



Course Guide



Report Writing for _____TM

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Introduction To Crystal Report Writing Using [REDACTED]

Notes

This training course introduces you to Crystal Reports v7.0, the leading database report writer published by Seagate Software. Crystal Reports v7.0 is the report writer included with your Express Options v3.6 software. Even though the [REDACTED] system is fully integrated with menu-driven reports for your stock administration needs, Crystal Reports gives you the ability to edit existing reports or create new reports that reflect your company's information needs and graphic style.

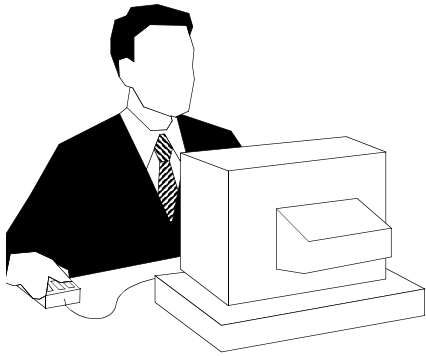
This is a basic seminar, and previous experience or prerequisites are not necessary for your participation. This course manual provides objectives, outlines key features of Crystal Reports, and offers integrated hands-on workshops throughout the day to complement your understanding of the software.

After you complete this course, it is recommended that you enroll in [REDACTED] *Advanced Crystal Report Writing* course to further enhance your experience and expertise with the software. Your instructor can discuss the course and provide a registration form if you are interested in enrolling or desire more information. You can also contact [REDACTED]'s education department or visit our website for additional information on all training courses [REDACTED].

During this course, we will cover the following objectives:


- General Navigation through Crystal Reports.
- Introduction to Designing a Crystal Report.
- Inserting Fields (including Text Object, Special, Database, Formula, and Parameter).
- Subtotaling and Grand Totaling Numeric Fields.
- Inserting Lines and Bitmaps.
- Filtering Records.
- Handling Crystal Reports through the Express Options system.

Create / Modify a Report

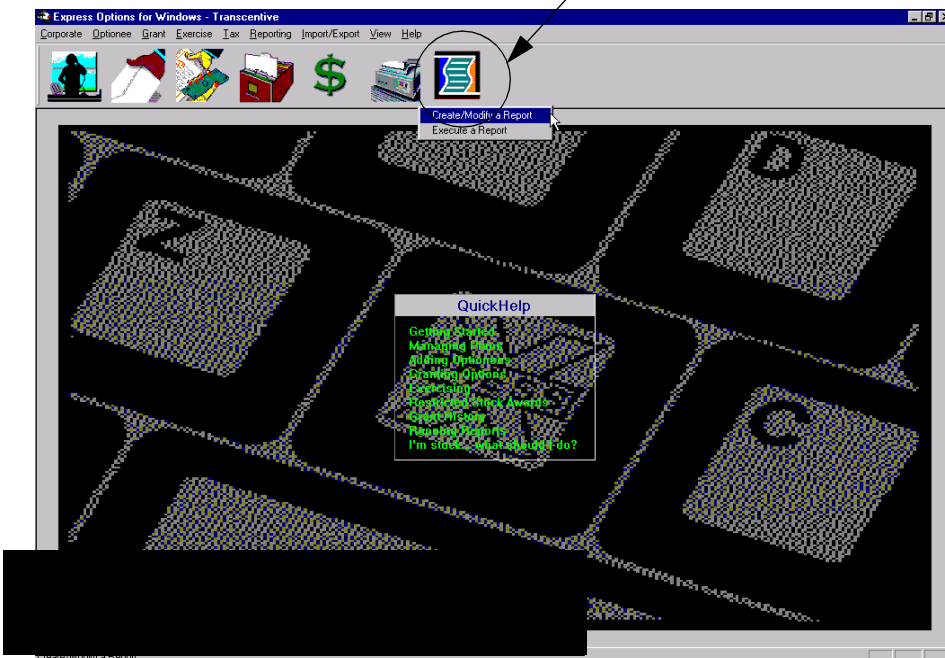


Launching Crystal Reports

Crystal Reports is accessible through the [redacted] system. Thus, you will need to log in to the [redacted] system using your User Name and Password before you can start designing a Crystal Report.

