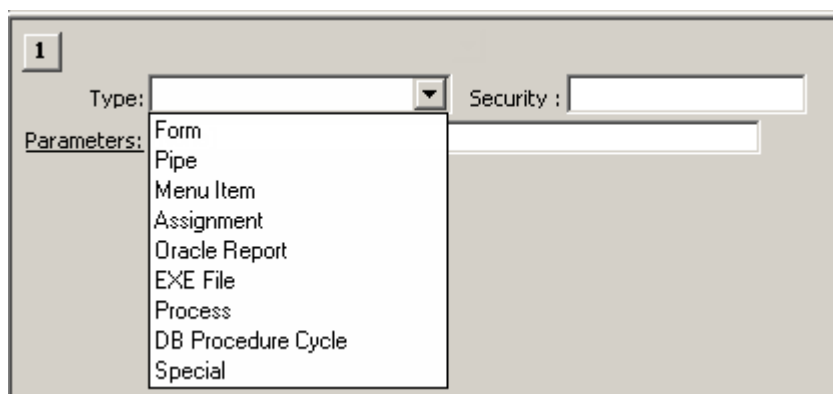
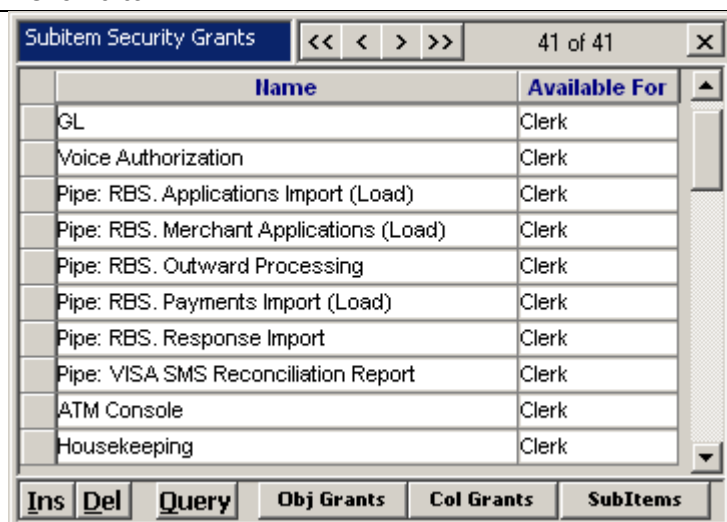


Fig. 12. Selecting a menu sub-item type



Caution should be exercised when changing a menu sub-item type as the sub-item parameters are reset and no "undo" option exists.

User access privileges for the *Type* field are defined in the *Security* field. These privileges are specified in a form for granting access privileges for menu item definition sub-items (see Fig. 13).



Name	Available For
GL	Clerk
Voice Authorization	Clerk
Pipe: RBS. Applications Import (Load)	Clerk
Pipe: RBS. Merchant Applications (Load)	Clerk
Pipe: RBS. Outward Processing	Clerk
Pipe: RBS. Payments Import (Load)	Clerk
Pipe: RBS. Response Import	Clerk
Pipe: VISA SMS Reconciliation Report	Clerk
ATM Console	Clerk
Housekeeping	Clerk

Fig. 13. Form for setting access privileges for menu item definition sub-items

The following sub-item types exist in DB Manager:

- "Form" – to open windows for viewing and editing data.
- "Pipe" – to start C pipes.
- "Menu Item" – to execute menu items available in the system.
- "Assignment" – to assign values to local variables for the current DB Manager session.
- "Oracle Report" – to launch Oracle Report Generator.
- "EXE File" – to start executable files under the operating systems running on client workstations.
- "Process" – to launch stored procedures executed by the database server.
- "DB Procedure Cycle" – to execute specified database procedures affecting all table rows meeting preset conditions.
- "Special" – to execute special program modules on client workstations.

2.6.1 "Form" Type

When a Form type sub-item is executed, the specified form is displayed on the screen. The parameters of sub-items of this type are specified in the following fields of the "Forms" form (see Fig. 14):

- Form name – selected in the left-hand section of the window from the list of forms registered in the system (see the "Starting Form Builder" section of the "Form Builder" document).
- *Modal* – used to block the entry of data in other forms that are open. If the "Yes" value is specified in this field, when the form is opened, data can be entered and modified in this form only. It will not be possible to enter and modify data in all other forms.

- *For ins* – if the "Yes" value is specified in this field, the form may be used for adding new records only. No data will be loaded from the database when this form is opened.
- *Query* – specifies the preliminary data selection method for this form (see the "Entering and Editing Data" chapter of the "DB Manual" document).
 - None – the window for preliminary data selection will not open when this form is started.
 - Free – preliminary data selection is carried out according to either user-created criteria or a pre-set *scenario*.
 - Prepared – preliminary data selection is carried out only according to a pre-set scenario.
- *Edit* – when the "Default" value is specified, this form's fields will be edited according to default parameters (see the section "Column Parameters" and "Field Properties" of the document "Form Builder"). If the value is set to "No edit", it will not be possible to edit form fields.



Note that if in parameters of the Editor's subform on the "Links" ("Details") tab the "Edit" field's value is "Default", and column parameters of the subform have the "Editable" flag while settings of the main menu item of the "Form" type have the "No Edit" value in parameters of the "Edit" field, the subform will not be editable.

- *Retry(sec)* – data refreshment interval. Data displayed in the form will be automatically re-loaded from the database every "n" number of seconds, according to the value specified in this field. If the parameter is set to "None", data will be loaded into the form only when it is opened and/or when other procedures refreshing data are called.

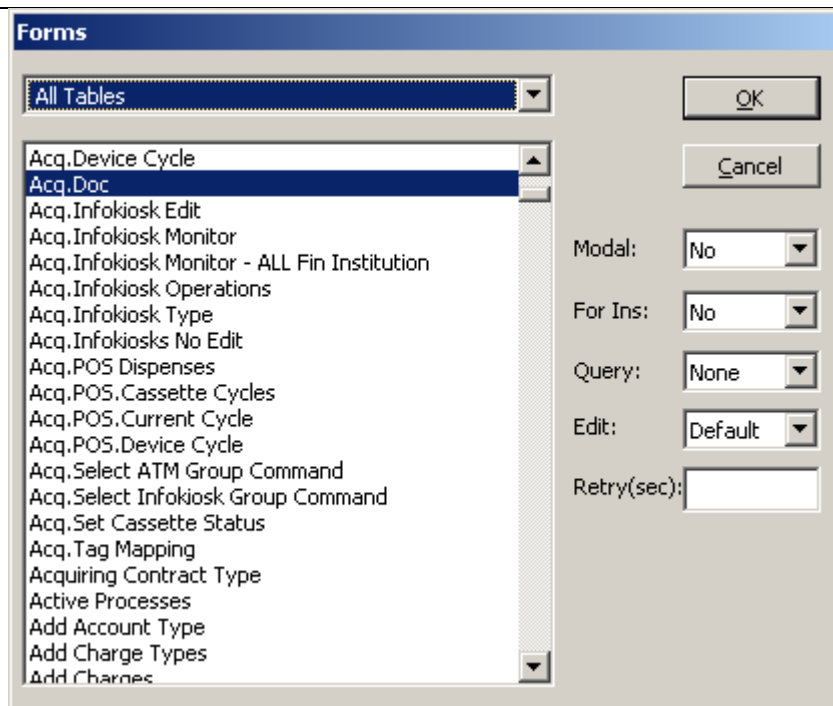


Fig. 14. The parameters of a sub-item of the "Form" type



Note that if the *Query* parameter is set to "Prepared" and no preliminary data selection scenarios have been saved (see the "Entering and Editing Data" chapter of the "DB Manual" document), this menu item (opening a form) cannot be executed and the error message "Saved queries are absent" will be displayed.

2.6.2 "Pipe" Type

2.6.2.1 Configuring Sub-items

When a "Pipe" type sub-item is executed, a C pipe is started. Sub-item parameters are entered in the *Parameters* field (see Fig. 15).

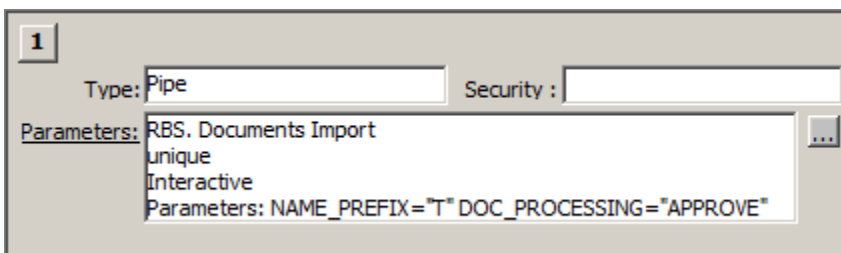

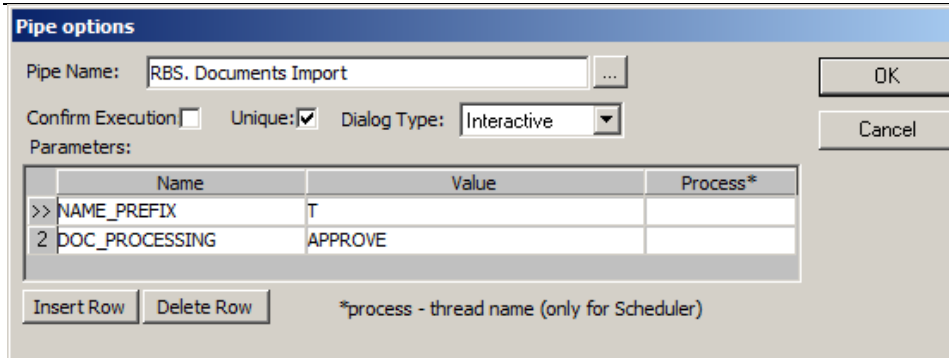


Fig. 15. Parameters of a "Pipe" type sub-item

The values of these parameters can be changed in the "Pipe options" dialogue window (see Fig. 16), opened by clicking the  button located to the right of the *Parameters* field.



Pipe options

Pipe Name: ...

Confirm Execution ☐ Unique: ☒ Dialog Type:


Parameters:

	Name	Value	Process*
>>	NAME_PREFIX	T	
2	DOC_PROCESSING	APPROVE	

*process - thread name (only for Scheduler)

Fig. 16. Window for entering "Pipe" type sub-item parameters

The "Pipe options" window contains the following fields:

- *Pipe Name* – field for specifying the pipe name; to open the list of pipe names, click the  button.
- *Confirm Execution* – if this box is checked, before starting the pipe, a request to confirm execution will appear; if the answer is no, the pipe will not be executed.
- *Unique* – if this box is checked, the pipe can be executed only on one workstation and during just one DB Manager session at a time.
- *Dialog Type* – a pipe can be executed in one of the following three modes:
 - *Interactive* – the pipe execution process will be shown in a corresponding dialogue window.
 - *Errors only* – only errors occurring during pipe execution will be shown in the dialogue window.
 - *Silent* – during execution of the pipe, only the progress bar is displayed and logging is maintained in the process log. Auxiliary dialog windows (for example, the file selection window, window confirming the execution of various actions) are not displayed.
- *Parameters* – field group for specifying pipe parameters. Each pipe has a unique set of parameters and their values. Clicking on the [Insert Row] button will add a new parameter, while clicking on [Delete Row] will delete the selected one.
 - *Name* – pipe parameter name.
 - *Value* – parameter value.
 - *Process** – this field is used in parallel mode when Scheduler is used to start the pipe (see the document "Scheduler R2"). This mode is only for pipes importing and exporting data from files and is used to improve performance when executing a large number of operations of the same type. In this case, process identifiers are set in the *Process** field. The number of different identifiers indicates the number of parallel processes being executed. Pipe parameters for which the same value is

specified in the *Process** field belong to the same process. Parameters for which the *Process** field is empty are common to all processes.



If Oracle RAC (Real Application Clusters) are used, pipes can be started in a WAY4 Cards database server node that differs from the node in which DB Manager is running. For this to be possible, set the pipe parameter "ALTERNATIVE_CONNECT_STRING" and define the parameter value in one of the following ways:

- "DBQ=<TNS Name>" – ODBC driver connect string. For example, "ALTERNATIVE_CONNECT_STRING=DBQ=Test_TNS".
- "@<Parameter Name>@", where <Parameter Name> is the name of the configuration parameter whose value must be used. The parameter name must be specified in uppercase letters and enclosed in "@" characters. The configuration parameter is searched for in the "db.ini" or "dbm.ini" files. Example: we assume that the parameter "SECOND_CONNECT_STRING=DBQ=My_TNS" is set in the "db.ini" file, so in the "Pipe options" window (see Fig. 16) for the pipe we should specify the parameter "ALTERNATIVE_CONNECT_STRING=@SECOND_CONNECT_STRING@". As a result, the string "DBQ=My_TNS" will be used as the connect string.

