Form Builder

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Introduction

DB Manager users access data contained in database records through editing windows, including the following:

- Grid forms where records are represented as table rows and their fields as columns.
- Free forms intended for representing just one record in a database at a time. The locations and sizes of the fields of such forms are determined while a form is being designed.

Form Builder is intended for creating new and editing existing forms, which, after that, are used as DB Manager editing windows.

This document is addressed to DB Manager users, employees of banks and processing centers acting as system managers.

It is recommended that, while working with this document, users also refer to the following sources from Open Way documentation set:

- DB Manager Manual
- Menu Editor
- DB Manager User Management

The following conventions are used throughout this document:

- Field labels in screen forms are typed in *italics.*
- The titles of screen form buttons are placed in square brackets, such as [Approve].
- Menu selection sequences are shown with the use of arrows like, for instance, Issuing → Contracts Input & Update.
- Item selection sequences, in the system menu, are shown with the use of different arrows like, for instance, Database => Change password.
- Combinations of keys used while working with DB Manager are shown in angular brackets such as <Ctrl>+<F3>.
- The names of directories and/or files where an inclusion of varying, from user computer to computer, paths is implied are also displayed in angular brackets like <OWS_HOME>.
- Warnings of possible erroneous action are marked with the  sign.
- Messages marked with the  sign contain information about important features, additional facilities or the optimal use of certain functions of the system.

Chapter 1. Working with Form Builder

Starting Form Builder

To start Form Builder, select "Database => Forms" item on the DB Manager system menu or press the <F2> key.

This will bring to the screen the "Forms" window (see Fig. 1) containing a field for selecting database tables out of the list and the list of forms generated on their basis.

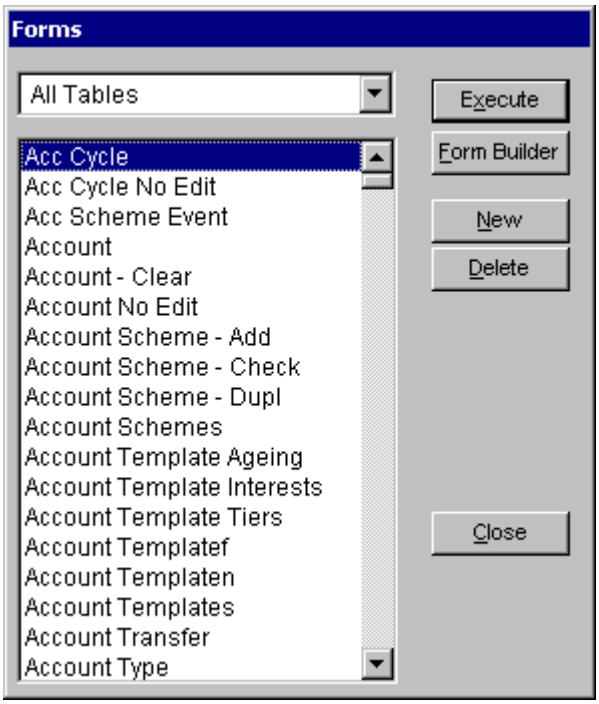

Fig. 1 The window for selecting a form to be edited

By default, when this window opens, it contains a list of forms related to all tables. The list is very large so it is recommended that the table to which a form to be edited is related be selected first, thus simplifying the search.

A form for editing is selected by clicking on the required name in the list of forms, and then clicking the [Form Builder] button. Clicking this button opens the "Editing form" window with the message "Form Editor will reset the form layout to default. To avoid this you should use 'design mode'". This message warns that when working with form editor after saving changes for free forms, the design of form elements (field size and location, colours, etc.) will be changed to that used by default. Clicking the [OK] button in the "Editing form" window opens the form editor window (see Fig. 2 in the section "Form Builder Window"). If the design of free form elements should not be changed to default, it is recommended to edit forms in Design mode ("Form => Design Mode", <Ctrl>+<D>).

To create a new form, click on the [New] button.

To delete a user-created form, use the [Delete] button (see "Form").

A click on the [Execute] button or a double click on the form name brings the selected form to the screen.

Form Builder Window

After a form has been selected for editing or the new form creation procedure started, the Form Builder window opens (see Fig. 2).

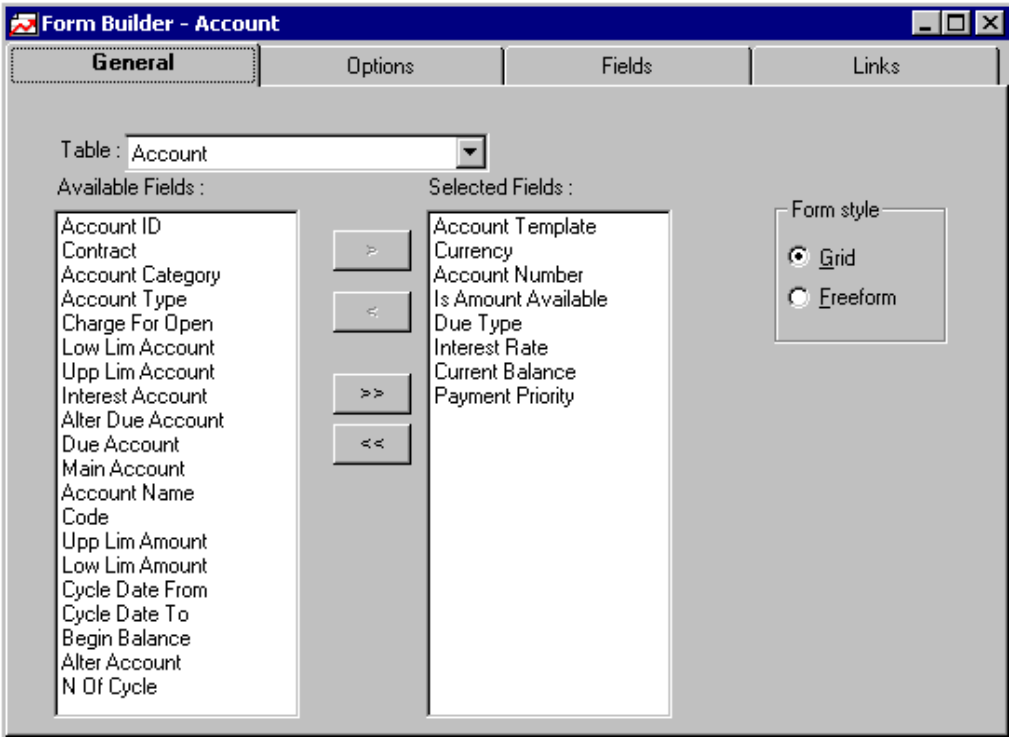

Fig. 2 The "General" tab of the Form Builder window

The Form Builder window allows defining the general properties of the form to be created and determining what database objects are necessary for the creation of the form

The window has the following four tabs:

- "General" where the general properties of the form are described
- "Options" where additional parameters are described
- "Fields" listing the fields of the form and describing their properties
- "Links" listing the connections of the form with other forms

Form Builder Window: the "General" Tab

The "General" tab of the Form Builder window (see Fig. 2) has the following fields:

- *Table* – for the name of the database table the form is based on.
- *Available Fields* – for a list of all fields the database table has.
- *Selected Fields* – for the list of all database table fields used in the form.
- The *Form Style* group of switches determining the style of the form.
  - *Grid* – for a grid form.

- *Free Form* – for a free form.

Fields are selected for use in the form by control buttons. In order to add a field, its label needs to be selected on the *Available Fields* list and the > button clicked. If a field is to be excluded, its label is selected on the *Selected Fields* list and the < button clicked. If all the fields on the list need to be added to the form, click the >> button. To exclude all the available fields from the form, click the << button.

Form Builder Window: the "Options" Tab

The "Options" tab of the Form Builder window (see Fig. 3 and Fig. 6) is used for setting rules for working with records, configuring Associated Procedures and setting conditions governing the presence in or exclusion from the form of buttons for launching the Associated Procedures, as depends on the type of a record, and whether the deletion or insertion of records is either prohibited or allowed.

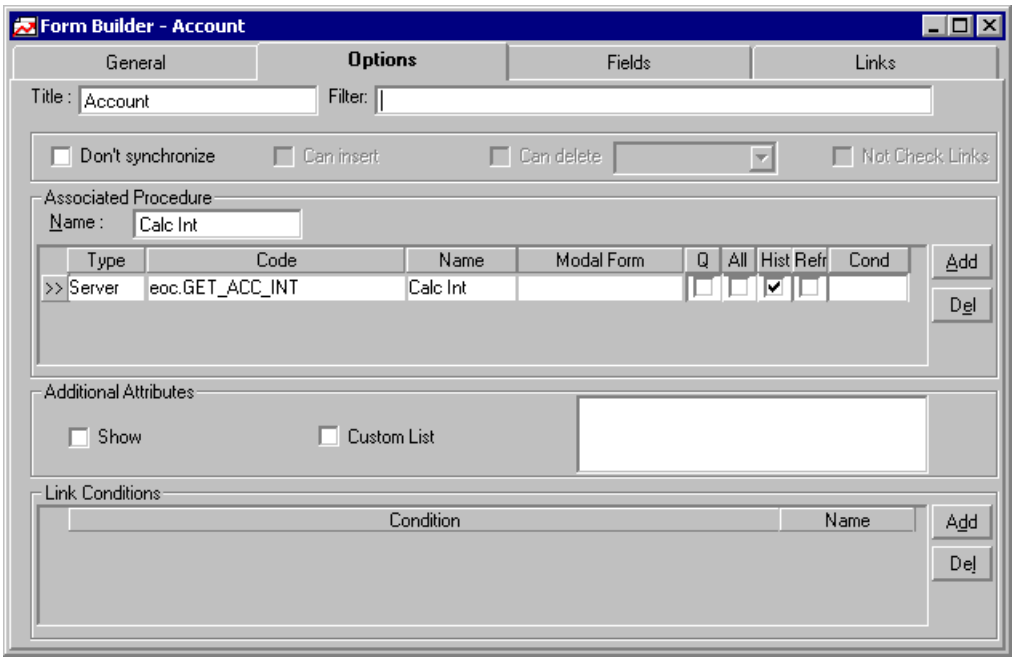

Fig. 3 The "Options" tab of the Form Builder window

For more information on the use of the fields in the "Options" tab please refer to the "Configuring a Form" section hereof.

Form Builder Window: the "Fields" Tab

The "Fields" tab of the Form Builder window (see Fig. 4) contains information as to the way database record fields are represented in the form and the conditions of the preliminary selection of records.

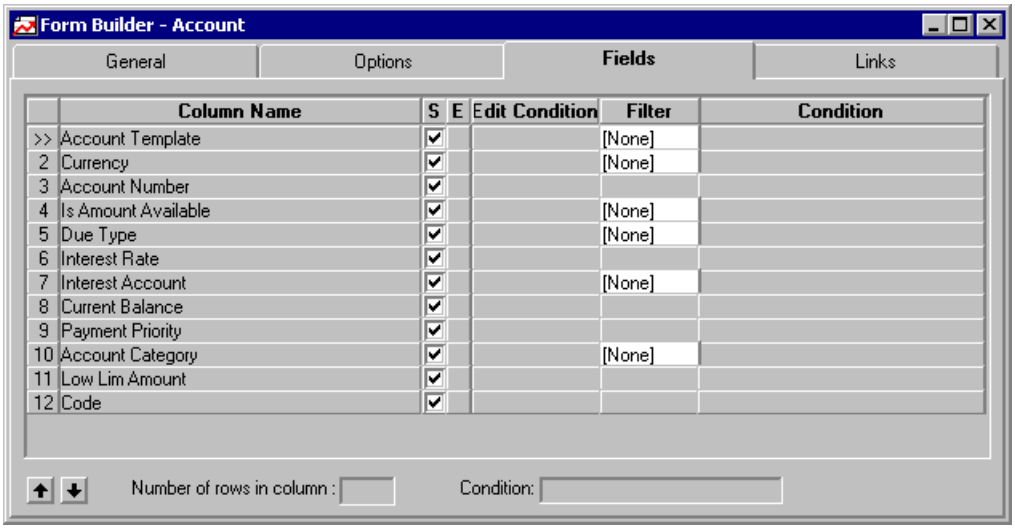

Fig. 4 The "Fields" tab of the Form Builder window

The field contains a table with the list of the fields and control buttons.