Once you have launched the [redacted] system and logged on, select the Crystal Reports button from the tool bar  and select the

Create / Modify a Report option.



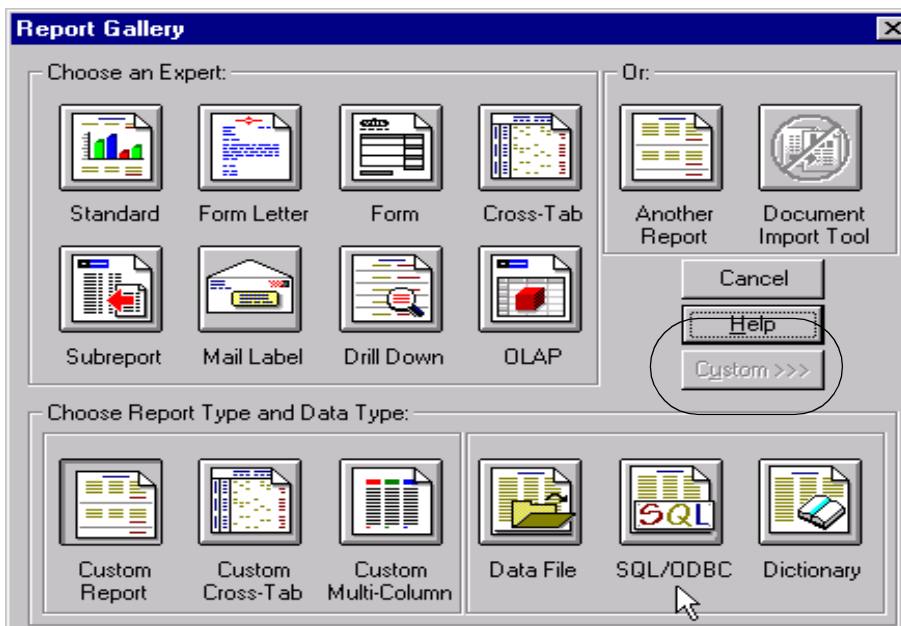
Note: You can also select to [Execute a Report](#) (page 34). This entails opening and running an existing report. We will return to this option once our Crystal Report is designed.

Notes

The Seagate Crystal Reports window (shown below) opens. Select **New Report**.



The Report Gallery window opens. Click the **Custom** button in the lower right hand corner to open the second part of the Report Gallery window (shown below).

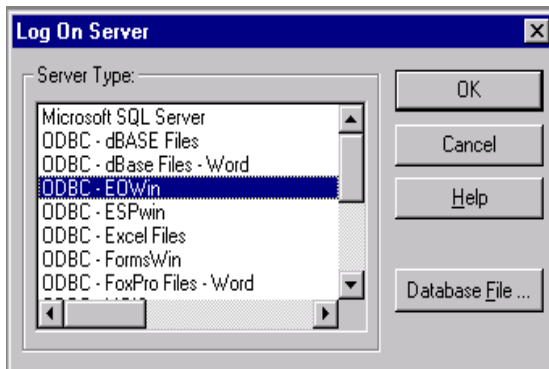


Under the Choose Report Type and Data Type section, select **SQL/ODBC**.

