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# Report Interface Designer

## **“Quick Start” Tutorial**



*A Brief Guide*





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# “Quick Start” Tutorial

*A brief guide on using “Report Interface Designer”*

## Overview

Report Interface Designer is designed to be used with Seagate Crystal Reports™, and many different programming languages and/or application development tools. Report Interface Designer is an easy-to-use utility for creating reporting criteria data-entry screens.

This guide will provide step-by-step instructions on creating a typical criteria dialog as well as instructions on how to use the Report Interface Designer programming object to execute the dialog.

## Requirements

This guide presumes that Seagate Crystal Reports™ “Professional” Version 5.0 (or greater) for Windows 95/NT has been installed and is operating correctly. The tutorial uses some of the sample reports and databases which are installed during program setup. Be sure to install Crystal Reports before continuing.

*While Crystal Reports can directly access many of the most common PC database formats, i.e., dBASE, FoxPro, Clipper, Btrieve, Paradox, and Microsoft Access, Report Interface Designer requires the developer to use an SQL/ODBC datasource for creating reports.*

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## Modifying the CRW Sample Report

When Crystal Reports was installed, a series of sample reports were placed in the \CRW directory. All these sample reports are based on the MSAccess CRAZE.MDB data file, and use the PDBDAO.DLL database driver.

The Tutorials described in this document use the SGT11.RPT report. This simple report lists five Customer-related fields: Name, Region, Country, Postal Code, and Last Year's Sales. The report grouping is based on a range of "Last Year's Sales", and presents about two pages of data.

Before using this report with Report Interface Designer, we will need to change the database driver associated with this report to the PDSODBC.DLL driver.

### Start by launching Crystal Reports.

### Locate the SGT11.RPT file and open it.

### Rename the file to RIDTUTOR.RPT:

- Select "File | Save As...".
- Enter "RIDTUTOR" in the "File Name:" control and press OK.

### Change the report database driver:

- Select "File | Report Options".
- Check the "Convert Database Driver ..." option, then select the "pdsodbc.dll (ODBC)" driver from the "To:" ComboBox. (Figure 1)

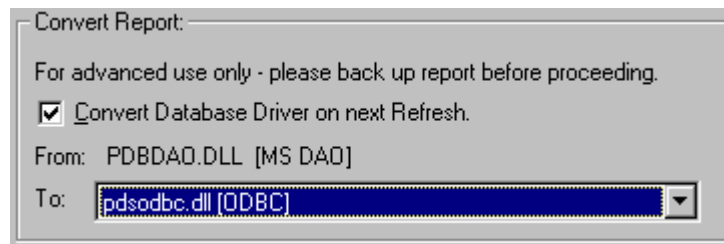


Figure 1: Changing the Database driver

- Press OK

### Now refresh the report using the new database driver:

- Select "Report | Refresh Report Data".
- Press OK when the confirmation screen is displayed.
- A list of defined ODBC datasources will be displayed. Locate the "Craze Sample Data" datasource and press OK.
- Simply press OK once the "Login Authorization" dialog is displayed.

Once the report is refreshed, select "File | Save" to save these modifications.