There are the following columns in the table:

- *Column Name* contains the names of the fields of the database record, which are included in the form being edited.
- *S(how)*: checkboxes determining if fields are shown when the form is called to the screen. If a box is left unchecked, the field it belongs to will not be shown.
- *E(dit)*: editing checkboxes. If an "*Edit*" box is checked, which is possible only if the corresponding "*Show*" box is checked, the value in the field is available for editing.
- *Edit condition* contains a condition to be met for the value of the field to be available for editing. This condition is set in the "Options" tab of the *Link Conditions* group of fields (for more detail, see "Configuring a Form").
- *Filter*: the type of preliminary record selection for a database column is shown here. The form will show only records where the value in the field conforms to the condition shown in the *Condition* column. If preliminary selection is not possible for some or other database field, that sell of the table remains inactive. This field is edited if it offers a selection from a list.
  - "None" means that no preliminary selection is done.
  - "Static" means that preliminary selection is done in accordance with a constant value selected from the list in the *Condition* field and shown in the column of the same name.
  - "Dynamic": preliminary selection is done according to the so-called local variable, which is a value supplied, at the time the form is called up, from the Local_constants table. The name of the local variable is selected from the *Condition* list and is shown in the column of the same name.
- *Condition*: this column contains the value of the field, which will govern preliminary record selection. Depending on the value contained in the Filter column, the Condition column will contain either a value proper or the name of the local variable whose value will be used for preliminary data selection at the time the form is called up to the screen.

Note that when adding new records, the field according to which the query is being made will be unavailable for editing while working with the form and the field value will be determined by query conditions.

Data selection governed by values contained in *Filter* and *Condition* cells is a property of a form and is adhered to, when the form is called to the screen, regardless of what the user does. Preliminary data selection done by users is described in the "Entering and Editing Data" chapter of the "DB Manager Manual" document and in the corresponding paragraph of the "Menu Editor" document (see the "Form Type" paragraph of the "Editing Menu Sub-items" section of the "Menu Editor" document).

The "Fields" tab also contains the following fields:

- *Condition* is a field found in the bottom part of the "Fields" tab of the Form Builder window where conditions for preliminary selection are picked out of a drop-down list analogous to the *Condition* column found in the right-hand-side section of the same window.
- *Number of rows in column.* When a new free form is created, database fields are initially arranged in columns. This field allows entering the number of database record fields in each column of the form being newly created. The locations of the form fields can be altered at a later time.

The and buttons are used for changing the order, in which, by default, fields appear in the preliminary data selection window of the form that is being edited (see the "Preliminary Selection of Records according to Arbitrary Criteria" of the DB Manager Manual" document). To alter this order, the required field needs to be selected by a mouse click in the *Column Name* column and one or the other button clicked the required number of times.

Form Builder Window: the "Links" Tab

In its turn, the "Links" tab (see Fig. 5) has two tabs, "General" and "Details". The "Links\General" contains a list of forms that can be called from the form that is being edited. The "Links\Details" tab serves to configure child form calls (for more detail, see "Links to Other Forms").

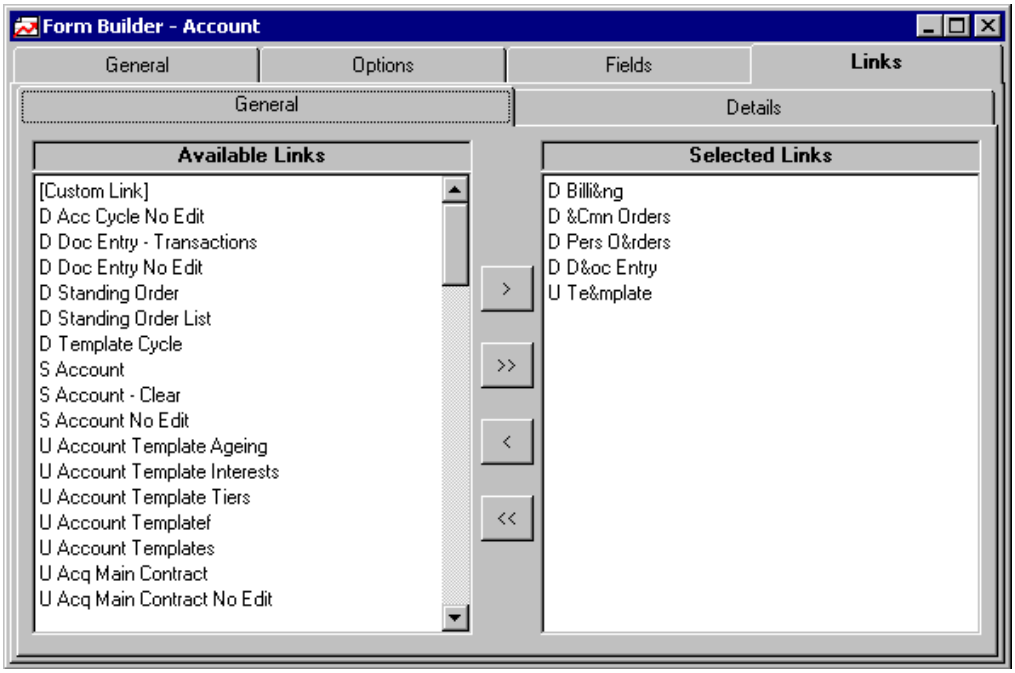

Fig. 5 The "Links" tab of the Form Builder window

The parent form that is being edited is the main one, while its child forms, which are called from it, are subordinate. Parent and child forms may be based on either the same or different database tables.

There are five types of links between forms:

- "Self", which means that both forms are based on the same database table, that is, the child form, when called, will contained data relevant to the current record in the parent form. This type of link is used, for instance, for displaying, in the parent form, the list of records in a database, while showing, in the child form, the complete set of the fields of the current record. Consider, for instance, the "Acquiring Contracts" and "Balance" forms.
- "Up" where the child form contains the record referred to by the current record in the parent form. Examples of this are "Acquiring Contracts" and "Clients" as a child form of the former.
- "Down" where the child form contains records that refer to the current record in the parent form. Examples of this are "Acquiring Contracts" and "Devices" as a child form of the former.
- "History" where the child form contains the table that contains the history of the changes made in a certain record.
- "Custom", which is a type of link set up by the user by creating special fields in the window for configuring child forms (see "Links to Other Forms").

The "Links" tab contains two lists:

- *Available Links*, which is a list of forms, which can be called from the form that is being edited. The name of each of these forms is preceded by the possible type of its link with the parent form: U(p), D(own), S(elf), H(istory) or C(ustom).
- *Selected Links*, which is a list of selected child forms, which will be available for calling up when working with the parent form.

Child forms that can be called from the parent form are selected with the use of control buttons. To add a form, its name should be selected, by a mouse click, on the *Available Links* list and the > button clicked. To exclude a form, its name should be selected on the *Selected Links* list and the < button clicked. To add all available forms to the list of child forms available for calling up, the >> button should be clicked, while the << button is clicked in order to exclude them all.

Saving an Edited Form

After a form has been edited, it is saved through the "Editor" item of the DB Manager system menu.

The item contains the following sub-items:

- "Save" (<Ctrl>+<S>) for saving forms.
- "Save As" for saving forms under new names.
- "Close" for exiting Form Builder without saving the results of editing.

⚠ Note that for the form to be correctly displayed on the screen, when saving the form use one of the following screen resolutions: 1024x768, 1152x864, 1280x960, 1400x1050, 1440x1080, 1600x1200, 1920x1440.

⚠ Note that saving forms from the Form Builder window will result in the replacement of the locations of free form fields and of grid form column names with those used by default.

The record sorting order assigned while working with a form (see the "Sorting Data in a Form" section of the "DB Manager Manual" document) will be saved when the form is saved.

After editing, forms are saved in the work directory (see "Concept of Storing Forms in Standard Directories").

Chapter 2. Designing a Form

Form Design Mode

When working with a form, Form Design mode is switched on by selecting the "Form => Design Mode" item of the system menu or clicking the  – [Design] button on the toolbar. While working with a form, this mode is only available if the form has been called up to the screen as a parent and not a child form. If design mode must be switched on for a child form, it must be reloaded as parent. To do that, right-click on the form name and, on the context menu, select "Load as Main".

In the Form Design mode, one can do the following:

- Specify the size and location of the form window.
- Configure the form.
- Describe the links of the form to other forms.
- Specify the sizes and locations of form fields.

Location and Size of a Form Window

The location and size of a DB Manager form window is changed in the following way:

- To relocate a form window on the screen, click on its title and drag it, while holding down the left mouse button, to a desired location.
- To resize a form window, move the mouse cursor to its edge till the cursor assumes the appearance of a two-headed arrow. Drag the window border, while holding down the left mouse button, until you get the desired window size.

You can keep the new size and/or location of the window by simply saving the form (see "Saving an Edited Form").

When you save a parent form, the sizes and location of opened child forms are also saved. In order to save the size and location of a child form that does not automatically open when its parent form is open, open the child form, adjust its size as described, place it where you want it and save its parent form. Then close the child form and save the parent form again.

Configuring a Form

The configuration of a form determines what can be done with data. The options window "<Name of form> options" (see Fig. 6) is called to the screen by selecting "Form => Options" on the system menu.

The form options window contains the following fields and boxes:

- *Title*, containing the title of the form.

- *Filter*, containing an additional condition for selecting data supplied by the form. This expression will be included in "WHERE" condition in an SQL query.
- *Don't synchronize.* If this box is checked, this form will not be synchronized when the "Database => Synchronize Forms" system menu item is selected (see "Synchronizing User-created Forms").
- *Can insert.* When this box is checked, the [Ins] button of the form becomes active, allowing the creation of new database records.
- *Can delete*. When this box is checked, the [Del] button of the form becomes active, allowing the deletion of database records.

  Database records can also be deleted as per a condition set in the Link Conditions group. To do so, select the required condition from the drop-down list that opens in the field located to the right of the *Can delete* checkbox.
- *Not Check Links*. When this box is checked, a record may be deleted without the deletion of other records that refer to it (for instance, a record of Contract type may be deleted without also deleting the Subcontract record that refers to it).

  To avoid violating the integrity of data as the result of a careless deletion of records, it is recommended that this checkbox never be checked without first consulting WAY4 vendor representatives.