2.6.2.2 An Example of the Use of the "Exe Executer" Pipe

This pipe ensures repeated execution of a specified procedure for processing similar information in large volumes of input data. For instance, it is possible to generate large numbers of similar reports. In this case, the input data for each cycle of procedure execution is the contract for which the report is being generated.

For instance, the "Full → Customer Support → Statements → Cardholder Batch Statements → Batch Cardholder Statements" menu item starts the batch procedure generating statements for all card contracts.

This item has three sub-items (see Fig. 17).

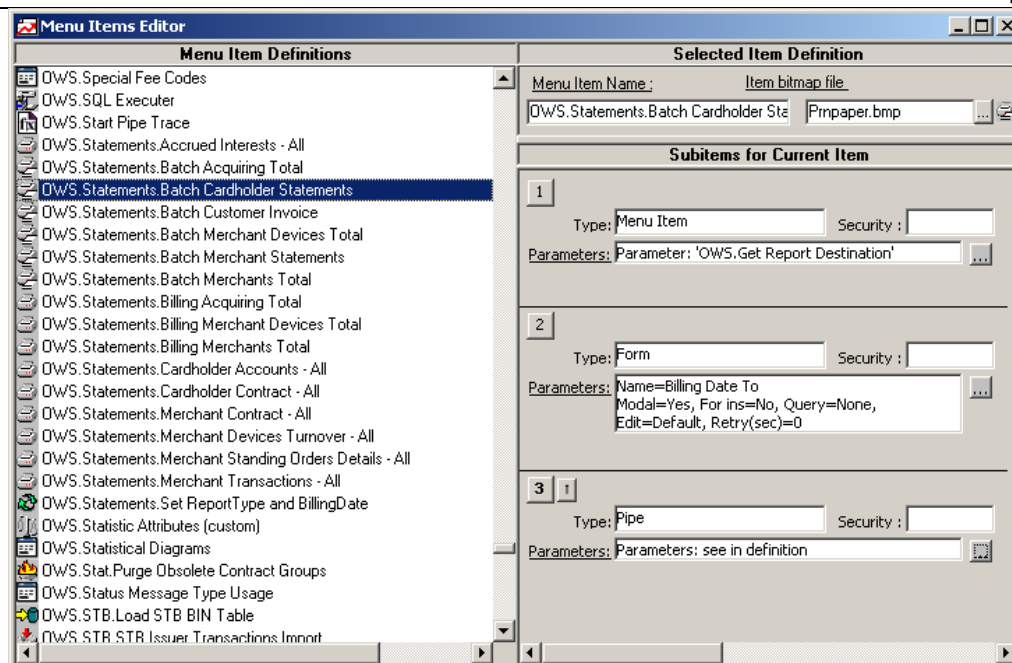


Fig. 17. Window for editing the "Batch Cardholder Statements" menu item

The Pipe Options window of the "Exe Executer" pipe run by this menu item is shown in Fig. 18.

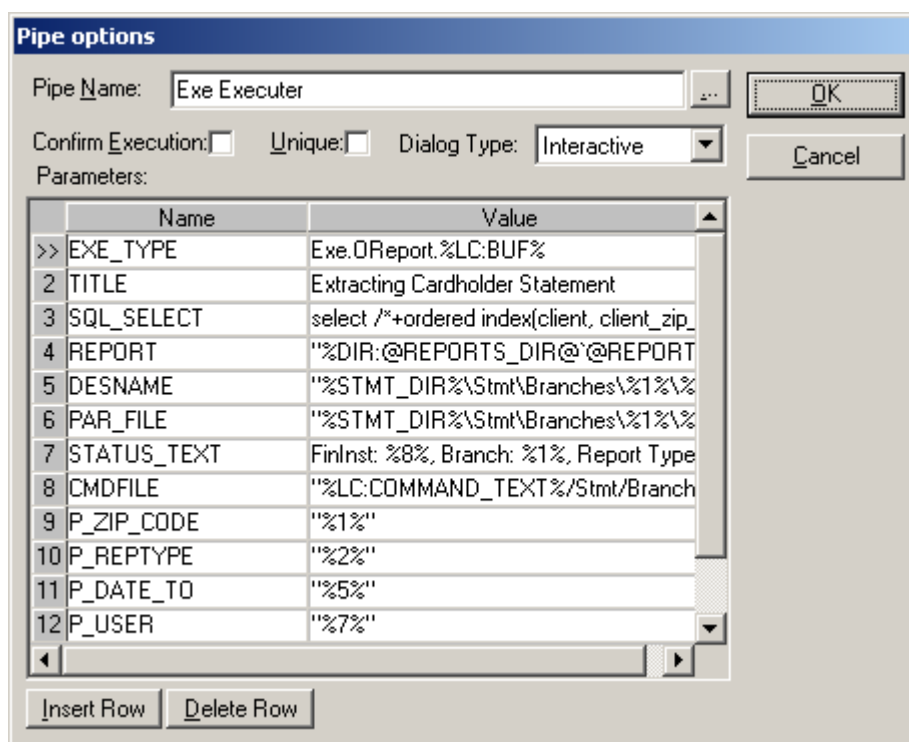


Fig. 18. Pipe Options window of the "Exe Executer" pipe

The pipe has the following mandatory parameters within this menu item:

- EXE_TYPE – name of the section in the DB.INI or DBM.INI file, containing the run parameters of the Oracle Reports system.

- TITLE – title of the progress indicator that appears on the screen during execution of the procedure.
- SQL_SELECT – database query starting the Oracle Reports system for each line it returns.

The query may contain several lines. If there is not enough room to enter them all, the border of the space can be dragged downwards or upwards.

- REPORT – report template file name.
- DESNAME – report file name.
- P_ZIP_CODE, P_REPTYPE, P_DATE_TO, P_USER, P_F_I, P_LANGUAGE – values of parameters used for setting data selection conditions for reports produced by the Oracle Reports system.
- PAR_FILE – name of the Oracle Reports system parameters file for the workstation on which the pipe is run.
- CMDFILE – name of the Oracle Reports system parameters file for the report server.
- STATUS_TEXT – text in the progress indicator that appears on the screen while each task is being generated.

In entering all parameter values, substitutions may be used for DB Manager environmental variables and the values returned by the SQL_SELECT query. Environmental variables are accessed according to their names (for example, "%STMT_DIR%") and query results according to the number of the field in the query (for example, "%8%").

The value of the EXE_TYPE parameter is the name of the section in the DB.INI or DBM.INI configuration file, containing various Oracle Reports system parameters.

Example 1. The content of a section of the configuration file:

```
[Exe.Oracle.Local]
PAR_FILE=%STMT_DIR%\report.cfg
NOT_INCLUDE_TO_PAR_FILE=USERID;CMDFILE;BACKGROUND;BATCH
EXE_NAME=rwrun60.exe
USERID=%OWN_CONNECT%
CMDFILE="%SPEC:PAR_FILE%"
BATCH=NO
BACKGROUND=NO
MODE=character
DESTYPE=file
DESFORMAT=wide
PRINTJOB=no
PARAMFORM=no
RECURSIVE_LOAD=NO
```

```
DESNAME="%STMT_DIR%\report.txt"
P_OWNER=@OWS_OWNER@
```

Example 2. The content of a section of the configuration file:

```
[Exe.OREport.Server]
PAR_FILE=%STMT_DIR%\report.cfg
NOT_INCLUDE_TO_PAR_FILE=USERID;CMDFILE;BACKGROUND;BATCH;SERVER
EXE_NAME=rwcli60.exe
USERID=%OWN_CONNECT%
CMDFILE="%SPEC:PAR_FILE%"
BATCH=YES
BACKGROUND=YES
SERVER=
MODE=character
DESTYPE=file
DESFORMAT=wide
PRINTJOB=no
PARAMFORM=no
RECURSIVE_LOAD=NO
DESNAME=%STMT_DIR%\report.txt
P_OWNER=@OWS_OWNER@
```

The Oracle Reports system parameters contained in the configuration file are as follows:

- PAR_FILE – name of the Oracle Reports system parameter file.
- NOT_INCLUDE_TO_PAR_FILE – list of Oracle Reports system parameters specified in the sub-item, which may not be included in the parameters file.
- EXE_NAME – name of the Oracle Reports system executable file. The value of this parameter depends on the version of the Oracle Reports system. For instance, for the 10G version of the Oracle Reports system these parameters are as follows:
 - "rwrn.exe" – local execution of a task.
 - "rwclient.exe" – transfers a task for execution by Oracle Reports Server.

In other Oracle Reports versions .exe filenames may be different.

The remaining strings are placed in the Oracle Reports system parameter file, whose name is specified in the pipe parameters. Parameter values set in the corresponding sections of the DB.INI or DBM.INI configuration file can be redefined in the parameters of the menu (pipe) sub-item.

2.6.3 "Menu Item" Type

When a sub-item of this type is executed, the operations specified in the corresponding menu item definition are executed. The name of the menu item

definition being run appears in the *Parameters* field of the "Subitems for Current Item" window (see Fig. 19).

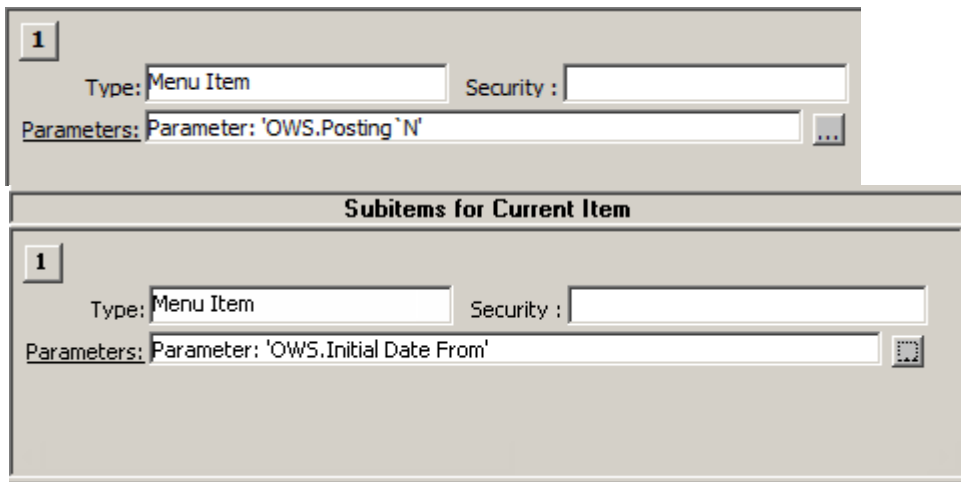




Fig. 19. Parameters of a "Menu Item" type sub-item

To specify a menu item definition, click the  button located to the right of the *Parameters* field. This will open the "Menu Item options" dialogue window (see Fig. 20). In this window, click the  button again and select a definition from the drop-down list that opens (see Fig. 3).

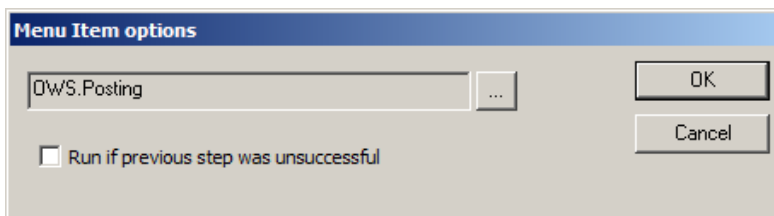


Fig. 20. Dialogue window for setting the parameters of a "Menu Item" type sub-item

When the *Run if previous step was unsuccessful* box is checked, the specified menu item definition will be executed if errors in business logic occurred during execution of the preceding item. This mechanism is used for exception handling that requires violation of the order for executing menu sub-items defined in this menu item. An exception may be, for example, the absence of a file being imported in a certain directory.

If system errors occur (for example, an SQL Error), the menu item specified in the "Menu Item options" window will not be executed.

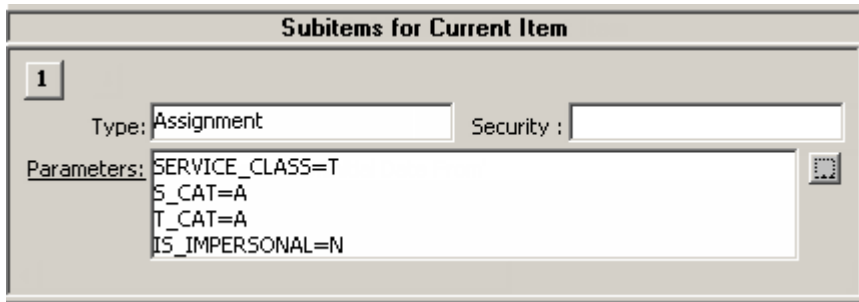


It is only recommended to check the box for "[Scheduler Flag](#)", "[Scheduler Waiting File](#)", "[Execute SQL](#)" and "[Java Pipe](#)" type menu sub-items.