## The “Report Interface Designer” Interface

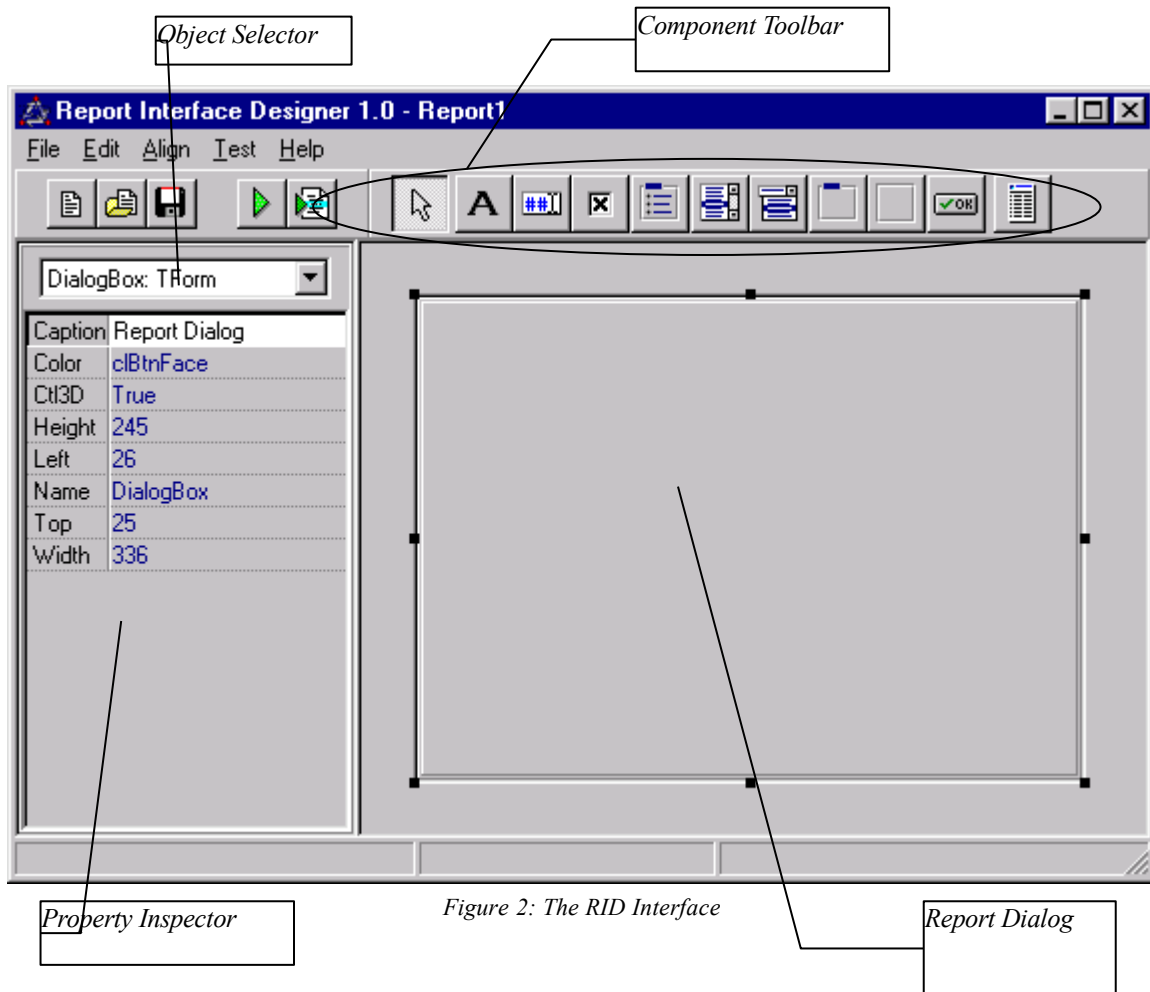


Figure 2: The RID Interface

### Controls Toolbar

These are the design objects used to create the “Criteria Dialog”.

### Property Inspector

The Property Inspector enables you to view and edit design-time properties for components placed on the Report Dialog

### Object Selector

The Object Selector is a drop-down list containing all the components on the Report Dialog, and it also displays their object type.

### Report Dialog

Place all the report components here. The characteristics of this object determine the look of the “Criteria Dialog” at execution time.


## Tutorial 1: Simple Report Selection

Let's begin with a single selection criteria using the "Country" value.

### Launch Report Interface Designer.

**A blank dialog will be displayed. Start by saving this dialog to the same directory as the RIDTUTOR.RPT file:**


- Select "File | Save As...".
- Change to the correct directory.
- Enter "TUTOR1.DDF" in the File Name control and press OK.

Drop a "Report"  component onto the dialog:


- Use the mouse to select the "Report" object from the component toolbar.
- Move the mouse over the Dialog and press the left-button.
- Select the "Report" component and position it near the left side in the middle of the Dialog.