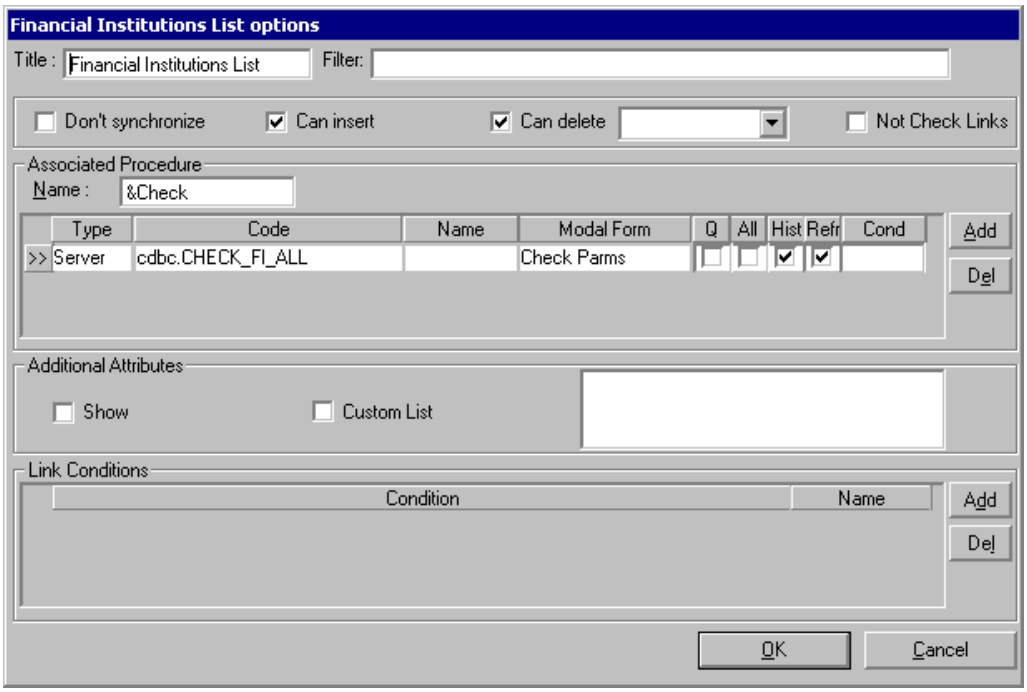

Fig. 6 The form options window

- The *Associated Procedure* group of fields:
  - *Name*. This is the name of the button used for calling an associated procedure.

    The title of a procedure may include the "&" symbol. In such a case, the letter following "&" is underlined and pressing <Alt>+<the underlined letter> has the effect of clicking the button in question.

- *Type*. The field where the type of an associated procedure may be picked out of a drop-down list. The choices are as follows:
  - "Server" calls up a stored procedure.
  - "Client" calls up a stored procedure on the client's end.
  - "Menu item" calls up a menu item.
- *Code*. The title of the associated procedure and the parameters of its activation.
- *Name*. This is the name of the procedure in the menu that opens when the button activating the associated procedure is clicked.
- *Modal form*. The title of the modal form called up for setting the criteria of execution (for instance, the date of processing) before an associated procedure is activated.
- *Q*. When this box is checked, the system will ask for confirmation before activating an associated procedure.
- *All*, When this box is checked, the procedure is run for all the currently selected records.

  Care must be taken when checking the *All* checkbox. This should be done only when the associated procedure must indeed be run for all the currently selected records.
- *Hist*. When this box is checked, all changes made in a record by a particular associated procedure will be saved.
- *Refr*. When this box is checked, the execution of the associated procedure will be followed by an update of the content of the form in accordance with the condition of preliminary selection of records (see the "Entering and Editing Data" chapter of the "DB Manager Manual" document).
- *Cond* is the field that allows selecting from a drop-down list of conditions, set in the *Link Conditions* group of fields, determining whether or not the button for calling up an associated procedure for active recording will be shown.

  Associated procedures are added and deleted by clicking the [Add] and [Del] buttons located to the right of the list.

- The *Additional Attributes* group of fields (for more details on additional fields please refer to the "Use of Additional Fields (Attributes)" section of the "DB Manager Manual" document) includes the following:
  - *Show*. When this box is checked, the form on the screen will show all its additional fields (attributes).
  - *Custom List*. When this box is checked, the form on the screen will show only those additional fields (attributes) that have been selected, by a mouse-click, on the list of attributes located to the right of the field.
- The *Link Conditions* group of fields includes the following:
  - *Condition* – an expression determining a condition. The buttons for calling up associated procedures and child windows will be either shown in or missing from the form, depending on the conformance of a record to the condition.

- *Name* – the title of a condition for an associated procedure or a link with a child window (see "Links to Other Forms") shown on the *Cond* selection list.

  Conditions are added and deleted by clicking the [Add] and [Del] buttons located to the right of the list.

  Conditions are saved in the PowerBuilder format for DataWindow objects (see the document "PowerBuilder 12.5 Users Guide". Examples of how such condition expressions are formed are found in the "Forming Conditions for Working with a Form" section hereof.

To save the configuration, the form must be saved with the "Form => Save" item of the system menu.

Forming Conditions for Working with a Form

Condition expressions are saved in the PowerBuilder format for DataWindow objects (see the document "PowerBuilder 12.5 Users Guide"). These expressions return Boolean True/False values.

The expressions may use every field of the table the form is built on.

The use of the special PowerBuilder functions, illustrated in Table 1, is allowed:

Table 1 The special PowerBuilder functions

Function	Purpose
abs(<x>)	Returns the absolute value (module) of <x>
mid(<s>,<pos>,<len>)	Selects, beginning the <pos> position, <len> characters from the <s> line
isNull(<x>)	Checks if the value of the <x> field of the table is Null
len(<s>)	Returns the length of the <s> line
lower(<s>)	Changes every letter of the <s> line to lower case
upper(<s>)	Changes every letter of the <s> line to upper case
today()	Returns the current date

The use of PowerBuilder notations, such as the following, is allowed:

```
if (<X>, <TRUE_VAL>, <ELSE_VAL>)
case(<X> when <A> then <VAL_1> when <B> then <VAL_2> … else <ELSE_VAL>)
```

The use of special functions, such as the following, is also allowed:

```
select_by_id("<select>",<id>)
```

where "<select>" is a database query returning Boolean 1 (true) or 0 (false) values, and where the "?" symbol is included instead of the unique ID of a database table record; while <id> is the value of the unique ID of a database table record used in the query instead of "?".

```
select_wo_par("<select>")
```

where "<select>" is a database query returning Boolean 1 (true) or 0 (false) values.

For example:

```
select_by_id("select decode(doc.trans_amount,0,0,1) from doc where
doc.id=?",ID)
```

This function will return the value "1" (true) if the document's "trans_amount" field value is not null; otherwise, the function returns the value "0" (false).

Example. For the "Process Log" form (Full → Process Log → Process Log) the condition must be specified when the [Stop] button (stop a process being executed) will be available for processes with the "Active" status. This button will be absent from the form for processes with other statuses.

To solve this task, the following fields in the "Process Log Options" form must be filled in:

- *Condition* – specify the following condition in this field:

```
status = 'A'
```

- In the *Name* field of the *Link Conditions* group, specify the "Active" value.
- In the *Name* field of the *Associated Procedure* group, specify the name of the "Stop" button, and in the *Cond* field, select the "Active" value from the list.

The results of these settings are shown in Fig. 7.

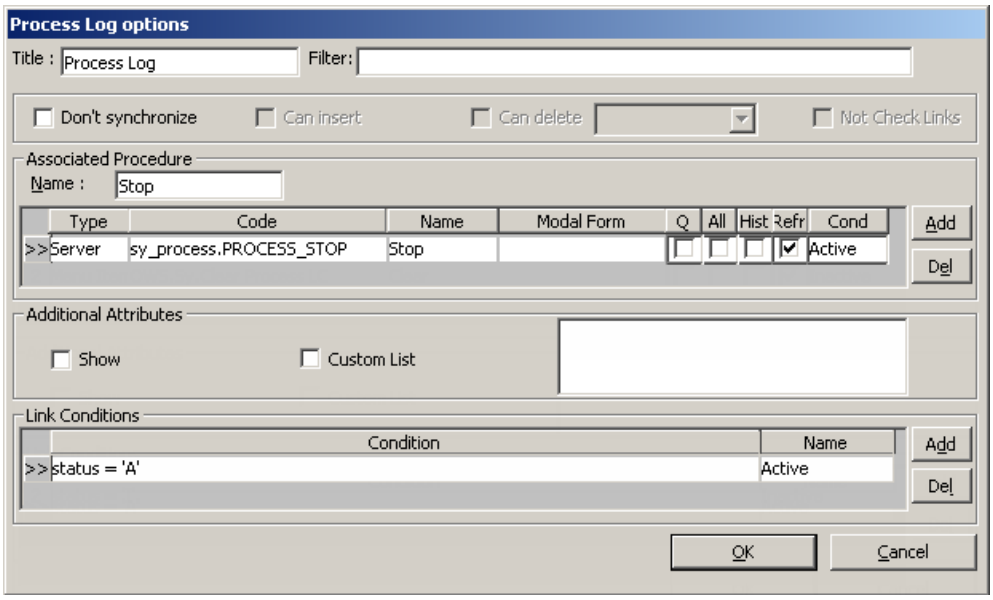

Fig. 7. Example of condition use

Links to Other Forms

The list of child forms called up from that being edited is compiled in the "Select links for" window (see Fig. 8) that is brought up to the screen by selecting the "Form => Links" item of the system menu.

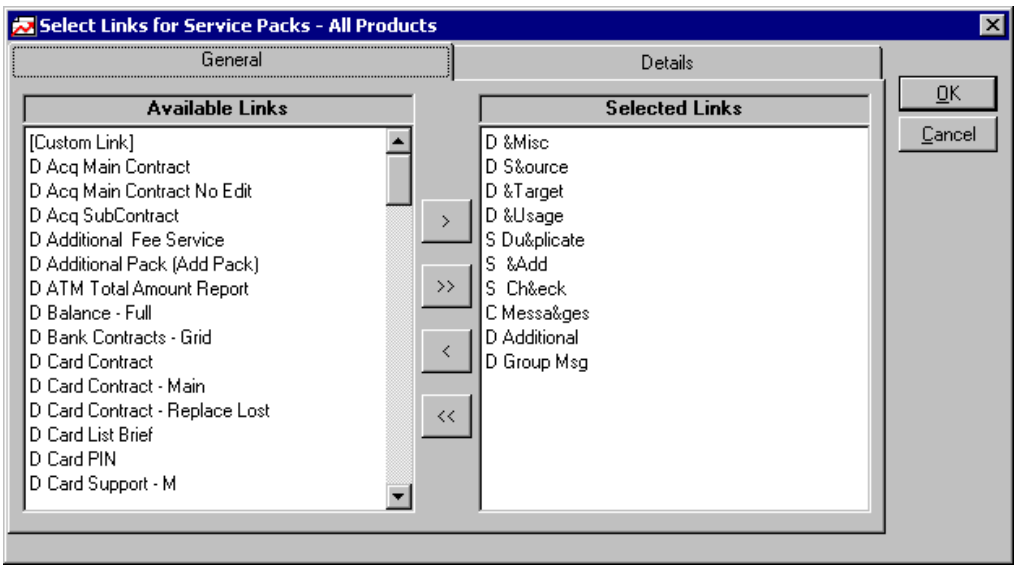

Fig. 8 The window for selecting links to child forms (the "General" tab)

The selection of child forms available for calling from the parent form is done the same way as in the Form Builder window (see "Form Builder Window: the "Links" Tab").

The parameters of calling up a child form may be set through the "Details" tab of the "Select Links for" window (see Fig. 9) or, while in the Design mode, by selecting the "Links => <the name of the child form>" item of the system menu.

The number of the parameters of calling up a child form depends on the type of the link to it. The type of the link to a child form is determined by the value selected from the list opening in the *Link Type* field (for more details on the types of links please refer to "Form Builder Window: the "Links" Tab").