2.6.4 "Assignment" Type


When a sub-item of this type is executed, it changes the values of local variables for the current DB Manager session. The values assigned to local variables are

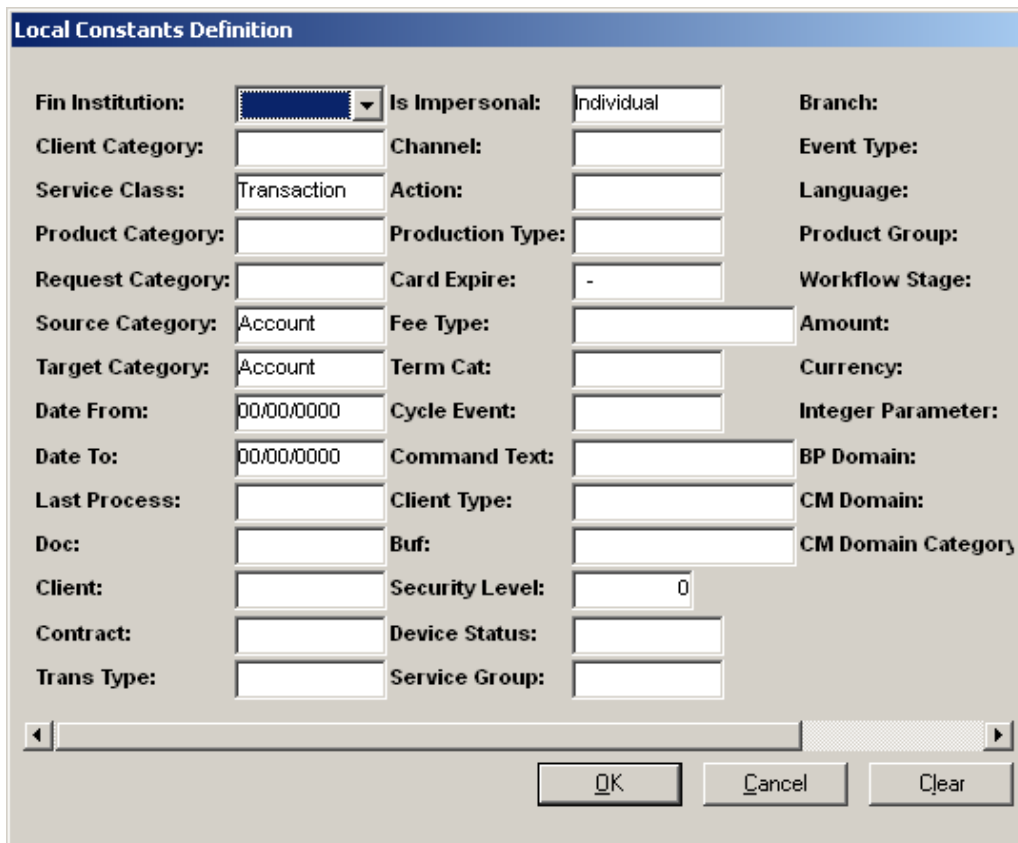
shown in the *Parameters* field of the "Subitems for Current Item" window (see Fig. 21).



The dialog window titled "Subitems for Current Item" shows a sub-item with index "1". The "Type" field is set to "Assignment" and the "Security" field is empty. The "Parameters" field contains the following text: SERVICE_CLASS=T, S_CAT=A, T_CAT=A, and IS_IMPERSONAL=N. A small icon button is located to the right of the parameters field.

Fig. 21. Parameters of an "Assignment" type sub-item

Values are assigned to local variables in the fields of the "Local Constants Definition" window (see Fig. 22) opened by clicking the  button located to the right of the *Parameters* field.




The "Local Constants Definition" dialog window contains numerous fields for defining local variables. Fields include: Fin Institution (dropdown), Client Category, Service Class (Transaction), Product Category, Request Category, Source Category (Account), Target Category (Account), Date From (00/00/0000), Date To (00/00/0000), Last Process, Doc, Client, Contract, Trans Type, Is Impersonal (Individual), Channel, Action, Production Type, Card Expire (-), Fee Type, Term Cat, Cycle Event, Command Text, Client Type, Buf, Security Level (0), Device Status, Service Group, Branch, Event Type, Language, Product Group, Workflow Stage, Amount, Currency, Integer Parameter, BP Domain, CM Domain, and CM Domain Category. At the bottom are OK, Cancel, and Clear buttons.

Fig. 22. "Local Constants Definition" dialog window

The values of local variables may be either selected from a list or typed in. If a field is left empty in this dialog window, the given menu sub-item does not affect the value of the corresponding local variable. To delete a value from a field of the "Local Constants Definition" window, select the field and click the [Clear] button.

This sub-item type does not accept NULL values for local variables. If a NULL value must be entered, use the Execute SQL Special sub-item type: (see "Special" Type").

2.6.5 "Oracle Report" Type

When executed, a sub-item of this type starts Oracle Report Generator, which generates a report based on a file specified in the Oracle Report Definition (see section "Report Generation Principles" of the "DB Manager Manual" document). The parameters of this type of menu sub-item are found in the *Parameters* field of the "Subitems for Current Item" window (see Fig. 23). These parameters may be edited in the "Oracle Report options" dialogue window (see Fig. 24). This window is opened by clicking the  button located to the right of the *Parameters* field.

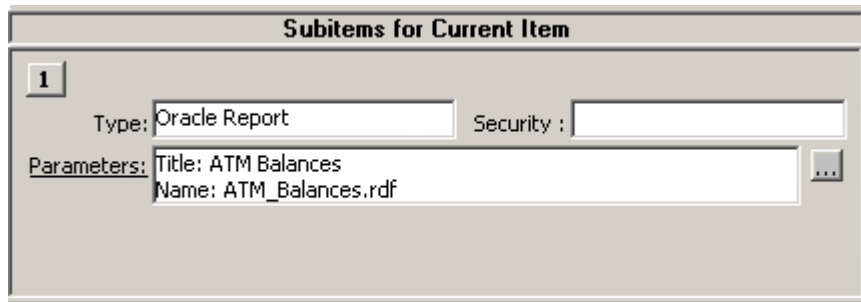


Fig. 23. Parameters of an Oracle Report type sub-item

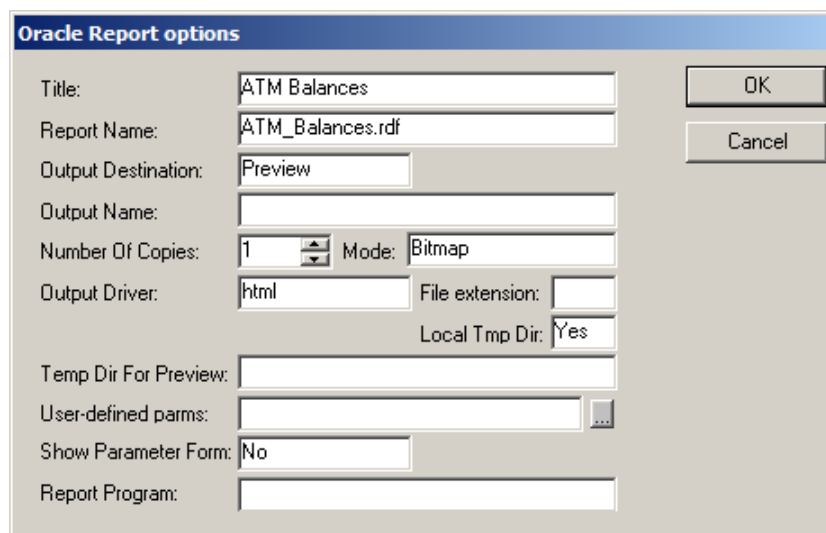


Fig. 24. "Oracle Report options" dialogue window

The "Oracle Report options" dialogue window (see Fig. 24) has the following fields for specifying module parameters:

- *Title* – specifies the title of the report that will be shown on every page.
- *Report Name* – specifies the name of the report, selected from a list.
- *Output Destination* – field with a drop-down list to specify the type of device to which the report will be sent:
 - Screen – computer screen (it is recommended that Preview mode be used in this case).
 - File – file. In this case the *Output Name* field must contain the name of the file and its path in the following format: "%STMT_DIR%\<filename>",

where STMT_DIR is the name of the environmental variable defining the directory in which the file will be saved. The value of STMT_DIR may be specified in the db.ini file or by selecting "Database => Configure" in the system menu.

- Printer – printer.
- Mail – e-mail. In this case, MAPI (Messaging Application Programming Interface) support must be installed on the computer and the *Output Name* field must contain the e-mail address of the report recipient.
- Sysout – not used. Reserved for future versions.
- Cache – not used. Reserved for future versions.
- Preview – computer screen.
- Local File – not used. Reserved for future versions.
- *Output Name* – name of the device to which the report will be sent (filename, e-mail address, printer name, etc).
- *Number Of Copies* – number of copies created.
- *Output Driver* – field with a drop-down list to specify the format of the report file:
 - dflt – file containing the description of the default printer used by the Oracle Reports system. The names of files containing the descriptions of other Oracle printers, such as "wide" or "wide180" may be added manually.
 - PDF – Adobe Acrobat files.
 - HTML – Hypertext Markup Language files.
 - RTF (added manually) – Rich Text Format files.
 - DELIMITED – delimited text format for Oracle Report 10G and higher versions. It may be added manually if "text only" (character) format is specified in the *Mode* field. The type of delimiter, for example DELIMITER=tab, must be specified in the *User-defined parms* field.
- *Mode* – field with a drop-down list to specify the format of report data:
 - Bitmap – text and graphics.
 - Character – text only.
- *Local Tmp Dir* – when the "Y" value is selected, a report will be stored in the standard temporary file directory <OWS_TEMP>; when the "N" value is selected, the directory specified in the *Temp Dir For Preview* field will be used.


- *Temp Dir For Preview* – temporary file directory for storing a report file used for viewing on the computer screen; this field is used when the "N" value is specified in the *Local Tmp Dir* field.
- *File Extension* – file extension.
- *User-defined parms* – custom parameters.
- *Show Parameter Form* – When "Yes" is specified in this field, the generation of a report is preceded by the appearance on the screen of a built-in form for entering parameters. If the value is "No", no such form is shown.
- *Report Program* – name of the Oracle Report generator; this field is used when a report is generated without a report server.

2.6.6 "EXE File" Type

When a sub-item of this type is executed, it launches an MS Windows executable file on the user's workstation. The name of the "*.exe" file and its startup parameters are specified in the *Parameters* field of the "Subitems for Current Item" window (see Fig. 25).



Fig. 25. Parameters of an "EXE File" type menu sub-item

The name and startup parameters of the executable file are entered in the "Select Executable" dialogue window (see Fig. 26) opened by clicking the  button located in the previous window, to the right of the *Parameters* field.

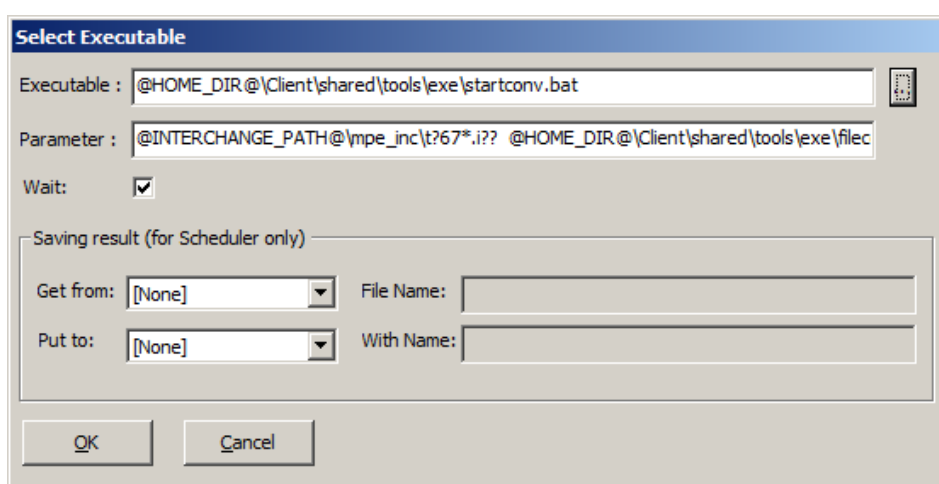



Fig. 26. "Select Executable" dialogue window.