Assign a Crystal Report to this dialog:


- Verify that the "Report" component is selected in the Dialog.
- In the Property Inspector, select the "Report Name" property and press the "..." button.
- Choose the "RIDTutor.rpt" file from the list and press the "Open" button.
- Press OK to clear the displayed message.
- The "Report Name" property now displays "RIDTutor", and the "Report Type" property will show "Where Clause".

Add an "Edit"  control for inputting the "Country" selection:

- Use the mouse to select the "Edit" object from the component toolbar.
- Move the mouse over the Dialog and press the left-button.
- Select the "Edit1" component and position it near the center of the dialog.
- In the Property Inspector, select the "Text" property and change it to "USA".
- Use the mouse to select the "Label" object from the component toolbar.
- Move the mouse over the Dialog and press the left-button.
- Select the "Label1" component and position it to the left of the "Edit1" control.
- In the Property Inspector, select the "Caption" property and change it to "&Country:".
- Select the "Focus Control" property and select the "Edit1" control from the ComboBox list.

Add a "Where"  parameter for binding the "Country" value to the SQL Statement of the report:

- Use the mouse to select the "Where" object from the component toolbar.
- Move the mouse over the Dialog and press the left-button.
- Select the "Where1" component and position it near the "Report" object in the dialog.
- In the Property Inspector, select the "Field Name" property and change it to "Country".  
(Notice in the Object Selector that the control's name has been changed to "Country".)
- Select the "Data Type" property and choose "Character" from the ComboBox list.
- Select the "Comparator" property and choose "Like" from the ComboBox list. Using this "Comparator" allows using the percent character ( % ) or underscore ( \_ ) wildcard characters when inputting criteria.
- Finally, select the "Dialog Control" property and select the "Edit1" control from the ComboBox list.

**Add two “Button”  controls for executing or canceling the report request:**

- Use the mouse to select the “Button” object from the component toolbar.
- Move the mouse over the Dialog and press the left-button.
- Select the “Button1” component and position it accordingly in the dialog.
- In the Property Inspector, select the “Kind” property and change it to “bkOk”. (Notice that the image on the button has changed.)
- Use the mouse to select the “Button” object from the component toolbar.
- Move the mouse over the Dialog and press the left-button.
- Select the “Button2” component and position it accordingly in the dialog.
- In the Property Inspector, select the “Kind” property and change it to “bkCancel”.

That’s it! You’ve just designed your first “Criteria Dialog”.

Let’s test how the dialog will look when it is called from an application. From the “Test” menu, select “Dialog Only” (or press F9 or the “Dialog Only” toolbar button). A dialog similar to the following will be displayed:



*Figure 3: Testing the "Tutor1" Dialog*

You will notice that the “Report” and “Where” parameters are not visible. These are “design-time” only controls. Pressing OK or CANCEL will remove the dialog and return you to design mode.

Now let’s test using the actual report. From the “Test” menu, select “Dialog with Report” (or press Ctrl-F9 or the “Test Report” toolbar button). The above dialog will again be displayed. This time, press OK to execute Crystal Reports. The displayed report will show only customers where “Country = USA”. [NOTE: If the report does not display, verify that the “Data Type” for the “Country” parameter is set to “Character”. You may also review the Report SQL Statement by selecting the “Report” object in the dialog, and then pressing the “...” button for the “SQL Statement” property in the Property Inspector].

Close the report and again select “Dialog with Report” (or press Ctrl-F9 or the “Test Report” toolbar button). This time, clear “USA” from the “Country” control and just enter “%”. Press OK. All of the customers now appear on the report.

Save the dialog and then proceed to the next tutorial.

*Concepts Discussed:*

- ◇ *The Label, Edit, Button, Report, and Where design components.*
- ◇ *The “Like” Comparator.*
- ◇ *The percent ( %) and underscore ( \_ ) wildcard characters.*



## Tutorial 2: Simple “Region” Selection

The first dialog works well if the user knows the range of the valid input criteria. In this tutorial, we will add an additional reporting criteria by permitting the user to review only those customers from a specific “Region”.