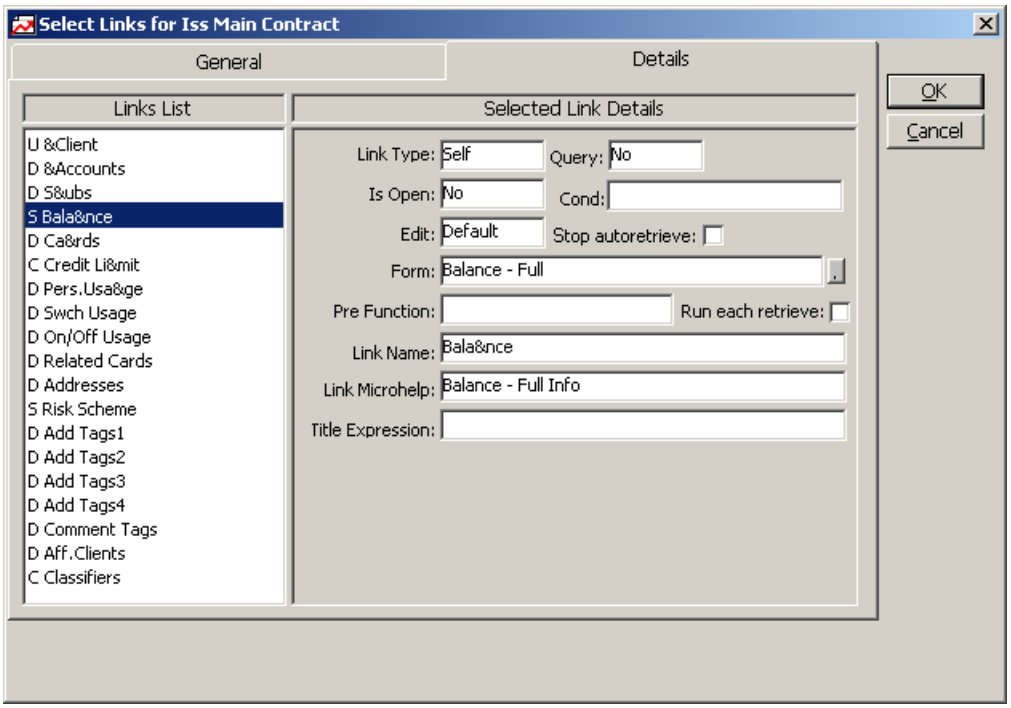

Fig. 9 The window for setting links to child forms (the "Details" tab)

The window for setting links to child forms contains the following fields:

- *Link Type* for the type of a link to a child form.

- *Query*. When "Yes" value is assigned to this field, the window for setting conditions for preliminary data selection will be called to the screen before the child form is.
- *Is Open.* When "Yes" value is assigned to this field, the child form will open automatically when the parent form is called to the screen.
- *Cond* is a field displaying the list of conditions set in the form configuration window (see "Configuring a Form"). When some or other condition is selected in this window, the opening of child forms will be possible only for parent forms meeting this condition.
- *Edit* – the way child forms fields are edited:
  - "Default" – form fields are edited depending on form properties.
  - "Not editable" – form fields cannot be edited.
- *Stop Autoretrieve* – when this box is checked, if a child form is called, automatic update of data in forms will be disabled.
- *Undelete* (only when the type of link is "History"). When the field is assigned "Yes" value, the [Undelete] button intended for restoring deleted records, will be present in the child form.
- *Form.* This field is for manually typing in or selecting from the list, by clicking on the button, the title of a child form.
- *Pre Function* holds the title of the stored procedure to be initiated before the child form is called up.
- *Run each retrieve.* If this box is checked, a stored procedure will be initiated every time the user goes to another record in a grid form, instead of just before the form is brought up to the screen.
- *Link Name.* This is the title of the button that, when clicked, brings a child form to the screen. The title may include the "&" symbol. If this is the case, the letter following the "&" symbol will be underlined and pressing <Alt>+<the underlined letter> will be the same as clicking the appropriate button.
- *Link Microhelp* holds the text of the message that pops up in the status line when the mouse cursor hits the button calling up a child form.
- *Link Field* (when link types are "Down" or "Up") - name of the field containing a link to another form.
  - If the link type is (D)own, the field holds the label of a field in a child form.
  - If the link type is (U)p, the field holds the name of a field in the form that is being edited.
- *Master Link Field* (only for "Custom" link types (see Fig. 10)) – name of the parent (being edited) form field.
- *Detail Link Field* (only for "Custom" link types (see Fig. 10)) – name of the child form field.
  - When there is no selection operator in the *Link Select* field, the child form will only show the database records where the value of the child form's *Detail Link Field* field is the same as the value of the parent form's *Master Link Field* field.

- When there is a selection operator in the *Link Select* field, the child form will only show the database records where, considering the selection condition, the value of the child form's *Detail Link Field* field are the same as the results of applying the selection operator that uses the value of the parent form's *Master Link Field* field.

⚠ Only the names of identifier fields can be used as *Master Link Field* and *Detail Link Field* field values. Identifier fields are usually named "<Field>__ID" or <Field>__OID); i.e. fields with the Oracle data type NUMBER(18,0), for example, "ACNT_CONTRACT__OID" or "ACC_SCHEME__ID".

- *Link Select* (only for "Custom" type links (see Fig. 10)) – sets the condition for selecting data for the child form.
- *Title Expression* – expression for computing a child form's header in PowerBuilder 12.5 format (for more information, see the document "PowerBuilder 12.5 Users Guide"). Field names from the main (being edited) form can be used in the expression. For example, if the expression "'Linked Clients for ' + SHORT_NAME" expression is set for the main form, the child form will have the header "Linked Clients for <Short_Name>", where <Short_Name> is the main form's SHORT_NAME field value (client name). If the field is empty, a child form will have the name "<Link_Name> for <rec_value>", where <Link_Name> is the button name (*Link Name* field value), and <rec_value> is the name of the current record.

An example of configuring the calling up of a child form, the type of link being "Custom", is shown in the figure Fig. 10.

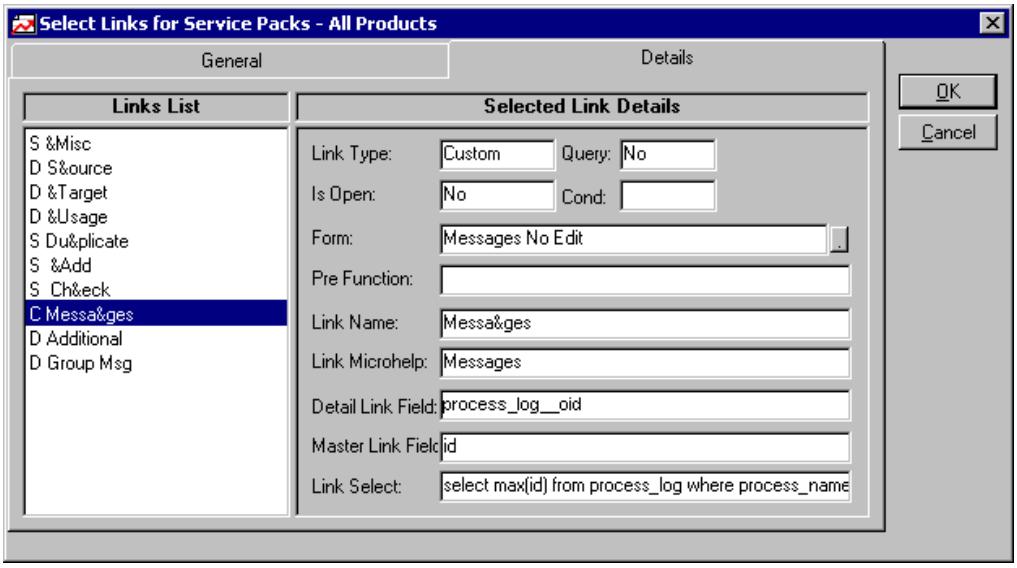

Fig. 10 Setting parameters for calling up a child form (the link type is "Custom")

In this example, the "Messages" child form will contain system messages generated by the last Approve procedure of the service package in question.

To meet the stated condition, the following parameters are set for calling up the child form:

- The parent form: "Service Package";
- The child form: "Messages";
- The field in the child form: *Process_log__oid*;

- The field in the parent form: *id*;
- The selection condition: "select max(id) from process_log where process_name='Renew Service Pack' and parameters = (select name from serv_pack where id = :arg)".

After the parameters of linking the parent form with child forms have been changed, the form that is being edited must be saved by selecting the "Form => Save" item of the system menu.

Chapter 3. Designing Grid Forms

The elements of a grid form are as follows:

- The table proper, consisting of rows and columns. The rows correspond to database records and columns represent fields.
- Column names.
- Control buttons, etc.

Column Order

The order, in which columns follow each other is changed while a form is being designed ("Form => Design Mode", <Ctrl>+<D>). To do that, place the mouse cursor on a column name and, while holding the left mouse button down, drag the name to the left or right to its desired position.

Having arranged all column names as desired, save the form (see "Saving an Edited Form").

Widths of Columns

The widths of columns are changed while a form is being designed ("Form => Design Mode", <Ctrl>+<D>). To do that, place the mouse cursor to the edge of the column (it will then assume the appearance of a dual-headed arrow) and, while holding the left mouse button down, drag the column border to its desired position.

Having changed the widths of all columns as desired, save the form (see "Saving an Edited Form").

Deleting Columns

Columns are deleted while a form is being designed ("Form => Design Mode", <Ctrl>+<D>). To do that, place the mouse cursor on the column you want to delete (not on the column name!) and press the right mouse button. In the context menu that opens (see Fig. 11), select "Delete".

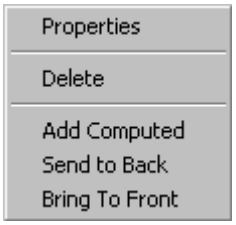

Fig. 11 The context menu used while editing the columns of a grid form

Having deleted the columns as desired, save the form (see "Saving an Edited Form").

Inserting Columns

Columns are added to grid forms while in Design mode ("Form => Design Mode", <Ctrl>+<D>). To do that, select the "Design => Insert => Field" item of the system menu, move the mouse cursor, which will assume the appearance of a cross, to the desired position and click the left mouse button. This will bring to the screen the window listing database fields that can be added to grid forms as columns (see Fig. 12). Select the desired field by clicking it and then click the [Insert] button.

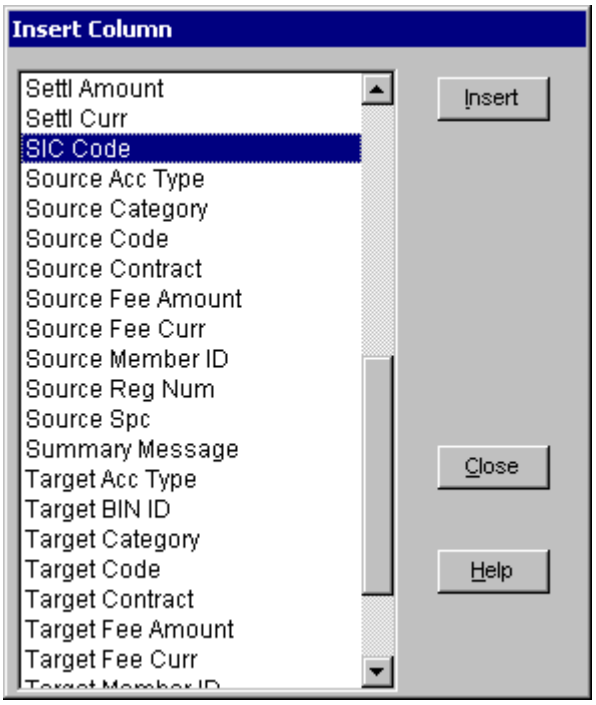

Fig. 12 The Insert Column widow with the list of fields that can be added as columns

When all the desired columns have been added, save the form (see "Saving an Edited Form").

Column Parameters

The parameters of the columns of a grid form are set while in Design mode ("Form => Design Mode", <Ctrl>+<D>). To do that, place the mouse cursor on some or other cell in the required column (not on the column title!) and click the right mouse button. In the context menu that opens (see Fig. 11), select the "Properties" item, which will result in the appearance, on the screen, of the window for setting column parameters (see Fig. 13).