This window contains the following fields:

- *Executable* – the executable file's name and path. The name can be changed by selecting it in the standard MS Windows "Select File" window opened by clicking the  button.
- *Parameter* – the file's startup parameters.

The *Executable* and *Parameter* fields accept the values of database environmental variables when the file path is specified.

- *Wait* – when this box is checked, the next menu sub-item will be executed only after the program started by the current sub-item is completed.

The following fields are only mandatory if Scheduler is used to start the menu item:

- *Get from* – specifies where to get information about the results of the program's operation.
 - "Return Code" – from the program's return code.
 - "Output Stream" – from the program's standard output stream.
 - "Error Stream" – from the program's error stream.
 - "File" – from a file; when this value is specified, the *File Name* field can be edited in the form. Specify the file name in this field.
 - "None" – information about the results of the program's operation is not required.
- *Put to* – specifies where to save information about results of the program's operation:
 - "Local Constant" – to a local constant whose name should be specified in the *With Name* field.
 - "Program Context" – to an internal DB Manager variable whose name should be specified in the *With Name* field.

2.6.7 "Process" Type

When a menu sub-item of this type is executed, it launches a stored DB procedure. The name of the procedure is shown in the *Name* field of the window containing the menu sub-item parameters (see Fig. 27).

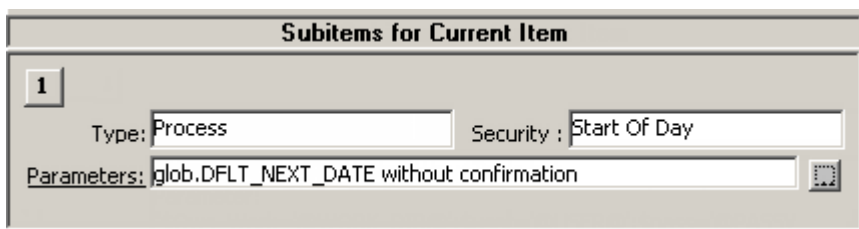

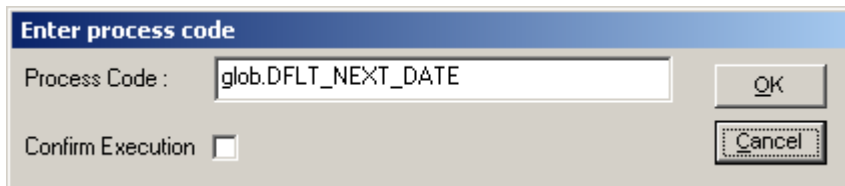


Fig. 27. Parameters of a "Process" type menu sub-item

The name of a stored procedure is entered in the *Process Code* field of the "Enter process code" window (see Fig. 28). This window is opened by clicking the .


button in the previous window (see Fig. 27). When the *Confirm Execution* box is checked, execution of the procedure will be preceded by a request for confirmation.

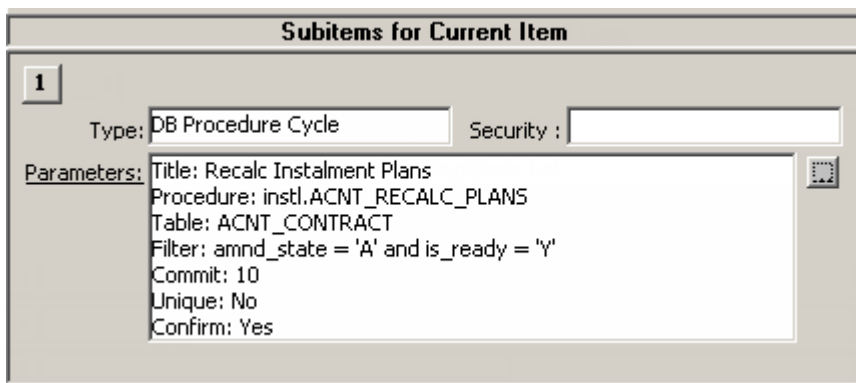


The dialog box titled "Enter process code" has a text field for "Process Code" containing "glob.DFLT_NEXT_DATE". Below it is a checkbox for "Confirm Execution" which is unchecked. On the right side, there are "OK" and "Cancel" buttons.

Fig. 28. Window for entering the names of DB stored procedures

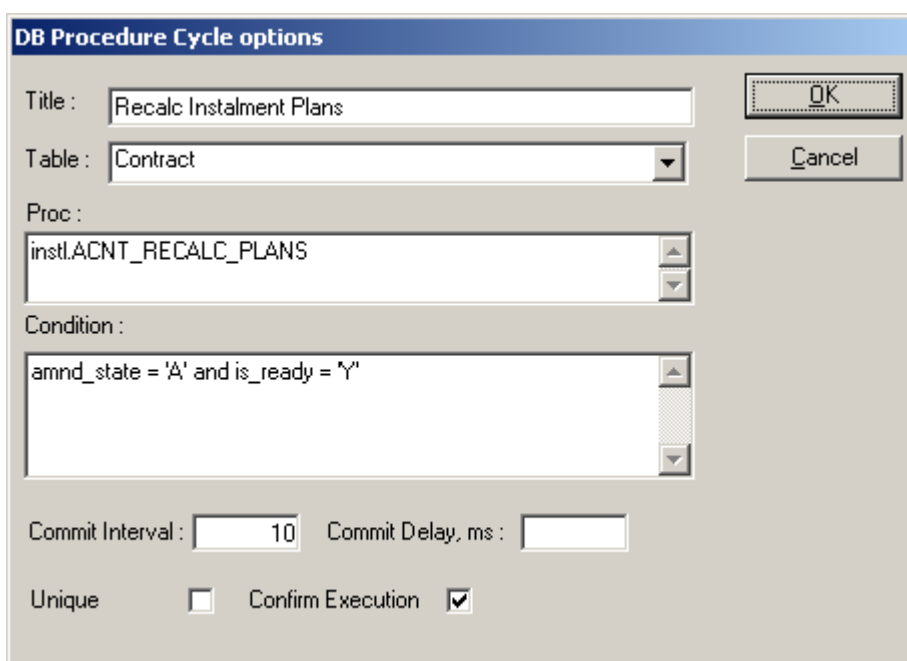
2.6.8 "DB Procedure Cycle" Type

When a menu sub-item of this type is executed, it launches a stored database procedure for all rows in the table meeting the conditions described in the sub-item. Sub-item parameters are set in the "DB Procedure Cycle options" dialogue window (see Fig. 30), opened by clicking the  button in the parameters window (see Fig. 29)



The dialog box titled "Subitems for Current Item" shows a list of sub-items. The first sub-item is selected, showing its details: Type: "DB Procedure Cycle", Security: (empty), and Parameters: "Title: Recalc Instalment Plans", "Procedure: instl.ACNT_RECALC_PLANS", "Table: ACNT_CONTRACT", "Filter: amnd_state = 'A' and is_ready = 'Y'", "Commit: 10", "Unique: No", and "Confirm: Yes". There is a small icon button to the right of the parameters list.

Fig. 29. Parameters of a "DB Procedure Cycle" type menu sub-item



The dialog box titled "DB Procedure Cycle options" contains fields for configuring a sub-item: "Title" (Recalc Instalment Plans), "Table" (Contract), "Proc" (instl.ACNT_RECALC_PLANS), and "Condition" (amnd_state = 'A' and is_ready = 'Y'). At the bottom, there are fields for "Commit Interval" (10) and "Commit Delay, ms" (empty), and checkboxes for "Unique" (unchecked) and "Confirm Execution" (checked). "OK" and "Cancel" buttons are on the right.

Fig. 30. Window for setting the parameters of a "DB Procedure Cycle" type menu sub-item

The window for setting the parameters of a "DB Procedure Cycle" type menu sub-item has the following fields:

- *Title* – name of the operation.
- *Table* – name of the database table from which data is selected.
- *Proc* – name of the stored database procedure.
- *Condition* – condition of data selection.
- *Commit Interval* – number of records processed in one transaction. The recommended range of values is between 10 and 1000.
- *Commit Delay, -ms* – delay in milliseconds after each execution of a COMMIT operator to decrease the load on the database server.
- *Unique* – when this box is checked, the given process may be executed on only one workstation during one DB Manager session at a time.
- *Confirm Execution* – when this box is checked, execution of an operation is preceded by a request for confirmation. If the answer is negative, the execution of the menu item is stopped.

2.6.9 "Special" Type

The "Special" type sub-item and its execution parameters are entered in the *Parameters* field (see Fig. 31).

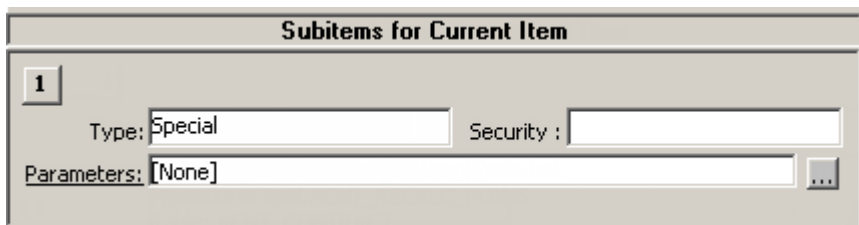



Fig. 31. Parameters of the "Special" type menu sub-item

The type of module is selected and its execution parameters set in the "Special parameters" dialogue windows (see Fig. 32 through Fig. 41) opened by clicking the  button.



Caution should be exercised when changing the parameters of a "Special" type sub-item as changing the module type not only changes a sub-item's previously set parameters but also makes it impossible to "undo" the operation.

The following "Special" type sub-items exist in WAY4:

- "DB Copy" – only for use by OpenWay employees.
- "DBM Java Class" – allows separate external Java applications to be run for an operation such as uploading XML data from a database. This option is only for use by OpenWay employees.

- "Execute SQL" – execution of SQL expressions.

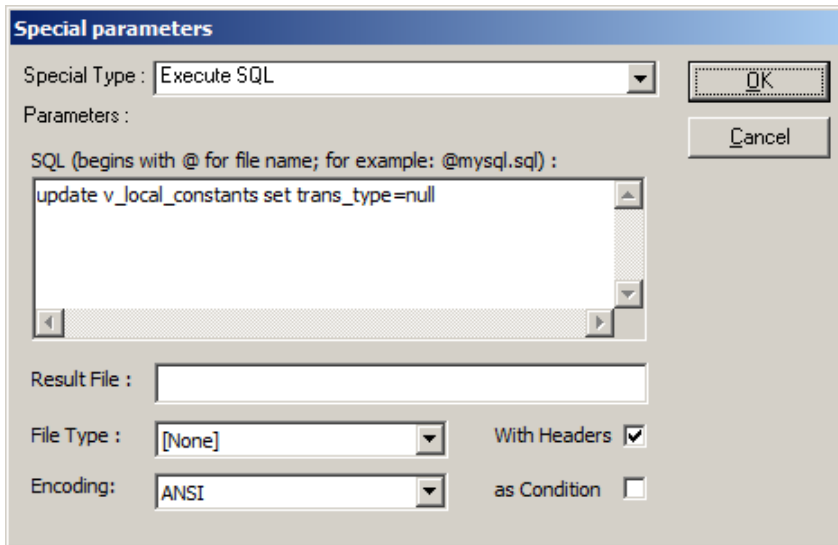


Fig. 32. Window for setting the parameters of the "Execute SQL" module for a "Special" type menu sub-item

The window for setting the parameters of the Execute SQL module has the following fields:

- *SQL* – field for entering an SQL expression.
 - ♦ Either one SQL query or a PL\SQL block can be specified as an expression (according to PL\SQL syntax).



Note that to add comments to an SQL expression, it is necessary to use the construction `"/<comment> */"`, where `<comment>` is the comment text.

- ♦ An expression entered in this field may come from a file. If the complete path to the file is not specified, the system will first look for it in the `<OWS_WORK>\Client\Shared\Scripts` directory and then in the `<OWS_HOME>\Client\Shared\Scripts` directory.
- *Result File* – field for entering the name of the file in which selected data is placed. If this field is left empty, the data is sent to the screen.
 - ♦ When the path to the file is specified, it may refer to environmental database variables.
 - ♦ If the value entered in this field begins with "SELECT", the corresponding SQL query is executed. It returns the name of the file, including the complete path, in which links to the environmental database variables may be used.
- *File Type* – field with a drop-down list to specify the format of the result file; the following formats may be used:
 - ♦ Comma-Separated – text file in which data is comma-delimited.