**Start with the dialog created in Tutorial 1. From the “File” menu, choose “Save As...” and change the dialog name to “Tutor2.ddf”.**

**Move the button controls to create room for other components:**

- While holding down the “Shift” key, use the mouse and select first the OK button and then the CANCEL button.
- Once both button controls are selected, position the mouse pointer over the top of one of the controls and press the left mouse button.
- While keeping the left mouse button depressed, slide the mouse downward to allow sufficient space to insert another control between the grouped controls and the “Country” edit control.

**Add a “ComboBox”  control for selecting the “Region”:**

- Use the mouse to select the “ComboBox” object from the component toolbar.
- Move the mouse over the Dialog and press the left-button.
- Select the “ComboBox1” component and position it between the “Country” control and the dialog buttons.
- In the Property Inspector, select the “Style” property and choose “csDropDown” from the ComboBox list.
- Use the mouse to select the “Label” object from the component toolbar.
- Move the mouse over the Dialog and press the left-button.
- Select the “Label2” component and position it to the left of the “ComboBox1” control.
- In the Property Inspector, select the “Caption” property and change it to “&Region:”.
- Select the “Focus Control” property and select the “ComboBox1” control from the ComboBox list.

**Set the list of “Region” values in the “ComboBox1” control:**

- Use the mouse to select the “ComboBox1” component in the dialog.
- In the Property Inspector, select the “Values” property and press the “...” button. The following property editor dialog will be displayed:

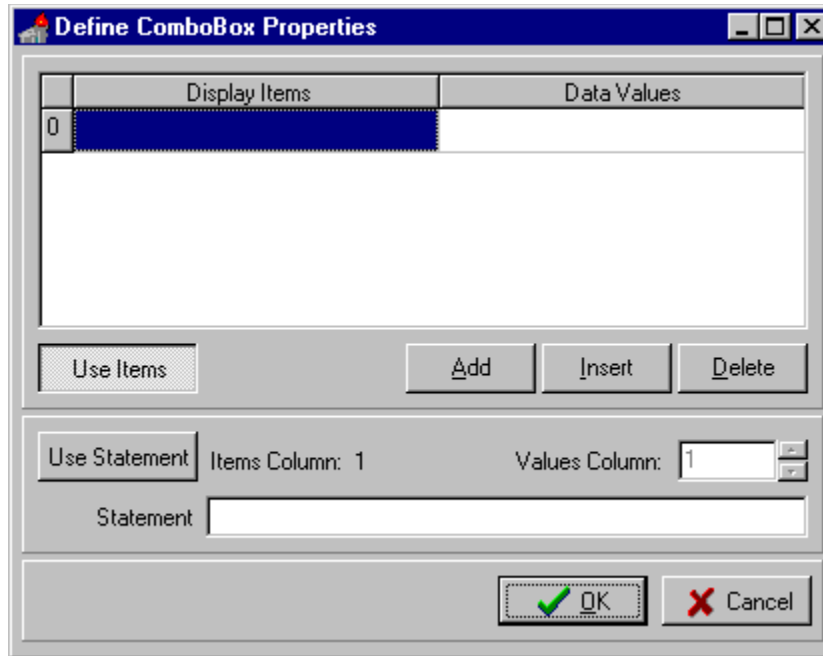


Figure 4: ComboBox "Values" Property Editor

- Enter the following six names and abbreviations into the “Display Items” and “Data Values” columns of the “Item Grid”:

<i>Display Items</i>	<i>Data Values</i>
All Regions	%
Alabama	AL
California	CA
Florida	FL
Illinois	IL
Michigan	MI

Press the “Add” or “Insert” buttons to add grid rows, and use the mouse or arrow-keys to navigate between grid rows/columns.

- Once all items have been entered, press the OK button to save the data and close the dialog.
- In the Property Inspector, select the “Text” property and change it to “All Regions”.