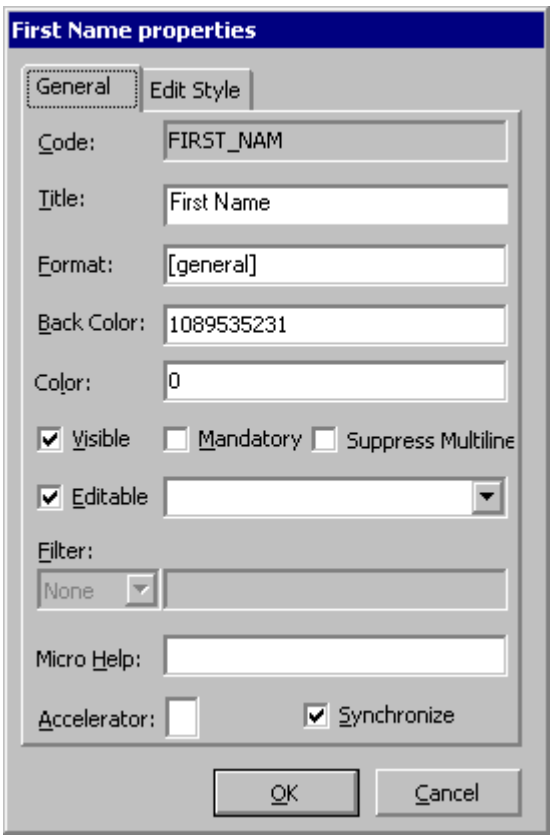

Fig. 13 The window for setting grid form column parameters

The window where the column parameters of a grid form are set has the following fields:

- *Code* – database field name.
- *Title* –title of a grid form column (this field is filled in automatically and does not require any changes done by a user).
- *Format* – field parameters may include data format (for more detail please refer to "PowerBuilder 12.5 Users Guide"); this field is used if it is necessary to mask field contents (see "Masking Field Contents").
- *Color* – font color (see "Altering Field Text Colors According to Conditions").
- *Back Color* – background color (see "Altering Field Text Colors According to Conditions").
- *Synchronize* – when this box is unchecked, there will be no synchronization of this field when the "Database => Synchronize Forms" item of the system menu is selected (see "Synchronizing User-created Forms").
- *Visible* – when this box is checked, the column in question will be present in the grid form.
- *Editable* – when this box is checked, the field values in this column may be edited.
- *Mandatory* – when this box is checked, the fields in this column must be filled in.
- *Suppress Multiline* – when this box is checked, the pop-up editor cannot be used for this field.

It is recommended that this option be always used if it is necessary to mask field contents (see "Masking Field Contents") as the pop-up editor does not support masking.

- *Filter* – (active for columns where preliminary data selection is possible): the selection of the type of preliminary data selection (see "Form Builder Window: the "Fields" Tab").
- *Accelerator* – this field is active for columns that allow data to be entered and edited. It may contain a Latin letter for denoting a "hot key" (<Alt>+<letter>) for switching to the cell in this column related to the current record.

  When creating "hot keys", one should avoid including letters reserved for standard buttons, such as [Delete] or [Insert], and system menu items. Otherwise the configuration of the system may be inadvertently altered.
- *Micro Help* – a message popping up in the status line when the mouse cursor hits a column.

Once all the desired parameters have been set, save the form (see "Saving an Edited Form").

Styles are configured through the "Edit Style" tab of the Grid Form Parameters window. The content of the tab depends on the style of the field whose parameters are being edited.

The following field styles are used in the system:

- *Edit*: a field for free-format entering.
- *EditMask*: a field for fixed-format entering.
- *DropDownListBox*: a field for selecting from an editable drop-down list.
- *DropDownDataWindow*: a field for selecting from a list stored in the database.

Edit Field

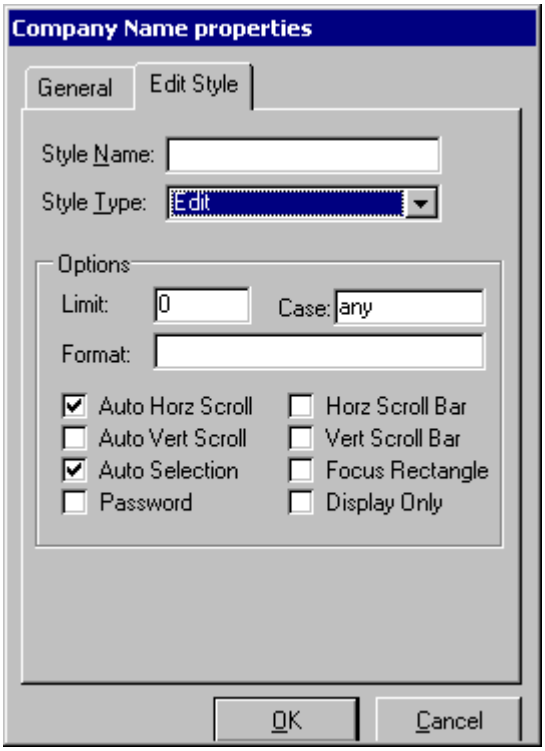

Fig. 14 The Edit Style tab of the Properties window: free-style editing

When free-style editing is selected, the Edit Style tab of the Parameters window (see Fig. 14) has the following fields:

- *Style Name*: the field (blank by default) where a style may be picked out of the list of styles that are registered in the system. This field has its own set of parameters that can not be edited. A user may set the required parameters, leaving this field blank.
- *Style Type: t*he field where style types may be picked out of a list.
- *Limit*: the field where the maximal number of characters that can be entered is set. If the number is 0, there is no limit.
- *Case*: drop-down list to specify the case of displayed characters:
  - Upper.
  - Lower.
  - Any.
- *Format*: the field where the data format is defined (for more detail please refer to "PowerBuilder 12.5 User's Guide").
- *Auto Horz Scroll*: when this box is checked, the cursor may be moved along the whole string entered into the field, which may be necessary if the number of symbols in the string exceeds the visible space.
- *Auto Vert Scroll*: when this box is checked, the cursor may be moved vertically in the fashion similar to the previous field description.
- *Auto Selection*: when this box is checked, the value of the field becomes highlighted when hit by the cursor.

- *Password:* the visible representation of entered data is automatically replaced with "*" symbols.
- *Horz Scroll Bar*: when this box is checked, a horizontal scroll bar appears in a field when it becomes active.
- *Vert Scroll Bar*: when this box is checked, a vertical scroll bar appears in a field when it becomes active.
- *Focus Rectangle*: when this box is checked, the active field is surrounded by a dotted-line rectangle.
- *Display Only*: when this box is checked, the field may be made active and be traveled in but its value remains unavailable for editing.

Edit Mask Field

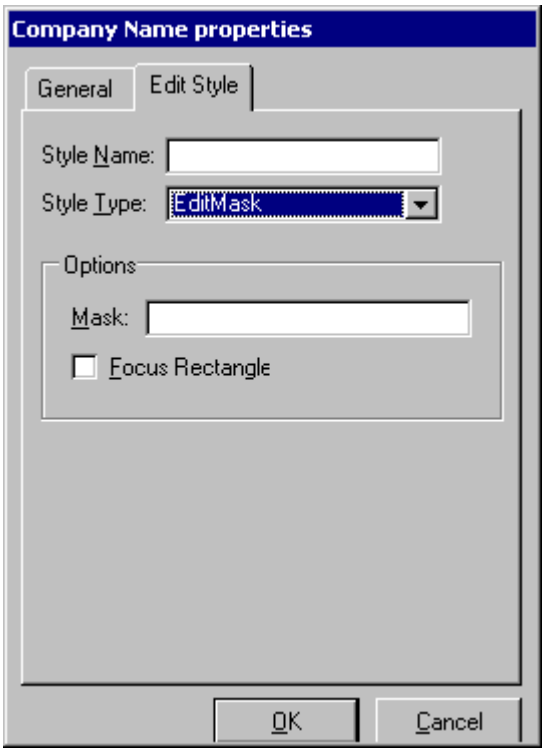

Fig. 15 The Edit Style tab of the Properties window: fixed-style editing

When fixed-style editing is selected, the Edit Style tab of the Parameters window (see Fig. 15) has the following fields:

- *Style Name*: the field (blank by default) where a style may be picked out of the list of styles that are registered in the system. This field has its own set of parameters that can not be edited. A user may set the required parameters, leaving this field blank.
- *Style Type*: the field where style types may be picked out of a list.
- *Mask*: the field where the format of entered data (date, time, etc.) is defined (for more detail please refer to "PowerBuilder 12.5 Users Guide").
- *Focus Rectangle*: when this box is checked, the active field is surrounded by a dotted-line rectangle.

Inserting Parameters from Drop-down Lists

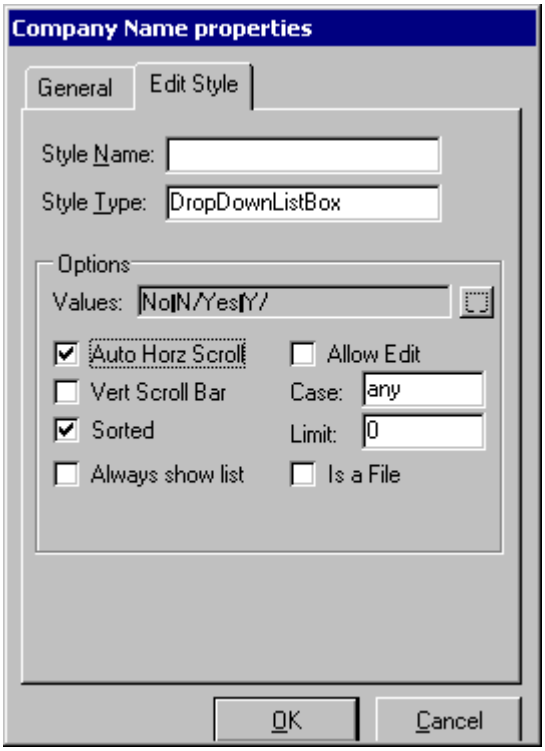

Fig. 16 The Edit Style tab of the Properties window: DropDownListBox

When picking parameters out of a drop-down list ("DropDownListBox") is selected, the Edit Style tab of the Parameters window (see Fig. 16) has the following fields:

- *Style Name*: the field (blank by default) where a style may be picked out of the list of styles that are registered in the system. This field has its own set of parameters that can not be edited. A user may set the required parameters, leaving this field blank.
- *Style Type*: the field where style types may be picked out of a list.
- *Values*: the field where the list of values to be selected is found. To select from the list, click the ... button located to the right of the list. This will bring the "DropDownListBox Definition" window to the screen (see Fig. 17).

  The insertion before the currently active element, deletion or adding of a row to the end of the list is done by clicking the [Insert Row], [Delete Row] or [Add Row] respectively.

  In the *Display Value* field, the value to be entered into the selection list is shown; while in the *Data Value* field the values passed to the system as the result of making the choice are shown.