- ◆ Excel5 – MS Excel format file.
- ◆ HTML – HTML format file.
- ◆ PSR – PowerBuilder format file.
- ◆ Tab-Separated – text file in which data is tab-delimited.
- *With Headers* – when this box is checked, database table field headers will be included in the result file.
- *Encoding* – field to specify the encoding of the result file; the value in this field can be entered manually or selected from the following list:
 - ◆ UTF-8 (default).
 - ◆ ANSI.
- *as Condition* – this checkbox is used for logical branching of the menu item depending on the results of executing an SQL expression.

If this box is checked, the menu subitem following the current one must be a subitem with the "Menu Item" type and [*Run if previous step was unsuccessful*](#) box must be checked.

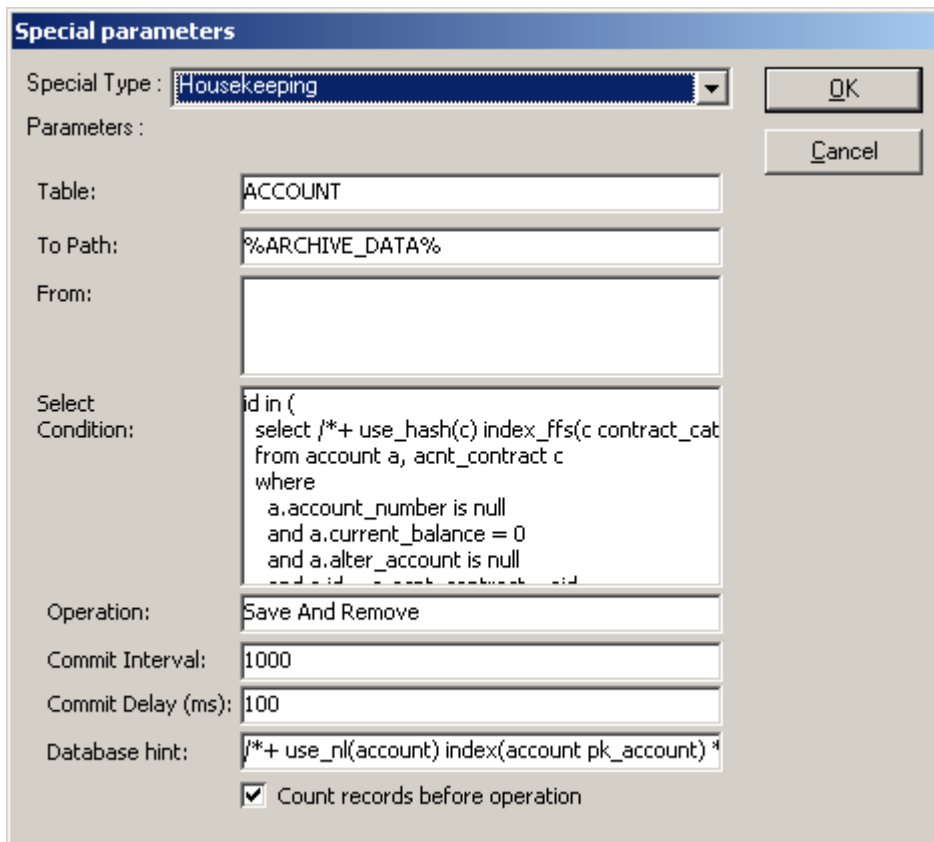
If the SQL expression returns "Y" (if the string "? :='Y'" is present in the SQL field), this subitem (with the "Menu Item" subtype and the [*Run if previous step was unsuccessful*](#) box checked) will not be run, and the subitem following it will be run. If the SQL expression returns "N" (the string "? :='N'"), first this subitem will be run (with the "Menu Item" subtype and the [*Run if previous step was unsuccessful*](#) box checked), and then the subitems following it.



It is recommended to check the *as Condition* box if the order for executing menu sub-items must be changed when exceptions occur, for example, if a contract is in the "Not Ready" status when the daily closing procedure is executed.

- "Execute SQL File" – module for executing SQL expressions contained in a file. The module is not used in the current version but exists in order to assure compatibility with previous versions. It is recommended to use "Execute SQL" for executing SQL queries and expressions.
- "Form" – not used in the current version but exists for compatibility with previous versions. Forms are accessed through a special sub-item type (see "Form" Type).
- "HSM Security Officer Screen" – intended for communicating with Host Security Module hardware (see "Host Security Module 8000. Operations and Installations Manual" and "Host Security Module 8000. Programmer's Manual" documents).

- "Housekeeping" – used for archiving data from database tables (see the "Housekeeping" document).



The screenshot shows a dialog box titled "Special parameters". It has a "Special Type" dropdown menu set to "Housekeeping". Below it are "Parameters" fields: "Table" (ACCOUNT), "To Path" (%ARCHIVE_DATA%), "From" (empty), "Select Condition" (a SQL query), "Operation" (Save And Remove), "Commit Interval" (1000), "Commit Delay (ms)" (100), and "Database hint" (/*+ use_nl(account) index(account pk_account) *). There is also a checkbox for "Count records before operation" which is checked. "OK" and "Cancel" buttons are on the right.

Special parameters

Special Type: **Housekeeping**

Parameters:

Table: ACCOUNT

To Path: %ARCHIVE_DATA%

From:

Select Condition:

```

id in (
select /*+ use_hash(c) index_ffs(c contract_cat
from account a, acnt_contract c
where
a.account_number is null
and a.current_balance = 0
and a.alter_account is null
-- id id -- contract_cat id

```

Operation: Save And Remove

Commit Interval: 1000

Commit Delay (ms): 100

Database hint: /*+ use_nl(account) index(account pk_account) *

☒ Count records before operation

OK Cancel

Fig. 33. Window for setting the parameters of the "Housekeeping" module for a "Special" type menu sub-item

The window for setting the parameters of the "Housekeeping" module has the following fields:

- *Table* – name of the database table that is being processed.
- *To Path* – path to the directory containing archived data files.
- *From* – field containing the query source (FROM) of the SELECT operator. This field can be used to redefine the contents of the *Table* field and to create new embedded queries.
- *Select Condition* – field determining the condition for selecting data from a database table (the WHERE condition of the SELECT operator).
- *Operation* – field with a drop-down list to specify the operation to be executed with the database table being processed.
 - ♦ Save – save the selected data in an external file.
 - ♦ Recover – load records into a table from an external file.
 - ♦ Purge Saved – delete data saved in an external file from a table.
 - ♦ Save And Remove – save a selection in an external file and delete the saved data from a database table.

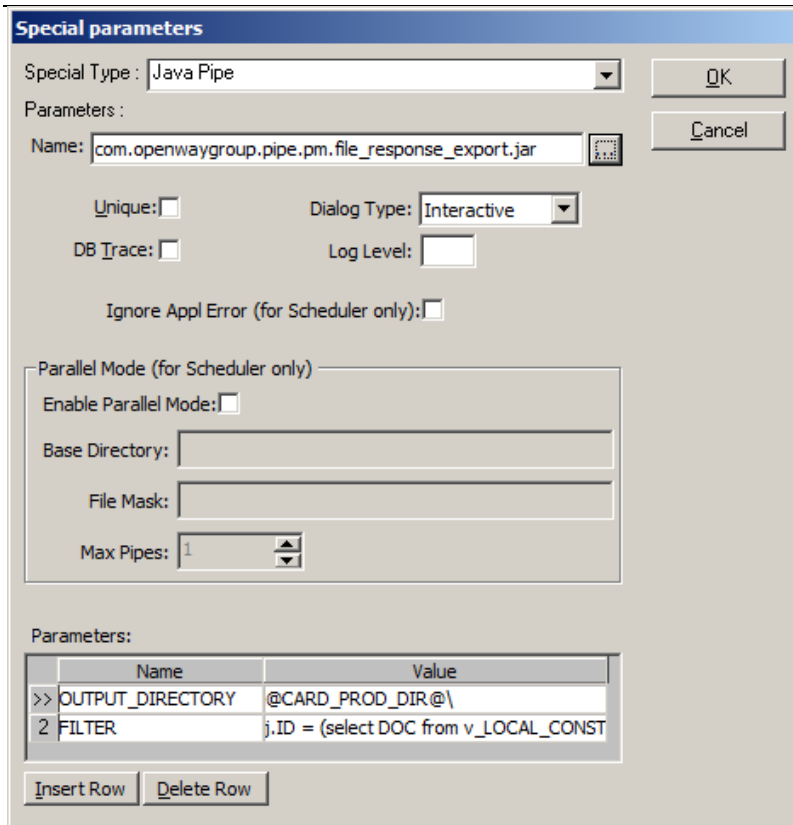
- *Commit Interval* – number of records deleted in one transaction. The recommended range is between 10 and 1000.
- *Commit Delay (ms)* – delay, in milliseconds, after each execution of the COMMIT operator. Used for lowering the load on the database server.
- *Database hint* – an optimizing condition for SELECT operator.
- *Count records before operation* – if this box is checked, records to be saved will be counted during execution of "Save" and "Remove" commands before each execution of the SELECT operator.
- Intranet – not used in the current version but exists for compatibility with previous versions.
- Issuer File Message – opens the "Issuer File Message".

The parameters of the module are specified using semicolons (;) as delimiters in the *Parameters* field of the window for setting parameters. For instance:

```
COMSERVER_ID=999;CHANNEL=VISAVIP;TIMEOUT=40;
```

where

- COMSERVER_ID is the three-digit number of the NetServer to which requests will be sent.
- CHANNEL is the name of the channel used to send requests to the VISA channel.
- TIMEOUT is the time, in seconds, for the system to wait for a response from the communications server.
- "Java Pipe" starts Java pipes.



Special parameters

Special Type: Java Pipe OK

Parameters:

Name: com.openwaygroup.pipe.pm.file_response_export.jar ... Cancel

☐ Unique: Dialog Type: Interactive

☐ DB Trace: Log Level:

☐ Ignore Appl Error (for Scheduler only):

Parallel Mode (for Scheduler only)

☐ Enable Parallel Mode:

Base Directory:

File Mask:

Max Pipes: 1

Parameters:

	Name	Value
>>	OUTPUT_DIRECTORY	@CARD_PROD_DIR@\\
2	FILTER	j.ID = (select DOC from v_LOCAL_CONST

Insert Row Delete Row

Fig. 34. Window for specifying parameters of the "Java Pipe" module of the "Special" type sub-item

The window for specifying module parameters contains the following fields:

- *Name* – drop-down list of pipe names; to open the list of pipe names, click ...
- *Unique* – when the box is checked, only one instance of the pipe may be executed at a given time (on a single workstation and during a single DB Manager session).
- *DB Trace* – when this box is checked, the Oracle Trace component will be started on the database server.
- *Dialog Type* – the pipe can be executed in three modes:
 - ◆ Interactive – the process is shown in the corresponding dialogue box.
 - ◆ Errors Only – the dialogue box only shows errors that occur during execution of the pipe.
 - ◆ Silent – during execution of the pipe, only the progress bar is displayed and logging is maintained in the process log. Auxiliary dialog windows (for example, the file selection window, window confirming the execution of various actions) are not displayed.
- *Log Level* – determines the level of information detail in log files. The following values can be specified:
 - ◆ 20 – only information about errors is saved.

- ◆ 30 – main information about transaction execution is saved.
- ◆ 40 – more detailed information about transaction execution is saved.
- ◆ 50 – debugging data is saved.
- ◆ 60 – recurring information is saved, e.g. specific SQL requests or results of database connection checks.



It is recommended that "30" be specified for production systems and "50" during acceptance testing.

- *Parameters* – pipe parameters. Each module has a unique set of parameters and their values. Click [Insert Row] to add a parameter to the set or [Delete Row] to delete a selected parameter.



If Oracle RAC (Real Application Clusters) are used, it is possible to run Java pipes in a WAY4 Cards database server node that differs from the node in which DB Manager is running. For this to be possible, set the pipe parameter "ALTERNATIVE_JDBC_CONNECT" and define the parameter value in one of the following ways:


- ◆ "jdbc:oracle:thin:@<Host>:<Port>:<SID>" – JDBC connect string. For example,
"ALTERNATIVE_JDBC_CONNECT=jdbc:oracle:thin:@prodhost:1521:prod".
- ◆ "@<Parameter Name>@", where <Parameter Name> is the name of the configuration parameter whose value must be used as the JDBC connect string. The parameter name must be specified in uppercase letters and enclosed in "@" characters. The configuration parameter is searched for in the "db.ini" or "dbm.ini" files. Example: we assume that the parameter
"SECOND_JDBC_CONNECT=jdbc:oracle:thin:@prodhost:1521:prod" is set in the "db.ini" file, so in the "Special Parameters" window (see Fig. 34) for the pipe, set the parameter
"ALTERNATIVE_JDBC_CONNECT=@SECOND_JDBC_CONNECT@". As a result, the string "jdbc:oracle:thin:@prodhost:1521:prod" will be used as the connect string.