### Add a “Where” parameter for binding the “Region” value to the SQL Statement of the report:

- Use the mouse to select the “Where” object from the component toolbar.
- Move the mouse over the Dialog and press the left-button.
- Select the “Where1” component and position it near the “Report” object in the dialog.
- In the Property Inspector, select the “Field Name” property and change it to “Region”.  
(Notice in the Object Selector that the control’s name has been changed to “Region”.)
- Select the “Data Type” property and choose “Character” from the ComboBox list.
- Select the “Comparator” property and choose “Like” from the ComboBox list. Using this “Comparator” allows using the percent ( %) or underscore ( \_ ) wildcard characters when inputting criteria.
- Finally, select the “Dialog Control” property and select the “ComboBox1” control from the ComboBox list.

Now let's test this dialog. From the "Test" menu, select "Dialog with Report" (or press Ctrl-F9 or the "Test Report" toolbar button). Press the ComboBox down-arrow and select "California". Press OK to execute Crystal Reports. The displayed report will show only customers where "Country = USA" and "Region = CA".

Try some of the other values and verify that the selection criteria is always correct. Save the dialog and then proceed to the next tutorial.

*Concepts Discussed:*

- ◇ *The ComboBox design component .*
- ◇ *Selecting multiple components and positioning controls as a group.*

## Tutorial 3: Advanced “Region” Selection

The previous dialog is static, in that if the list of regions changes, the dialog will need to be modified. In this tutorial, we will change the selection mechanism for the “Region” ComboBox control so that the list of valid regions is derived from the database.

**Start with the dialog from Tutorial 2. From the “File” menu, choose “Save As...” and change the dialog name to “Tutor3.ddf”.**

**Modify the list of “Region” values in the “ComboBox1” control:**

- Use the mouse to select the “ComboBox1” component in the dialog.
- In the Property Inspector, select the “Text” property and change it to “%”.
- Select the “Values” property and press the “...” button, displaying the property editor dialog. (Refer to Figure 4.)
- Press the “Use Statement” button and enter the following in the “Statement” control:

```
SELECT DISTINCT(Region) FROM Customer ORDER BY Region
```

*While we only select one attribute in the SQL statement, any number of attributes can be returned in the result set. However, only the first attribute will be displayed in the ComboBox list. Changing the “Values Column” control allows you change the attribute which is used in the SQL statement of the report itself.*

- Change the “Values Column” control to “1”.
- Press the OK button to save the data and close the dialog.

Now let’s test this dialog. From the “Test” menu, select “Dialog with Report” (or press Ctrl-F9 or the “Test Report” toolbar button). Press the ComboBox down-arrow and select “TX”. Press OK to execute Crystal Reports. The displayed report will show only customers where “Country = USA” and “Region = TX”.

Try some of the other values and verify that the selection criteria is always correct. Save the dialog and then proceed to the next tutorial.

*Concepts Discussed:*

- ◇ *Deriving ComboBox values from a dynamic SQL Statement.*

## Tutorial 4: Setting “Order By” Clause

In the report on which all of these tutorials is based, there is no specific ordering to the results.

In this tutorial, we will manually modify the report SQL statement to enable the user to change the sort order of the report.

**Start with the dialog from Tutorial 3. From the “File” menu, choose “Save As...” and change the dialog name to “Tutor4.ddf”.**

**Move the button controls to create room for other components:**

- While holding down the “Shift” key, use the mouse and select first the OK button and then the CANCEL button.
- Once both button controls are selected, position the mouse pointer over the top of one of the controls and press the left mouse button.
- While keeping the left mouse button depressed, slide the mouse downward to allow sufficient space between the grouped controls and the “Region” ComboBox control.