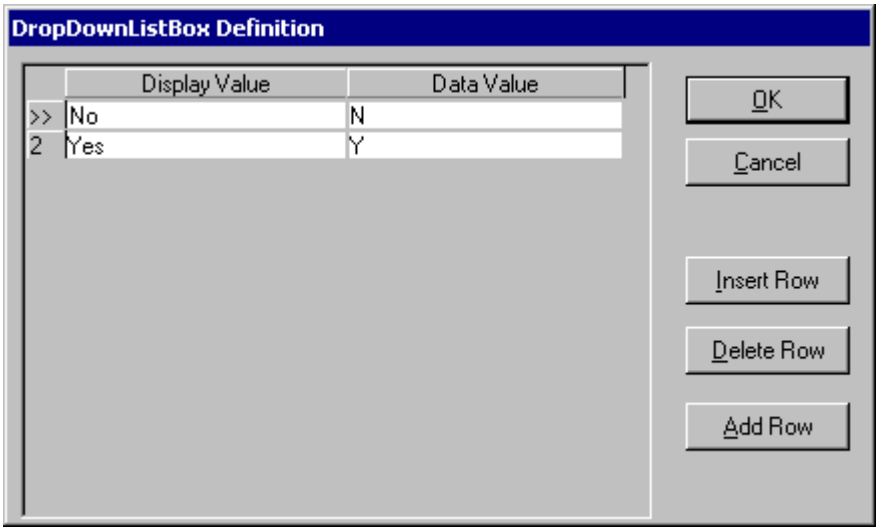

Fig. 17 The window for adding listed style parameters (DropDownListBox Definition)

- *Auto Horz Scroll*: when this box is checked, the cursor may be moved along the whole string entered into the field.
- *Vert Scroll Bar*: when this box is checked, a vertical scroll bar appears in a field when it becomes active.
- *Sorted*: when this box is checked, the elements of the list are sorted alphabetically.
- *Always Show List*: when this box is checked, the list of values to choose from will open when the field becomes active by moving the focus to it with the use of the <Tab> key. If made active in a different way, the field will have the button for opening the list.
- *Allow Edit*: when this box is checked, the value of the field, besides being picked out of the list, may be entered manually.
- *Case* - drop-down list to specify the case of entered characters:
  - Upper.
  - Lower.
  - Any.

  The value of this field is taken into account when the *Allow Edit* box is checked.
- *Limit*: the field where the maximum number of characters that can be entered is set ("0" means there is no limit). The value of this field is taken into account when the *Allow Edit* box is checked.
- *Is a File*: when this box is checked, the standard "Open File" MS Windows window will come up on the screen when a value is entered into the field and the selection of a file will automatically start an associated program.

  If the *Is a File* box is checked, the *Values* field and DropDownListBox Definition window (see Fig. 17) serve to define the type and format of the file to be opened. The type of the file to be selected in the *Files of Type* field of the "Open File" window is shown in the *Display Value* column of the DropDownListBox Definition window and file mask, like "*.txt", goes into the *Data Value* column thereof.

File Dir is the field where the path to the chosen file is shown. This field is present in the "Edit Style" tab only if the *Is a File* box is checked.

Fields for Entering from Drop-down Data Windows

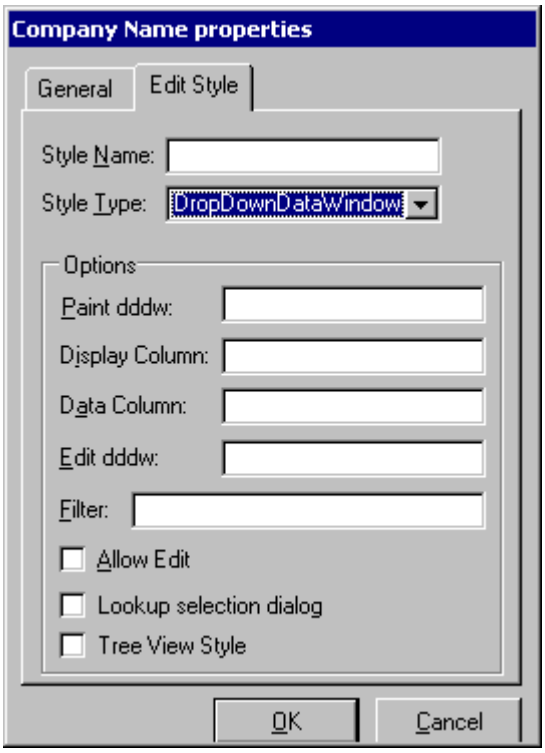

Fig. 18 The window for adding style parameters from the DropDownDataWindow list

The window for adding style parameters from DropDownDataWindow list (see Fig. 18) has the following fields:

- *Style Name*: the field (blank by default) where a style may be picked out of the list of styles that are registered in the system. This field has its own set of parameters that can not be edited. A user may set the required parameters, leaving this field blank.
- *Style Type*: the field where style types may be picked out of a list.

⚠ It is recommended that the following fields of the Options group be edited only after consulting a WAY4 vendor representative.

- *Paint dddw*: this field shows a drop-down list of objects registered in the system that define database fields and the way their values are displayed on the list.
- *Display Column*: the value defined by an object shown on the list in the *Paint dddw* field that will appear on the list for selection.
- *Data Column*: the value defined by an object shown on the list in the *Paint dddw* field that will be passed to the system when a selection is made from that list.
- *Edit dddw*: the field for making a selection from the list of dddw objects, allowing redefining the value shown in the Paint *dddw* field with the purpose of, for instance, restricting the selection of the values of the field available for editing.

- *Filter*: additional filtering condition; this expression will be included in the "WHERE" condition of the SQL query to the database table based on which the dddw object is generated. When specifying filtering conditions, the following formats can be used (<Column_Ref> is the name of the field in the database table based on which the dddw object specified in the *Paint dddw* field is generated):
  - "<Column_Ref>=<Condition_Value>" – field value is equal to <Condition_Value>.
  - "<Column_Ref>!=<Condition_Value>" – field value is not equal to <Condition_Value>.

  Here <Condition_Value>:
    - <Column_Current> – name of the field of the database table based on which this form is built; specified in capital letters;
    - "<Constant>" – constant, specified in quotation marks (");
    - @<Local Constant Column>@ – name of the LOCAL_CONSTANTS table field (local constants). The corresponding local constant will be checked as the condition. The field name must be specified in capital letters in between "@" characters.
  - "<Column_Ref> IS NULL" – empty field (NULL).
  - "<Column_Ref> IS NOT NULL" – field containing a value.
  - "<Column_Ref> LIKE <SQL_LIKE_Pattern>" – field value corresponds to the <SQL_LIKE_Pattern> pattern, specified in the notation of the SQL LIKE operator. For example, the '%abc%' pattern means the character sequence "abc" is found in the <Column_Ref> field.
  - "<Column_Ref> IN (<SQL_IN_Values_List>)" – field value corresponds to a value specified in the <SQL_IN_Values_List> set. Only literals (constants) can be used as values in the set.
  - "<Column_Ref> NOT IN (<SQL_IN_Values_List>)" – field value does not correspond to values specified in the <SQL_IN_Values_List> set. Only literals (constants) can be used as values in the set.

   If several filtering conditions must be specified, a space is used as a delimiter.

  Example of filling in the Filter field:
  - F_I=F_I PCAT=PCAT GROUP_CODE="FLT";
  - LANGUAGE=@LANGUAGE@;
  - APPL_PRODUCT__OID IS NOT NULL;
  - SHORT_NAME LIKE 'Jo%';
  - COUNTRY IN ('Brazil', 'Argentina', 'Venezuela').
- *Allow Edit*: when this box is checked, the value of the field, besides being picked out of the list, may be entered manually, like in the case of entering a currency code instead of looking up the currency abbreviation on the list.

- *Lookup Selection Dialog*: when this box is checked, the selection list will be displayed as a dialogue window serving to select a value for the field (see the "Editing Fields" section of the "DB Manager Manual" document).
- *Tree View Style*: when this box is checked, the list will be displayed as a tree. In this case, the reference table must be a hierarchical structure.

Custom Handbooks

Fields allowing selection from fixed lists (DropDownDataWindow) may be configured to allow selecting from user-created handbooks.

To create such a custom handbook, use the "Full → Configuration Setup → Client Classifiers → Custom Handbooks" item of the user menu. This will bring the "Custom Handbooks" form (see Fig. 19) to the screen.

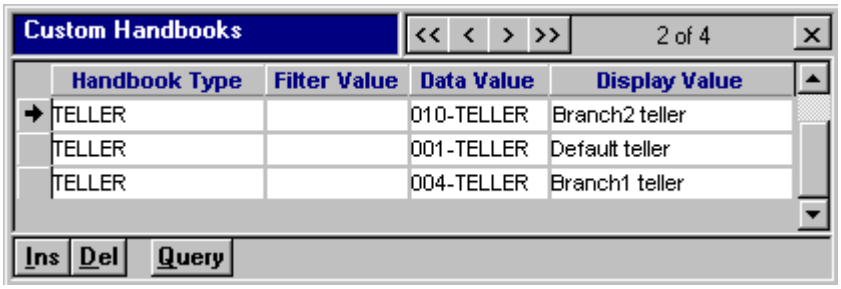

Fig. 19 The form for creating custom handbooks

The form has the following fields:

- *Handbook Type* the handbook code.
- *Filter Value*: the value defining the selection of rows from the handbook. *Data Value*: the value contained in the database.
- *Display Value*: the value displayed on the drop-down list.

A field whose style has been redefined is marked as "nonsynchronizable" (see Fig. 13) so as to prevent its return to the default style when the synchronization of forms is performed.

In order to connect to the custom handbook field, its style must be redefined. This is done by selecting the following values for the fields in the window for adding style parameters from the DropDownDataWindow list (see Fig. 18):

- In the *Paint dddw* field, the "sy_handbook__f" value is selected on the list.
- In the *Display Column* field, the "name" value must be shown.
- In the *Data Column* field, the "code" value must be shown.
- In the *Filter* field, a filtration condition, such as GROUP_CODE="<handbook code>" [FILTER=<form field> must be shown.

Generally, the filtration condition is defined in the following format: "GROUP_CODE="<handbook code>"; for example, GROUP_CODE="TELLER".

If an additional condition for selecting the content of the custom handbook must be set as per the value of one of the fields of the form to which the field being edited also belongs, the *Filter Value* field of the "Custom Handbooks" (see Fig. 19) should be used. In this field, for each row of the custom handbook, the corresponding value stored in the database table must be shown as per the *Data*

Value field, according to which selection from the content of the custom handbook shall be done. For instance, if selection is done according to the category of client, the field must contain "A" for "Accountant", "C" for "Commercial" or "P" for "Private".

In this particular case, the filtration conditions entered in the *Filter* field will look like this:

"GROUP_CODE="<handbook code>" FILTER=<the label of the form field>".

For instance, if the handbook is used while editing client data and the content of the handbook is filtered as per client category, the filtration condition will look as follows:

"GROUP_CODE="<handbook code>" FILTER=CCAT".

⚠ Note that the styles are redefined only for fields meant for entering free-format data (Edit). It is strongly recommended that the styles of fields where selection is done from DropDownListBox editable list or DropDownDataWindow fixed list be redefined only as per consultations with WAY4 vendor representatives.

Altering Field Text Colors According to Conditions

The colour of text in a field may be defined according to a condition. While setting such conditions, the syntax is as follows:

```
<0~t><condition>
```

In this statement, <0~t> must always be present.

Conditions may be set with the use of IF and CASE statements:

```
if(<condition1>,if(<condition2>, ... <color 2>,<color 1>),<default color>)
case(<expression>when<condition>then<color> ... else<default color>)
```

Colors are set with the use of the RGB(x,y,z) function returning colors as per three given components, red (x), green (y) and blue (z).

The numeric values of these parameters lie within the range between 0 and 255. The intensity of the selected color component, within the resulting color, changes according to the numeric value.

ⓘ When the desired text color has been set, save the form through the (see "Saving an Edited Form").

An example of altering field colors according to conditions

In the "Full → Acquiring → ATM Controller → ATM Monitor - All" ATM monitoring form, values that go into the *Status* column are color-coded (see Table 2).