The following fields are only mandatory if Scheduler is used to start Java pipes:

- *Ignore Appl Error (For Scheduler Only)* – when this box is checked, errors in business logic that occur during the pipe's operation will be ignored.

If the box is not checked and during Java pipe operation logical errors occurred that were saved to the process log (i.e. the corresponding record in the "Process Log" form has the "Closed" status, and "Error" is

specified in the *Error Level* field), the menu sub-item with the "Menu Item" type and *Run if previous step was unsuccessful* flag set following this one will be run.

- *Enable Parallel Mode* – when this box is checked, parallel mode is enabled, when several copies of the pipe are run simultaneously. This mode is only used for pipes importing data from files and is used to improve performance when executing a large number of operations of the same type.
- *Base Directory* – this field defines the directory from which files are imported; click the  button to select a directory. This field can only be edited if the *Enable Parallel Mode* box is checked.
- *File Mask* – regular expression (mask) for a file name; "*" (any number of characters) and "?" (any character) can be used. This field can only be edited if the *Enable Parallel Mode* box is checked.
- *Max Pipes* – maximum number of copies of this pipe being executed simultaneously. This field can only be edited if the *Enable Parallel Mode* box is checked.
- "Luhn Calculator" – calculation of the Luhn control digits for numbers entered by the user. This module is used without parameters.
- "Map Applet" – reserved for use in future system versions and not available in the current version.
- "Menu Item" – not used in the current version but exists for compatibility with previous versions. To execute a menu item, use a special sub-item (see ""Menu Item" Type").
- "Menu Item on Scheduler" – executes a menu item using Scheduler.

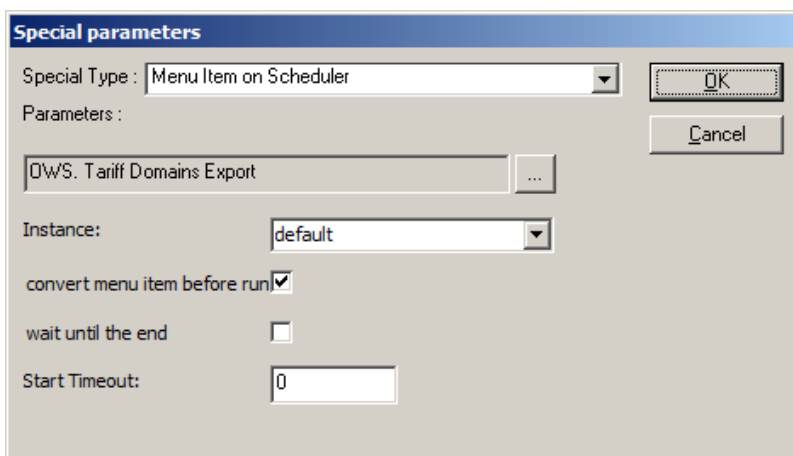



Fig. 35. Window for setting parameters of the "Menu Item on Scheduler" module for the "Special" sub-item.

The window for specifying module parameters contains the following fields:

- In the first field, click the  button and select the menu item definition from the list.
- *Instance* – drop-down list to select the name of the Scheduler instance (for more information, see the document "Scheduler R2").
- *Convert menu item before run* – when box is checked, the menu item will be converted to the format used by Scheduler. It is recommended to check this box.
- *Wait until the end* – when this box is checked, a modal window will be displayed during execution of the menu item. This window can only be closed after the menu item has been executed.
- *Start Timeout* – timeout (in seconds) for starting a menu item with Scheduler. If the menu item was not started within this period, an error message will be displayed and execution of the menu sub-item will be terminated. If "0" is specified in this field, the timeout for starting execution of the menu item will be endless.
- "Menu Upgrade" – loads a menu from an external file or saves a menu in an external file (see "Importing and Exporting User Menus").

The parameters of this module are entered in the *Parameters* field. They are as follows:

- "LOAD" – loads a menu.
- "DUMP" – exports a menu.
- "Message Box" – opens a message box.

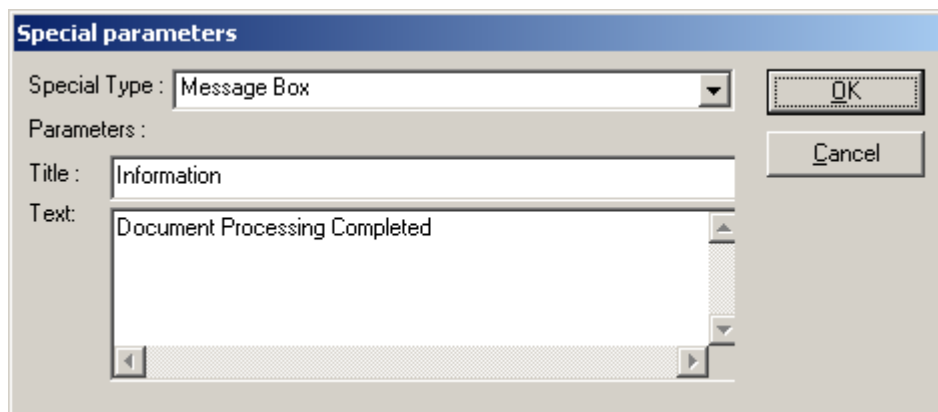
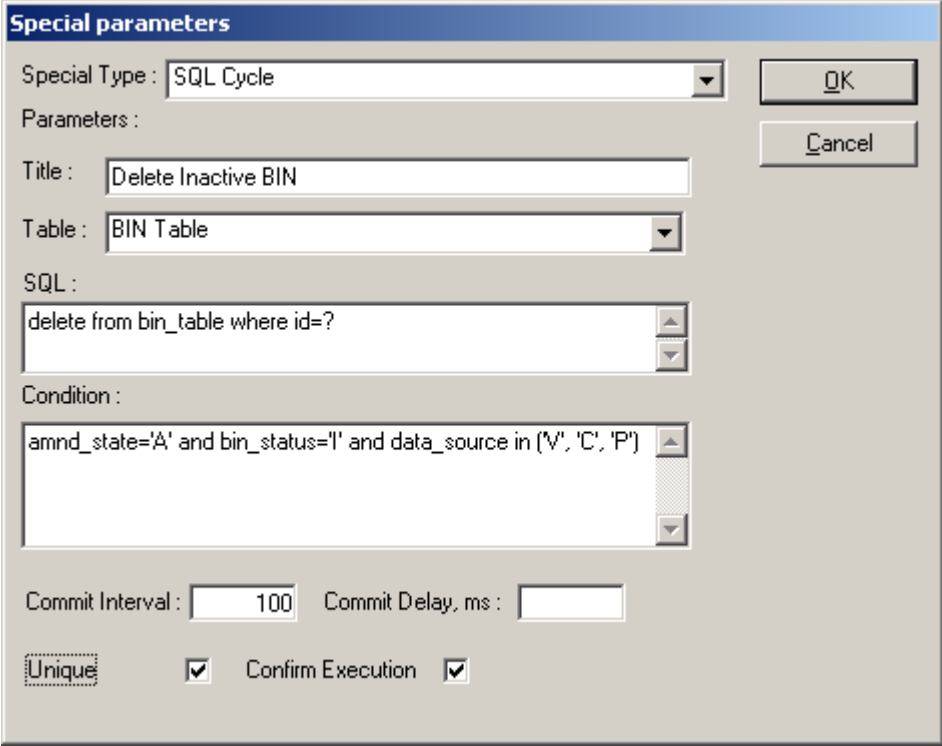


Fig. 36. Window for setting the parameters of the "Message Box" module of a "Special" type menu sub-item

The window for entering the parameters of the "Message Box" module has the following fields:

- *Title* – the title of a message.
- *Text* – for entering the text of a message, no longer than 1 line.

- "Message Box Confirmation" – opens a dialogue window with a question and answering buttons. If the answer is yes (the [OK] button), the next sub-item is executed. If the answer is negative (the [Cancel] button), the execution of the current menu item is stopped. The parameters are the same as those of the Message Box module.
- "Open MDI Window" – opens the MDI (Multiple Document Interface) child window with specified internal name. This window may only be used by representatives of the WAY4 system vendor.
- "Open Window" – opens a window with an specified internal name, executed as a stand-alone task. This window may only be used by representatives of the WAY4 system vendor.
- "Oracle Report" – not used in the current version but exists for compatibility with previous versions. It is recommended to use a special menu sub-item (see "Oracle Report" Type") for launching Oracle Report Generator.
- "PIN Management" – not used in the current version but exists for compatibility with previous versions.
- "Pipe" – not used in the current version but exists for compatibility with previous versions. Please use the special menu sub-item (see ""Pipe" Type") for starting pipes.
- "SQL Cycle" – launches the execution of a specified SQL expression for all rows in a database table that meet a specified condition.



The screenshot shows a dialog box titled "Special parameters". It contains the following fields and controls:

- Special Type:** A dropdown menu set to "SQL Cycle".
- Parameters:** A section containing:
 - Title:** A text field with "Delete Inactive BIN".
 - Table:** A dropdown menu set to "BIN Table".
 - SQL:** A text area containing "delete from bin_table where id=?".
 - Condition:** A text area containing "amnd_state='A' and bin_status='I' and data_source in ('V', 'C', 'P')".
- Commit Interval:** A text field with "100".
- Commit Delay, ms:** An empty text field.
- Unique:** A checkbox that is checked.
- Confirm Execution:** A checkbox that is checked.
- Buttons:** "OK" and "Cancel" buttons are located in the top right corner.

Fig. 37. Window for setting the parameters of the "SQL Cycle" module of a "Special" type menu sub-item

The window for setting the parameters of the SQL Cycle module has the following fields:

- *Title* – name of the operation.
- *Table* – name of the database table from which data is selected.
- *SQL* – contains the SQL expression executed for each record from which data is selected. The "?" symbol is synonymous to the *ID* field of the database table from which selection is made.



Note that SQL expressions may not contain more than one "?" symbol, otherwise execution of the expression will be terminated and a window with an error message will be displayed.

- *Condition* – condition to be met when data are selected.
- *Commit Interval* – number of records processed within one transaction; the recommended range is between 10 and 1000.
- *Is Unique* – when this box is checked, the process may be executed on only one workstation during one DB Manager session at a time.
- *Confirm Execution* – if this box is checked, confirmation to execute the operation will be requested. If the answer is no, execution of the menu item is declined.
- **Scheduler Flag** – set or remove a special parameter (flag). This mechanism is used, for example, to restrict access to a resource, or for notification of a certain event. This type of sub-item is only used when working with Scheduler (see the document "Scheduler R2").

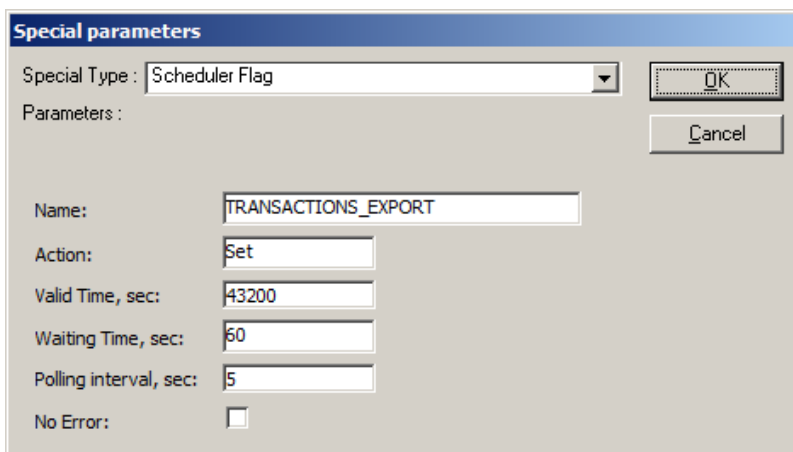


Fig. 38. Window for setting parameters of the "Scheduler Flag" module for the "Special" sub-item.

The window for specifying module parameters contains the following fields:

- *Name* – flag name.
- *Action* – action that must be performed with the flag.

- ◆ "Set" – set the value of the flag to "Y".
- ◆ "Reset" – reset a flag; i.e. set its value to "N".
- ◆ "Wait" – wait until the value of the flag is "Y".
- ◆ "Lock" – only set the value of the flag to "Y" if the flag is not set.
- *Valid Time, sec* – time interval (in seconds) during which the flag is valid; this field is mandatory if "Set" or "Reset" is specified in the *Action* field.
- *Waiting Time, sec* – waiting time (in seconds); this field is mandatory if "Wait" or "Lock" is specified in the *Action* field.
- *Polling Interval, sec* – database polling interval (in seconds); this field is mandatory if "Wait" or "Lock" is specified in the *Action* field.
- *No Error* – if this flag is set, "Wait" or "Lock" is specified in the *Action* field and the flag was not set to "Y" by the end of the waiting time, execution of this menu item is completed without an error message; otherwise, execution of the menu item will be terminated and the next menu sub-item with the "Menu Item" type and *Run if previous step was unsuccessful* flag set will be run.