Add a “RadioGroup”  control for modifying the report sort order:

- Use the mouse to select the “RadioGroup” object from the component toolbar.
- Move the mouse over the Dialog and press the left-button.
- Select the “RadioGroup1” component and position it between the “Region” control and the dialog buttons.
- In the Property Inspector, select the “Values” property and press the “...” button. The following property editor dialog will be displayed:

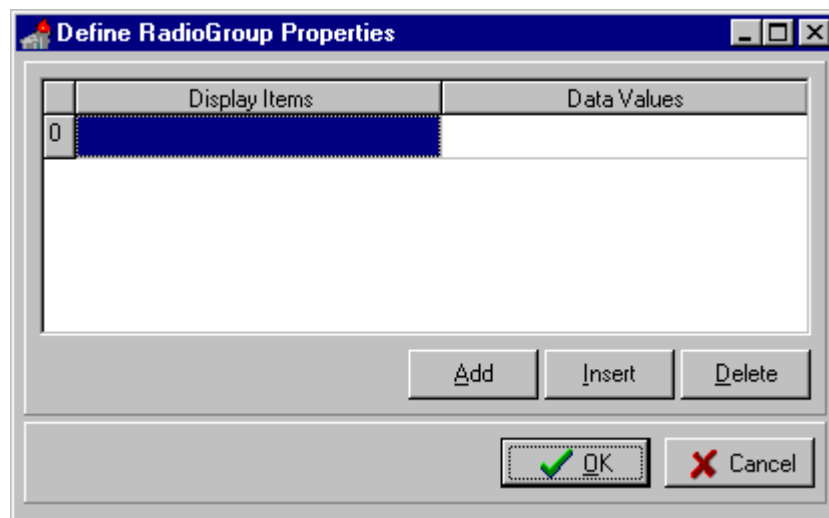


Figure 5: RadioGroup “Values” Property Editor

- Enter the following three sort-orders into the “Display Items” and “Data Values” columns of the “Item Grid”:

<i>Display Items</i>	<i>Data Values</i>
Cust. Name	`Customer Name`
Postal Code	`Postal Code`
Sales	`Last Year's Sales`

*Do not overlook the accent character ( ` ) around the “Data Values”. Since each of these attributes has a space in the name, this character is required by the database driver.*

Press the “Add” or “Insert” buttons to add grid rows, and use the mouse or arrow-keys to navigate between grid rows/columns.

- Once all items have been entered, press the OK button to save the data and close the dialog.
- In the Property Inspector, select the “Columns” property and change it to “3”.
- Select the “Caption” property and change it to “Sort Order”.
- Select the “ItemIndex” property and change it to “0”.
- Select the “RadioGroup1” component in the dialog. Modify the size and position so that it looks appropriate.

### **Add a “Where” parameter for binding the “RadioGroup1” value to the “ORDER BY” segment of the report SQL statement:**

- Use the mouse to select the “Where” object from the component toolbar.
- Move the mouse over the Dialog and press the left-button.
- Select the “Where1” component and position it near the “Report” object in the dialog.
- In the Property Inspector, select the “Field Name” property and change it to “OrderBy1”.
- Select the “Data Type” property and choose “Numeric” from the ComboBox list. By selecting the “Numeric” datatype, Report Interface Designer will not ‘wrap’ the value with quotation marks when it modifies the SQL Statement and inserts the user-selected value.
- Finally, select the “Dialog Control” property and select the “RadioGroup1” control from the ComboBox list

### **Now we need to manually modify the “Report” SQL Statement to add an “Order By” clause and associate it with the “OrderBy1” parameter:**

- Select the “Report” component in the dialog.
- In the Property Inspector, select the “SQL Statement” property and press the “...” button. The following property editor dialog will be displayed:

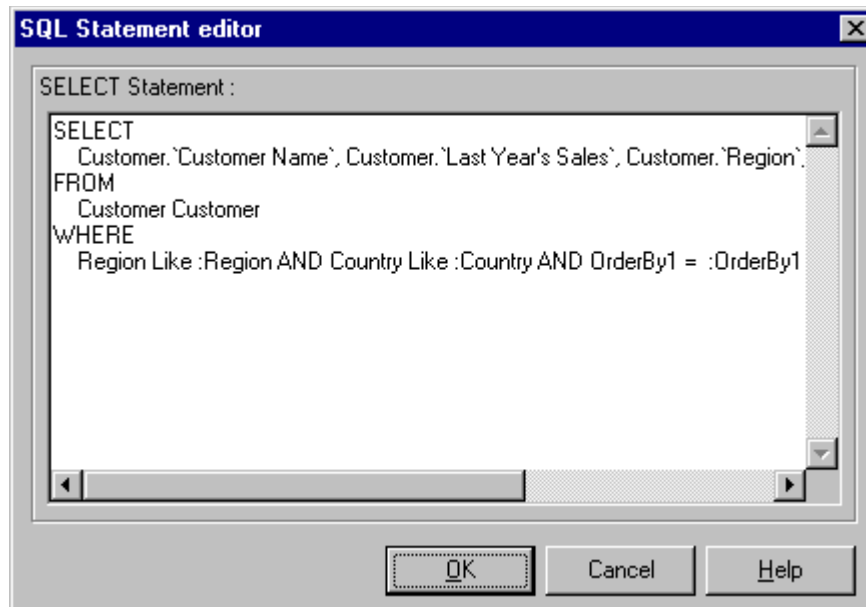
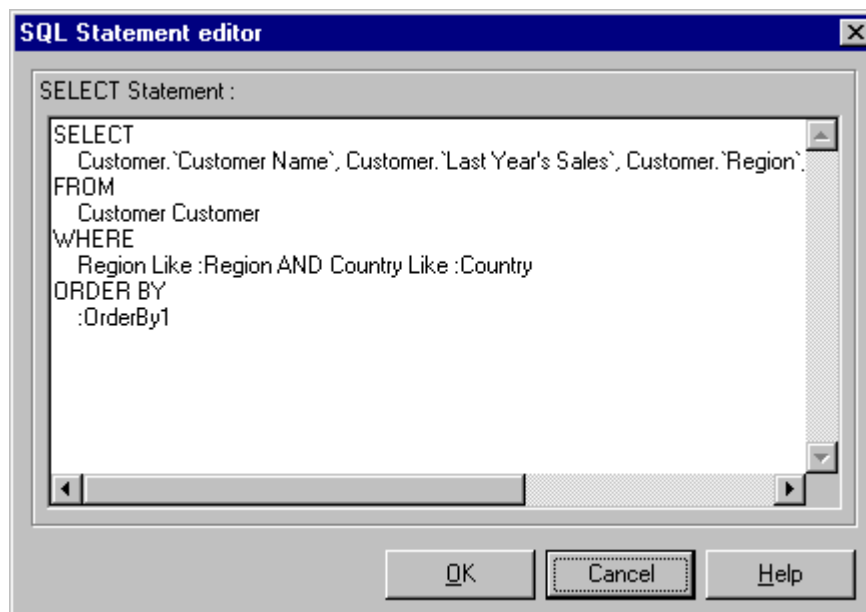


Figure 6: "SQL Statement" Property Editor

- Locate the "OrderBy1" segment of the "Where" clause. Change the statement so that it resembles the following:



It is only necessary to modify the "WHERE" and "ORDER BY" segments. Notice that the "OrderBy1" parameter is preceded by a colon (:). At execution time, this "placeholder" will be replaced by the value of the "Dialog Control" referenced by the "OrderBy1" parameter.

- Press the OK button to save the data and close the dialog.

Now let's test this dialog. From the "Test" menu, select "Dialog with Report" (or press Ctrl-F9 or the "Test Report" toolbar button). Press OK to execute Crystal Reports. The displayed report will show all customers where "Country = USA" and will be sorted by whatever "Sort Order" criteria was selected.

Try the other sort options and verify that the selection criteria is always ordered correctly. Be sure to save the dialog.

*Concepts Discussed:*

- ◇ *The RadioGroup design component .*
- ◇ *Modifying the Report SQL statement.*