Table 2. The table of color codes for ATM status values

The STATUS value	**Color**
OK	Blue
Information	Green
Warning	Orange
Error	Red
Not Configured	Yellow
Fatal Error	Black

The various values of the *Status* field may be selected from the drop-down list (see "Fields for Entering from Drop-down Data Windows"). In this example, the values are as follows (see Fig. 20):

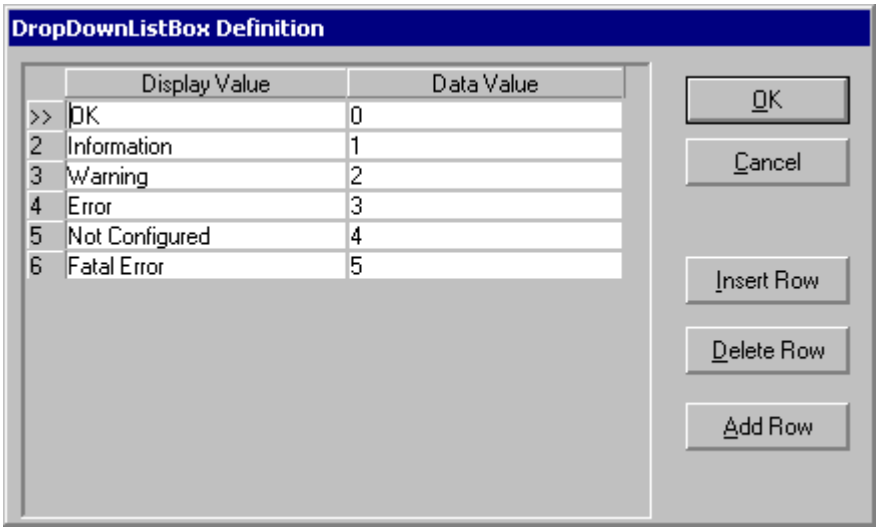

Fig. 20 The list of Status values

The values of the *Color* field are set as follows:

```
0~tif(status <>~"0~",if(status <>~"1~",if(status <>~"2~",if(status <>~"3~",
if(status >~"4~",RGB(0,0,0),RGB(255,255,0)),RGB(255,0,0)),RGB(255,127,0)),
RGB(0,255,0)),RGB(0,0,255))
```

or

```
0~tcase(STATUS when ~"0~" then RGB(0,0,255)when ~"1~" then RGB(0,255,0)
when ~"2~" then RGB(255,127,0) when ~"3~" then RGB(255,0,0) when ~"4~" then
RGB(255,255,0)else RGB(0,0,0))
```

When the conditions for text colors have been set, save the form (see "Saving an Edited Form").

Masking Field Contents

If it is necessary to mask field contents, specify an expression in the PowerBuilder 12.5 format in the *Format* field of the window for specifying column parameters. To mask card contract numbers (according to the PCI DSS standard), the following expression should be specified:

```
~tcase(CON_CAT when ~"C~" then
(left(CONTRACT_NUMBER,6)+if(len(trim(CONTRACT_NUMBER))>6,~"*******~",~"~")+
case(len(trim(CONTRACT_NUMBER)) when is>15 then
right(trim(CONTRACT_NUMBER),3) when is=15 then
right(trim(CONTRACT_NUMBER),2) when is=14 then
right(trim(CONTRACT_NUMBER),1) else ~"~")) else CONTRACT_NUMBER)
```

Deleting Column Headings

In grid forms, column headings are deleted while in the Form Design mode ("Form => Design Mode", <Ctrl>+<D>). To do that, right-click the heading of the needed column and, in the context menu that opens (see Fig. 21), select "Delete"

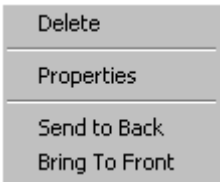

Fig. 21 The context menu popping up while editing column headings

When the desired column headings have been deleted, save the form (see "Saving an Edited Form").

The Text and Style of a Column Heading

The text and styles of column headings are altered while in the Design mode ("Form => Design Mode", <Ctrl>+<D>). In order to do that, right-click the required column heading and, in the context menu that appears (see Fig. 21), select "Properties". This will bring up the window of column heading parameters (see Fig. 22).

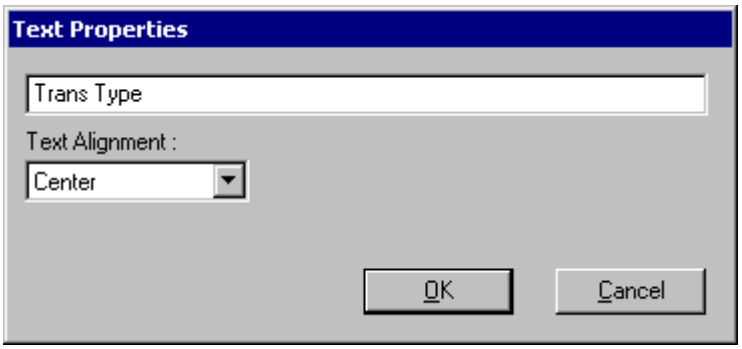

Fig. 22. The grid form column headings parameters window

This window allows entering heading text and, in the *Text Alignment* field, the type of justification:

- Center
- Left
- Right

After changing the text and/or style of the column heading, save the form (see "Saving an Edited Form").

Comments

The comments appearing when the mouse cursor hits a column are entered while in the Design mode ("Form => Design Mode", <Ctrl>+<D>). In order to do that, double-left-click a column (not the heading!) and in the window that opens (see Fig. 23) enter the text of the comment.

When the text of the heading has been entered, save the form (see "Saving an Edited Form").

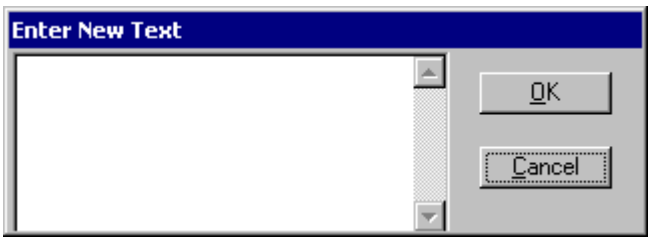

Fig. 23. The window for entering column comments

Aggregate Computations

The Design mode allows performing aggregate computations using data in grid form columns. In order to do that, right-click a column (see Fig. 11) and, in the context menu that opens, select "Add Computed". This will result in the Computed row added at the bottom of the table and the disappearance of the "Add computed" item from the context menu.

In order to enter a formula for aggregate computations, right-click on the Computed row cell at the bottom of the column to compute for and, on the context menu, select "Properties". This will bring the "Computed Properties" window (see Fig. 24) to the screen. The formula, written in the computed expressions language used in the PowerBuilder application development system, is entered in the top field of the window. For more information about the language for computed expressions, see "PowerBuilder Classic 12.5: DataWindow Reference (Chapter 1 "DataWindow Operators and Expressions" and Chapter 2 "DataWindow Expression Functions").

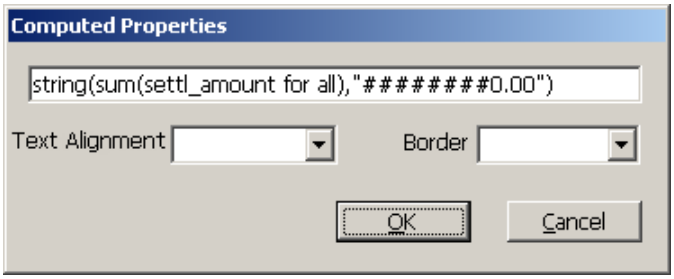

Fig. 24 The window for entering aggregate computations formula

The Text *Alignment* field of the "Computed Properties" window allows picking a justification style on the following list:

- Left
- Center
- Right

The *Border* field of the "Computed Properties" window is not used while working with grid forms.

If aggregate computations need to be performed for another column, repeat the described procedure.

Editing Field Content

If, while in Form Design mode, the form window is right-clicked outside of the grid, a context menu (see Fig. 25)that allows editing every field in the form

(Enable Edit All) or make all fields unavailable for editing (Disable Edit All) comes up.

Fig. 25. The context menu for allowing or prohibiting the editing of fields.

Chapter 4. Designing Free Forms

The items of a free form are as follows (see Fig. 26):

- Fields
- Inscriptions
- Computed values
- Field-grouping elements:
  - frame – a depressed rectangle
  - plateau – an elevated rectangle
  - GroupBox – a titled rectangle

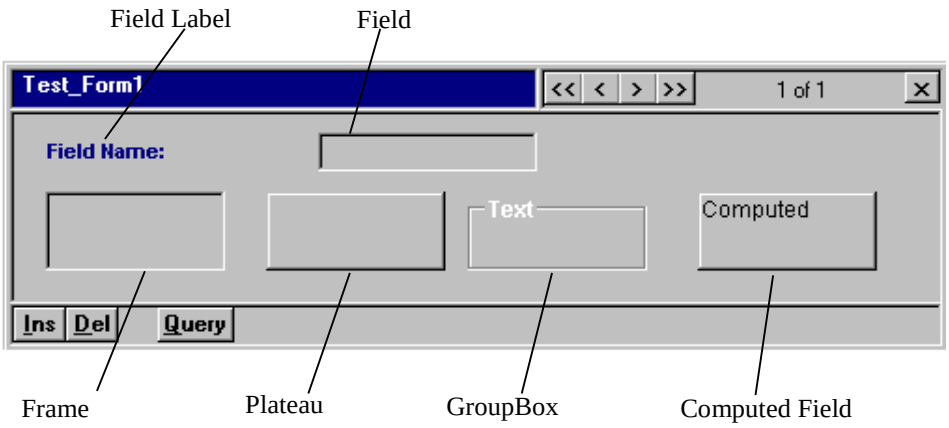

Fig. 26 The elements of a free form

Moving Form Items

The relocation of free forms items is done while in Design Mode ("Form => Design Mode", <Ctrl>+<D>). In order to do that, shadow-highlight the items you need to relocate, left-clicking them, while holding down the <Ctrl> button. Once all the desired items have been highlighted, release the <Ctrl> button, place the mouse cursor on one of the highlighted items and, holding down the left mouse button, drag it to its intended position. Repeat this for all the highlighted items.

A relocation step may be set for free form items. In order to do that, select the "Design =>Grid" item of the system menu. This will bring the "Grid Options" window to the screen (see Fig. 27).

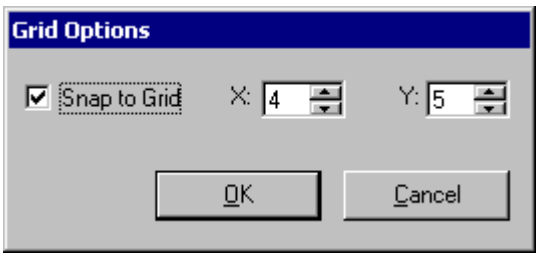

Fig. 27 The Grid Options window

If the box *Snap to Grid* of this window is checked, the location of the free form item will be set according to an invisible grid of coordinates, the vertical and horizontal dimensions of whose cells are set by the user in the respective X and Y fields of the window. When this has been done, the free form item will move in fixed steps determined by the dimensions of the cells of the coordinates grid.

When all the desired free form items have been relocated to their intended positions, save the form (see "Saving an Edited Form")

Changing the Size of a Form Item

The sizes of free form items are changed wile in Design mode ("Form => Design Mode", <Ctrl>+<D>). In order to do that, set the mouse cursor on the edge of the element you want to change the size of. The cursor will then assume the shape of a dual-headed arrow. Press and hold the left mouse button and change the size of the item, dragging its edge in the desired direction.

When the sizes of all the selected free form items have been changed, save the form (see "Saving an Edited Form").

Deleting a Form Item

Free form items are deleted wile in Form Design mode ("Form => Design Mode", <Ctrl>+<D>). In order to do that, place the mouse cursor onto the item you want to delete, depress the right mouse button and select "Delete" on the context menu that opens.

When all the selected free form items have been deleted, save the form (see "Saving an Edited Form").

Arranging Form Items

Free form items are arranged in the desired order wile in Form Design mode ("Form => Design Mode", <Ctrl>+<D>). In order to do that, highlight the items you need to arrange, left-clicking them, while holding down the <Ctrl> button and select the "Design => Arrange" item on the system menu. On the sub-menu that opens (see Fig. 28), select the desired method of arranging the items:

- "Align Left" (<Ctrl>+<Alt>+<L>) will left-adjust the items by the first item that was selected.
- "Align Right" (<Ctrl>+<Alt>+<R>) will right-adjust the items by the first item that was selected.