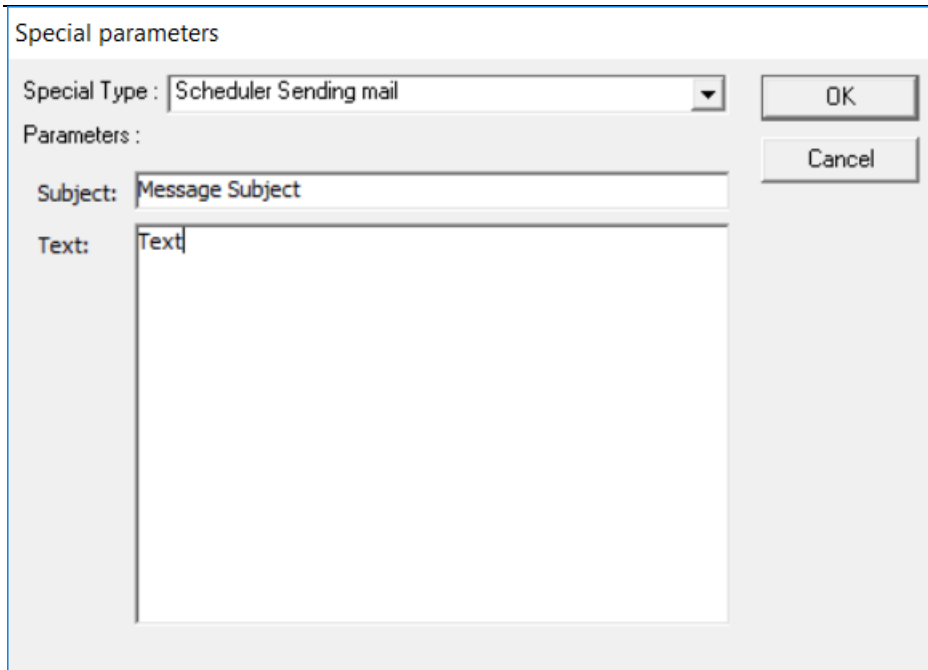
If a menu item containing a "Flag" type sub-tem is called from another menu item, the *No Error* flag is set, "Wait" or "Lock" is specified in the *Action* field and the flag was not set to "Y" by the end of the waiting period, the next sub-item of the menu that called the menu item is run.

- Scheduler Sending Mail – send messages by email. This subitem is only used when working with Scheduler (see the document "Scheduler R2 Manual").

The address specified with the Scheduler configuration parameter "mail_address_to" is used as the recipient address (see the section "Scheduler Configuration" of the document "Scheduler R2").

The subitem's parameters are set in the "Special parameters" form:

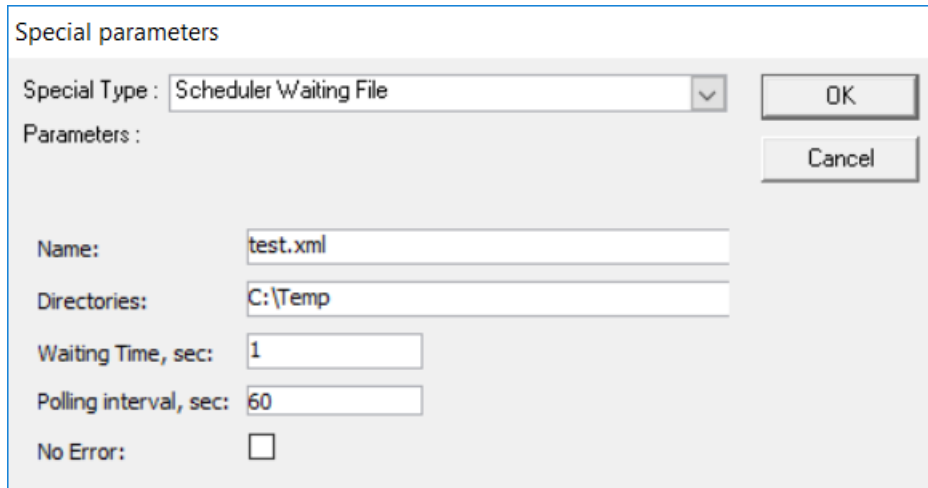
- *Subject* – message subject
- *Text* – message text



The screenshot shows a dialog box titled "Special parameters". At the top, "Special Type" is set to "Scheduler Sending mail" in a dropdown menu. Below this, the "Parameters" section contains a "Subject" field with the text "Message Subject" and a larger "Text" area with the text "Text". On the right side of the dialog, there are "OK" and "Cancel" buttons.

Fig. 39. Window for setting parameters for the "Scheduler Sending Mail" module of the "Special" subitem

- Scheduler Waiting File – wait for a specific file to appear in a specific directory. This type of sub-item is only used when working with Scheduler (see the document "Scheduler R2").



The screenshot shows a dialog box titled "Special parameters". "Special Type" is set to "Scheduler Waiting File". The "Parameters" section includes: "Name" field with "test.xml", "Directories" field with "C:\Temp", "Waiting Time, sec" field with "1", "Polling interval, sec" field with "60", and a "No Error" checkbox which is currently unchecked. "OK" and "Cancel" buttons are on the right.

Fig. 40. Window for setting parameters of the "Scheduler Waiting File" module for the "Special" sub-item

The window for specifying module parameters contains the following fields:

- *Name* – file name; a Java regular expression (mask) may be used for the name. For example, to wait for a file with any name and extension, define the mask ".*", for files with the ".xml" extension – ".*\.xml". The mask "A.*\.txt" indicates all files with the ".txt" extension beginning with an uppercase letter "A".

- *Directories* – path to the directory waiting for the file. Several paths can be specified, with semicolons (";") used as delimiters.
- *Waiting Time, sec.* – time to wait for the file (in seconds).
- *Polling Interval* – polling interval (in seconds).
- *No Error* – if this flag is set and the file did not appear in the specified directories by the end of the waiting period, execution of this menu item is completed without an error. If the flag is not set and the file did not appear in the specified directories by the end of the waiting period, execution of the menu item will be terminated and the next menu sub-item with the "Menu Item" type and [Run if previous step was unsuccessful](#) flag set will be run.



If a menu item containing a "Waiting Files" type sub-item is called from a different menu item, the *No Error* flag is set, and the file did not appear in the specified directories by the end of the waiting period, the next sub-item of the menu that called the menu item will be run.

- "Security" – opens the "DB Manager Users and Groups" window.
- "Special" – execution of special system commands specified as parameters of the PBD module.

The following commands are acceptable:

- "RECOMPILE_PIPES" – recompile all pipes. This command is used after files containing the initial pipes' texts have been altered. This command may only be used by representatives of the WAY4 system vendor.
- "MICROHELP_SELECT" – edits SQL expressions generating messages appearing in the status line of DB Manager.
- "SILENT_MODE" – starts pipes in the Silent mode (see ""Pipe" Type").
- "INTERACTIVE_MODE" – starts pipes in the Interactive mode (see "Pipe" Type").
- "Voice Authorization" – opens the card inquiry voice authorization interface.

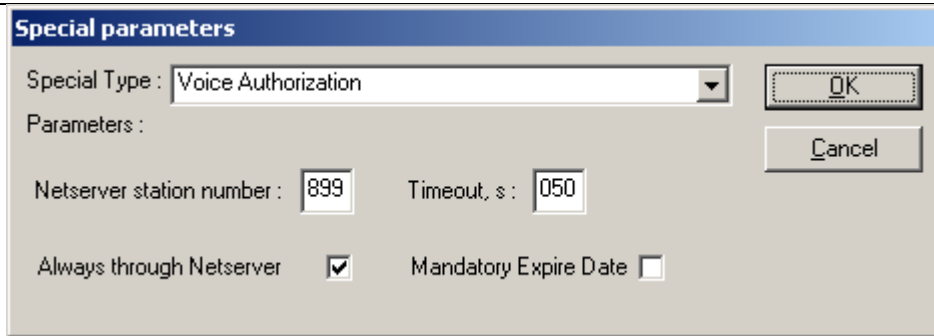


Fig. 41. Window for setting the parameters of the Voice Authorization module of a Special type menu sub-item

The window for setting the parameters of the Voice Authorization module has the following fields:

- *Netserver station number* – the ID of the communications server used by DB Manager for launching authorization procedures for on-us and foreign cards.
- *Timeout* – the maximum length, in seconds, to wait for a response from the communications server.
- *Always through Netserver* – when this box is checked, requests to the database always come through the communications server (it is recommended to check this box).
- *Mandatory Expire Date* – when this box is checked, the expiry date of a bankcard must be entered for authorization to be performed.

3 Importing and Exporting User Menus

The DB Manager user menu may be altered by directly editing its groups and items or upgraded by loading the necessary data from a file or files in a special format.

It may also be upgraded during a comprehensive system upgrade when a new version of the standard menu developed by OpenWay is loaded or by importing menu elements created and debugged in other systems.

3.1 Loading the Standard Menu

The standard version of the user menu is loaded by selecting the "Database => Import Standard Menu" item of the DB Manager system menu.



To prevent the loss of user-created menu groups and items and their parameters, these menu elements must be placed in a separate branch parallel to that supplied by OpenWay.

To load the standard menu, confirm execution of this procedure by clicking the [Yes] button in the Confirm Operation dialogue window (see Fig. 42).

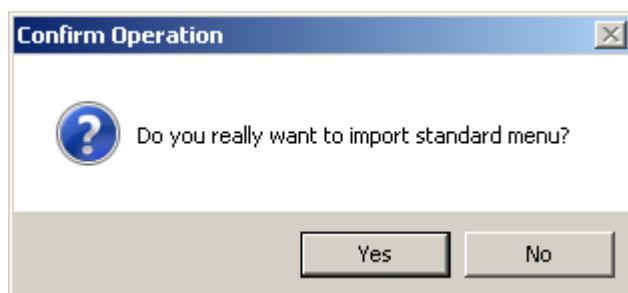


Fig. 42 Dialogue window to confirm loading of the standard menu

The standard menu may also be loaded by selecting the "Full →DB Administrator Utilities →Upgrade Utilities →Import Menu" menu item (see Fig. 43) and then clicking the [Full Upg] button in the "Menu Upgrade File Loader" form.

3.2 Exporting Menu Groups and Items into a File

Menu groups and items are exported after new elements are created and debugged on one system for their migration to another system; for example, from a test system to a production one.

To export menu elements, select the "Full→DB Administrator Utilities →Upgrade Utilities →Export Menu" user menu item (see Fig. 43).

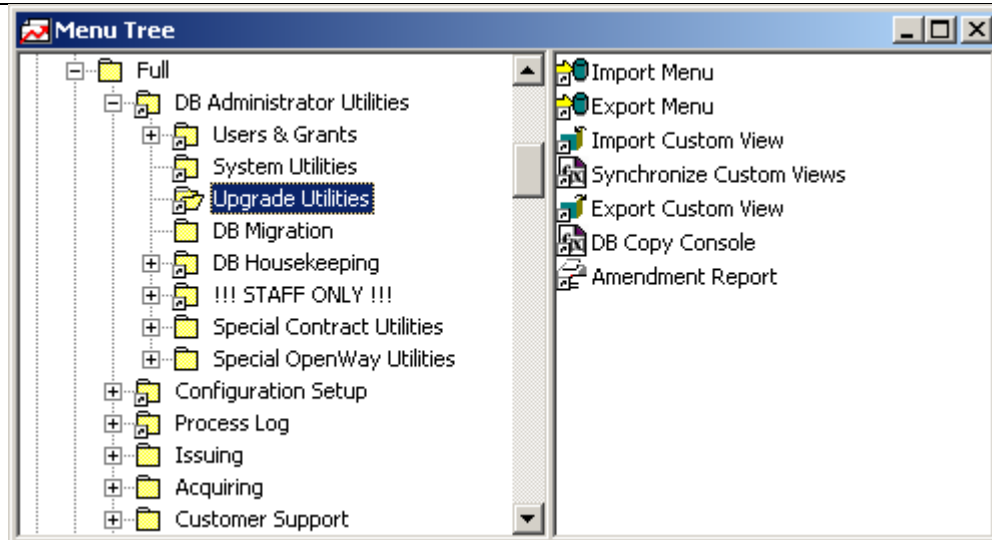


Fig. 43. Menu items used for upgrading the user menu

When this menu item is selected, the Menu Upgrade File Creator window (see Fig. 44) is opened. This window is used for selecting groups and/or items to be exported.