- "Align Up" (<Ctrl>+<Alt>+<U>) will adjust the items by the first item that was selected – toward the upper edge of the form.
- "Align Down" (<Ctrl>+<Alt>+<D>) will adjust the items by the first item that was selected – toward the lower edge of the form.
- "Size Horizontally" (<Ctrl>+<Alt>+<H>) will adjust the widths of the items to the width of the first item that was selected.
- "Size Vertically" (<Ctrl>+<Alt>+<V>) will adjust the heights of the items to the height of the first item that was selected.
- "Space Horizontally" (<Shift>+<Alt>+<H>) will adjust the horizontal spaces between the items to the width of the space between the two items that were selected first.
- "Space Vertically" (<Shift>+<Alt>+<V>) will adjust the vertical spaces between the items to the width of the space between the two items that were selected first.

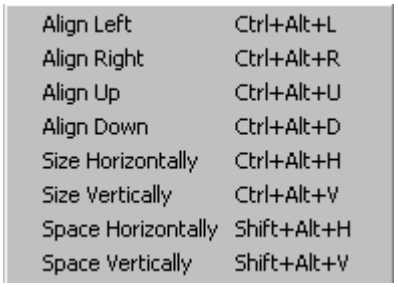

Fig. 28 The methods of arranging free form items

When all the selected free form items have been arranged, save the form (see "Saving an Edited Form").

Inserting Fields

Free form fields are added while in the Design mode ("Form => Design Mode", <Ctrl>+<D>). In order to do that, select the "Design => Insert => Field" item of the system menu and click on the spot, inside the form, where you want to insert a new field. This will bring to the screen the window containing the list of fields available in the current database record (see Fig. 29).

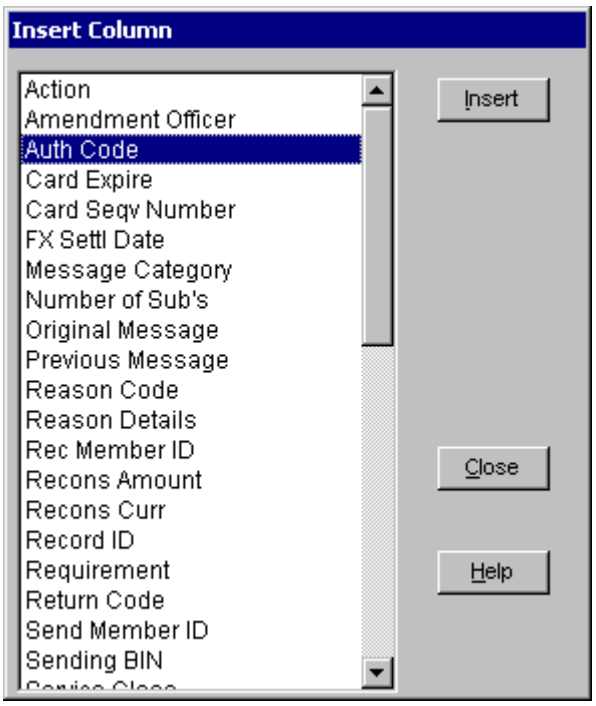

Fig. 29 The list of fields available in the current database record for adding into a free form

On the list, select a field by clicking on it and then click the [Insert] button.

When all the selected fields have been added, save the form (see "Saving an Edited Form").

Inserting Column Heading Text

Inscriptions, such as field labels, are added to free forms while in the Design mode ("Form => Design Mode", <Ctrl>+<D>). In order to do that, select the "Design => Insert => Text" item on the system menu and click on the spot, inside the form, where you want to insert your text. This done, just enter your inscription.

In order to edit an existing inscription, right-click it and edit your inscription in the top field of the "Text properties" window that appears (see Fig. 30). The lower field allows selecting the way of aligning your inscription. "Left" means left-justified and "Right" means right-justified.

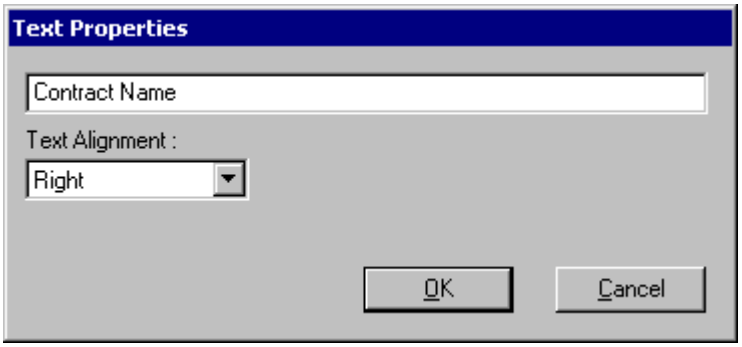

Fig. 30 The Text Properties window

When the inscriptions have been added or edited, save the form (see "Saving an Edited Form").

Inserting Field Grouping Items

Field grouping items are added to free forms while in the Form Design mode ("Form => Design Mode", <Ctrl>+<D>). In order to do that, select the "Design => Insert" item on the system menu. Then, on the menu that opens,

- "Frame" adds a depressed rectangle
- "Plateau" adds an elevated rectangle
- "GroupBox" adds a titled rectangle

Select the lowest item. In order to reconfigure the item designated as "GroupBox", right click it and, on the context menu that opens, select "Properties". This will bring the "GroupBox properties" window to the screen (see Fig. 31). The top field of this window allows editing the selected heading or lable, while the lower field is for selecting a frame:

- "Box" – simple
- "Lowered" – depressed
- "Raised" – elevated.

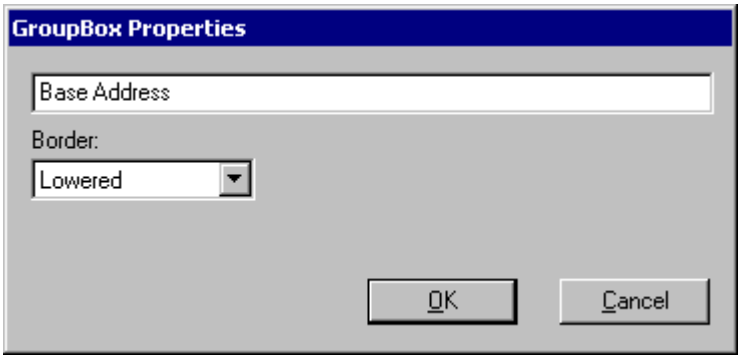

Fig. 31 The GroupBox Properties window

When all the field grouping items have been added or edited, save the form (see "Saving an Edited Form").

Inserting Computed Values

Computed values are added to free forms the same way aggregate computations are added to grid forms. (see "Aggregate Computations").

The *Border* field allows selecting the way the item containing a computed value is going to be shown in the form:

- "None" – without highlighting
- "Lowered" – highlighting in the form of a depressed rectangle
- "Raised" – highlighting in the form of an elevated rectangle

When all the items containing computed values have been added, save the form (see "Saving an Edited Form").

Field Properties

The parameters of editable fields and field styles are set the same way as described in the "Column Parameters" section hereof.

Setting the Order of Navigating Fields

While in a DB Manager free form, the cursor is moved from field to field by pressing the <Tab> key

The order of navigating fields, when the <Tab> key is pressed, is set while in the Design mode ("Form => Design Mode", <Ctrl>+<D>). In order to do that, select the "Design => Tab Order" item on the system menu. This will bring the "Set Items Order" window to the screen. It contains an orderly list of the fields of the free form (see Fig. 32).

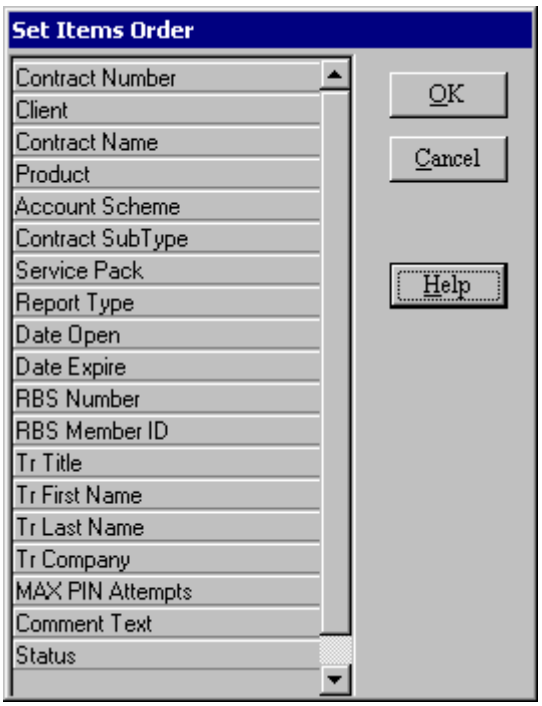

Fig. 32 The Set Items Order window

To change the order of navigating form fields, click on the desired field on the list in the Set Items Order window and, while holding the left mouse button down, to move the cursor, that will assume the shape of a rectangle, to the intended position.

When the order of navigating fields has been set in the desired way, save the form (see "Saving an Edited Form").

The Order of Item Overlapping

The order, in which the fields of a free form overlap is set when the items and inscriptions of a free form are placed within field grouping items ("Frame", "Plateau", "GroupBox") used for highlighting groups of fields (see "Inserting Field Grouping Items").

This order is changed while in the Design mode ("Form => Design Mode", <Ctrl>+<D>). To do that, right-click an item of the form and, on the context menu that opens, select either "Send to Back" or "Bring to Front".

Appendix: The Concept of Storing Forms in WAY4 Standard Directories

Standard Directories of the WAY4™ File Server

The standard directories of the file server and access privileges is described in "Privileges of Access to Standard WAY4 Directories" section of the "DB Manager User Management" document.

Concept of Storing Forms in Standard Directories

The system stores forms in physical files with *.srd extension. These files are placed in standard <OWS_HOME> and <OWS_WORK> directories, in "<OWS_directory_name>\client\shared\forms" subdirectories.

The forms supplied with the distributive copy of the system and stored in the <OWS_HOME> directory are considered standard and must absolutely never be edited in any way or deleted.

The standard forms stored in the <OWS_HOME> directory may be modified only by WAY4 vendor representatives and are renewed only with new versions of the system.

User-created Forms

If standard forms need to be edited or modified when, for instance, their field labels are translated into a local language or when users create their own systems of forms, their copies are saved in the working directory. Later, these copied forms will be called to the screen instead of standard ones.

If there is a need to find out what directory some or other forms has been called from, right-click the title of the form and, on the context menu, select the "Form Information" item. The path to the form file is shown in the *File* field of the Form Parameters window that opens.

Synchronizing User-created Forms

When the system version has been upgraded, start the procedure for synchronizing user forms. The procedure includes the verification of correspondence between the fields of user forms and those of the upgraded database tables. The presence of the corresponding fields in database tables and forms and the correspondence of the types of database table and form fields are also verified. If any discrepancies are discovered, a window offering the user a chance to make the needed changes comes up on screen.

Form synchronization is started by selecting the "Database => Synchronize Forms" item of the system menu.

It is sufficient to start the synchronization of forms once every time the system version is upgraded.

Restoring Standard Forms

If there is a need to return to the standard form, in place of which a user-created or edited form is called to the screen from the <OWS_WORK> directory, it can be done with saving or not saving the user form.

In order to make the system use the standard form, the corresponding file must be removed from the working directory. This may be done by either clicking on the [Delete] button in the window for selecting a form for editing (see Fig. 1) or by physically deleting the file containing the form with the use of the file manager of the operating system.

To make the return of the edited user form possible, its file with *.srd extension must be saved in some other directory on the disk.