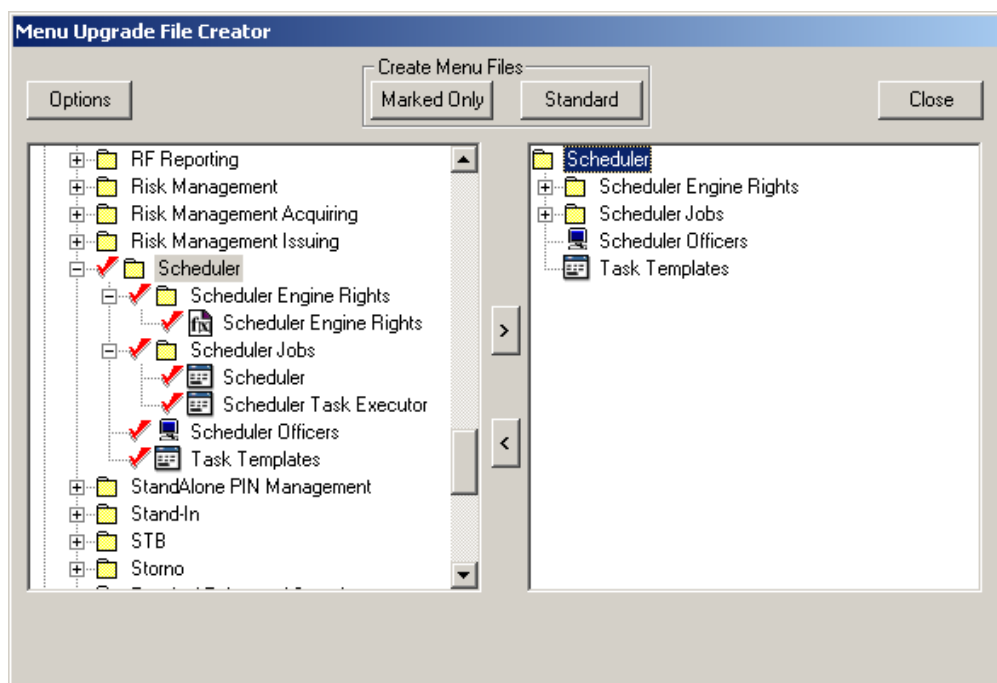




Fig. 44. Menu Upgrade File Creator window

In the left-hand section of the window, select the menu elements to be exported, and click the  button. As a result, these elements will appear in the right-hand section of the window and a red check mark (✓) will appear beside them in the left-hand section of the window.

To exclude an element from the selection, select it in the right-hand section of the "Menu Upgrade File Creator" window and click the  button.

The parameters of the menu element export operation are set in the "Options" window (see Fig. 45) opened by clicking the [Options] button in the "Menu Upgrade File Creator" window.

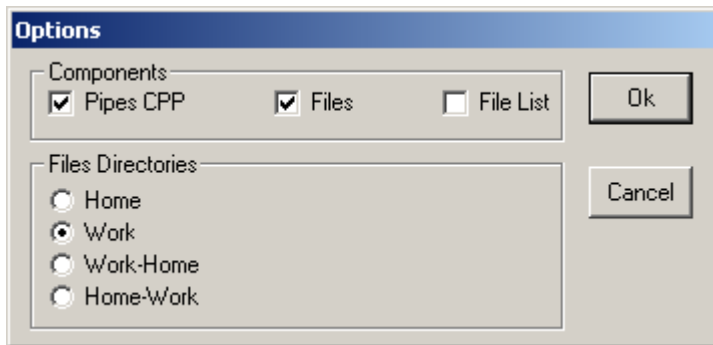


Fig. 45. Options window for setting menu element export parameters

This window contains the following fields and buttons:

- *Pipes CPP* – when this box is checked, the initial texts of the pipes being exported will also be exported to a file with the name <name>.dmp, where <name> is the menu export filename specified by the user.
- *Files* – when this box is checked, files used when menu items like pipes or forms are executed will be exported to files with the .dmp extension (*.dmp).
- *File List* – when this box is checked, the exporting of a menu will be accompanied by the creation, in a <name>.lst file, of a list of files used when the items of this menu are executed.
- *Files Directories* – a group of radio buttons determining the order for selecting standard WAY4 directories from which files be taken when menu groups and/or items are exported. The standard directories and access privileges are described in the "Classification of WAY4 Users" section of the "DB Manager User Management" document. These radio buttons are used as follows:
 - *Home* – necessary files will be searched for in the <OWS_HOME> directory only.
 - *Work* – necessary files will be searched for in the <OWS_WORK> directory of the workstation from which the menu is being exported.
 - *Work-Home* – the necessary files will be searched for in the <OWS_WORK> directory of the workstation; if no files for export are found, the <OWS_HOME> directory will be searched.
 - *Home-Work* – the necessary files will be searched for in the <OWS_HOME> directory of the workstation; if no files for export are found, the <OWS_WORK> directory will be searched.

After menu elements have been selected for exporting and the export parameters set, click the [Marked Only] button to specify in the "Save upgrade information" window, the name of the file in which data will be saved. This file will be automatically given the .upg extension.

To export all elements of the user menu, click the [Standard] button.

3.3 Importing Menu Groups and Items from a File

Menu groups and items are imported by users when they are received from the, WAY4 system vendor, or after the creation of menu upgrade files on a test system.

To import menu groups and/or items, select "Full →DB Administrator Utilities → Upgrade Utilities →Import Menu" (see Fig. 43) from the user menu.

The "Menu Upgrade File Loader" (see Fig. 46) window used to select user menu groups or items for importing opens.

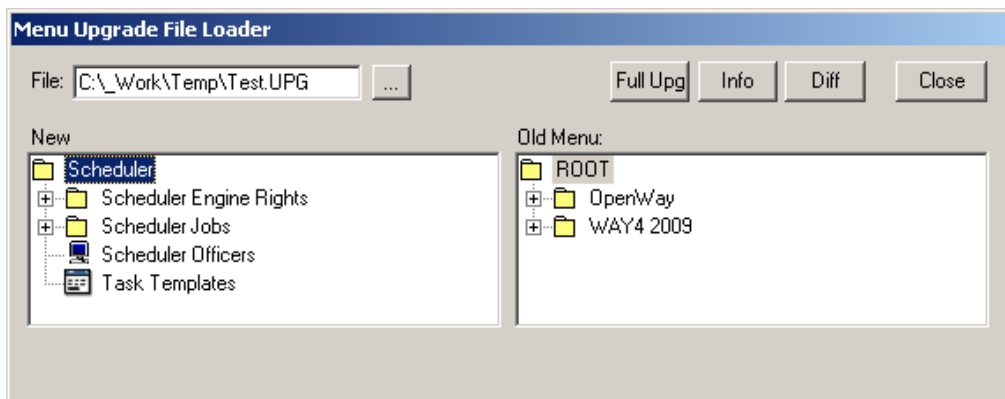





Fig. 46. Menu Upgrade File Loader dialogue window

In the *File* field of this form use the  button to specify the name of the file from which the menu will be imported. The menu elements contained in this file will be shown in the *New* field of the window.

This window contains the following control buttons:

- [Full Upg] – starts the procedure of importing the standard menu.
- [Info] – opens the window containing information about the menu element being imported, which is highlighted in the *New* field.
- [Diff] used to display information about differences in menu groups being imported and those installed on the workstation. Before clicking this button, in the left and right-hand sections of the "Menu Upgrade File Loader" window highlight the menu groups to be compared. When the comparison is completed, new menu items in the left-hand section of the "Menu Upgrade File Loader" window will be marked by  symbols, and in the right-hand side of the window, the items which are missing from the menu being imported will be marked by  symbols (see Fig. 47).

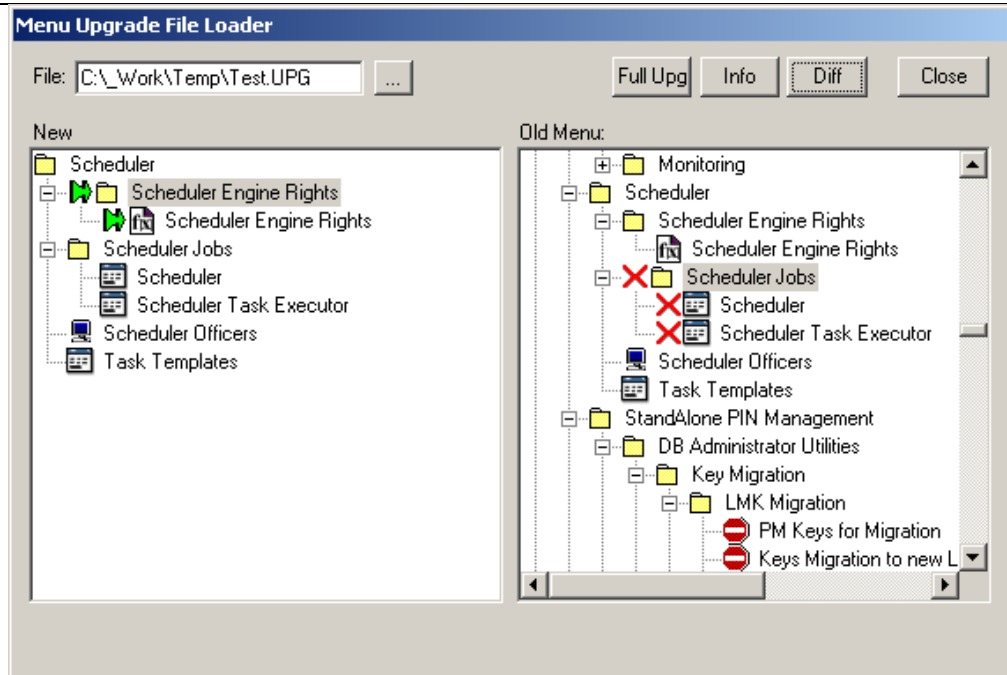


Fig. 47. Information about differences between old and new menu groups.

To import a menu element, left-click it and, holding the left mouse button down, drag it to its place in the appropriate menu group in the *Old Menu* field of the window.

When this operation is completed, the Install Objects window (see Fig. 48) will open.

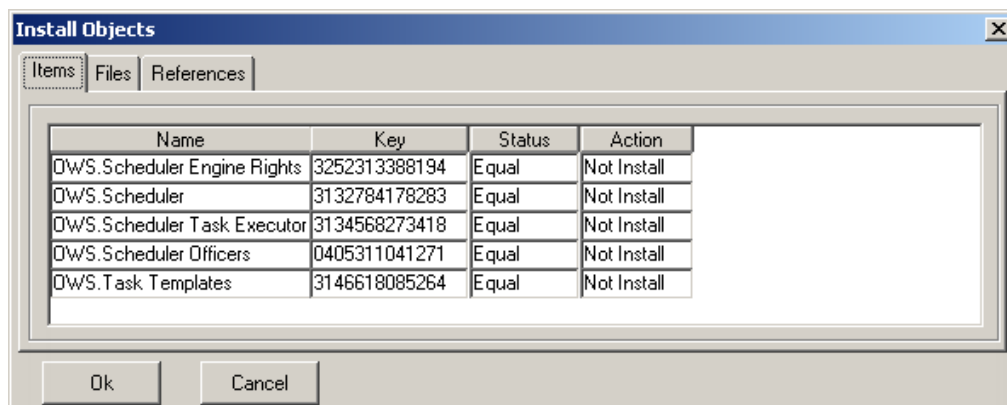


Fig. 48. Menu element importing parameters

The window has three tabs:

- Items – table with the list of menu items contained in the file selected for import.
- Files – table with the list of files necessary for executing the menu items being imported and contained in the file selected for import. When a menu item associated with such files is exported, the latter are saved in a file with the .dmp extension (see the description of the "Options" window in "Exporting Menu Groups and Items into a File").

- References – table listing the additional access privileges required for a user to start a certain menu item. (see the Security field in "Editing Menu Item Definitions").

Each element of these lists has one of the following values in the *Status* field:

- Equal – the element being imported already exists in the user menu.
- Modified – the element being imported differs from the corresponding element in the user menu.
- New – the element being imported is not in the user menu.

In the *Action* field of the tables shown in the "Install Objects" window, using a drop-down list, the user can specify if a particular menu element will be imported from the menu upgrade file. "Install" is the default value for elements whose statuses are either "Modified" or "New". If this value is specified, the selected element will be imported. "Not Install" is the default value for elements whose status is "Equal"; this value determines that the given element will not be imported.

After the user menu import parameters have been set, click the "Ok" button in the Install Objects window to start the importing procedure.