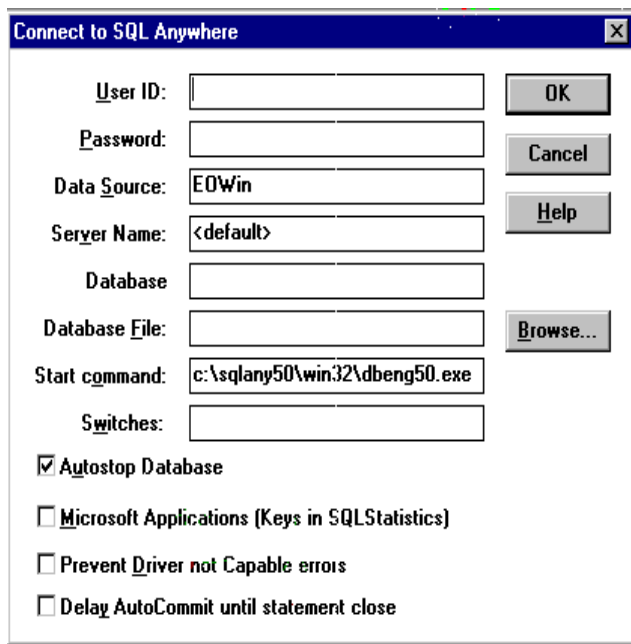
The Log On Server window opens. For this course, scroll down to select **ODBC - EOWin** and select **OK**. Note that your selection depends upon how your software is installed (i.e., Microsoft SQL Server, Oracle Server, etc.) Thus, the initial windows you encounter in this book and class may differ slightly from the windows you encounter at your office.

Notes

Notes

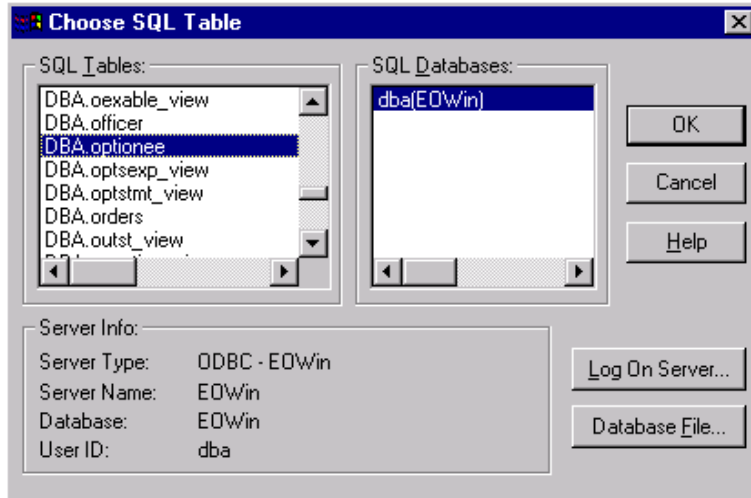


The **Connect to SQL Anywhere** window opens. Type your **User ID** and tab to the Password field. Type your **Password** and select **OK** or press **Enter**. Remember that this window will differ if you are using an environment other than SQL Anywhere. See your database administrator if you have questions about your database type.



The **Choose SQL Table** window opens. From this window you will select the first data table to be included in your report. Note that there is a DBA prefix before each type of table. This is the ID that was used when the [REDACTED] database was created. Yours may be slightly different. In addition, there will be ESPWin tables if the ESPWin system is also installed. For today's course, under SQL Tables, Select **DBA.optionee** and press **Enter** or select **OK**.

Notes



The Crystal Reports designing window opens. Note that there are drop-down menus (File, Edit, View, etc.) listed across the top. There are also shortcut icons on the tool bar beneath the drop-down menus.

There are five basic navigation tools to help you design a Crystal Report:

Menu Bar: Provides drop-down access to Crystal options

Tool Bar: Contains icons (buttons) for the most frequently-used menu options.

Format Bar: allows you to apply formatting (e.g. bold, italics) to fields in your report.

Note that you can also right-click your mouse to format fields in your report. There will be more explanation of formatting procedures xxx.

Status Bar: hints about menu items and tool bar the tool bar when they are active.

Note that this page opens with a Design tab and five basic fields (Report Header, Page Header, etc.) You use these fields to populate your Crystal Report. Below is a brief description of the five fields that are included by default:

Report Header: appears once on the first page of your report.

Page Header: repeats one time on every report page.

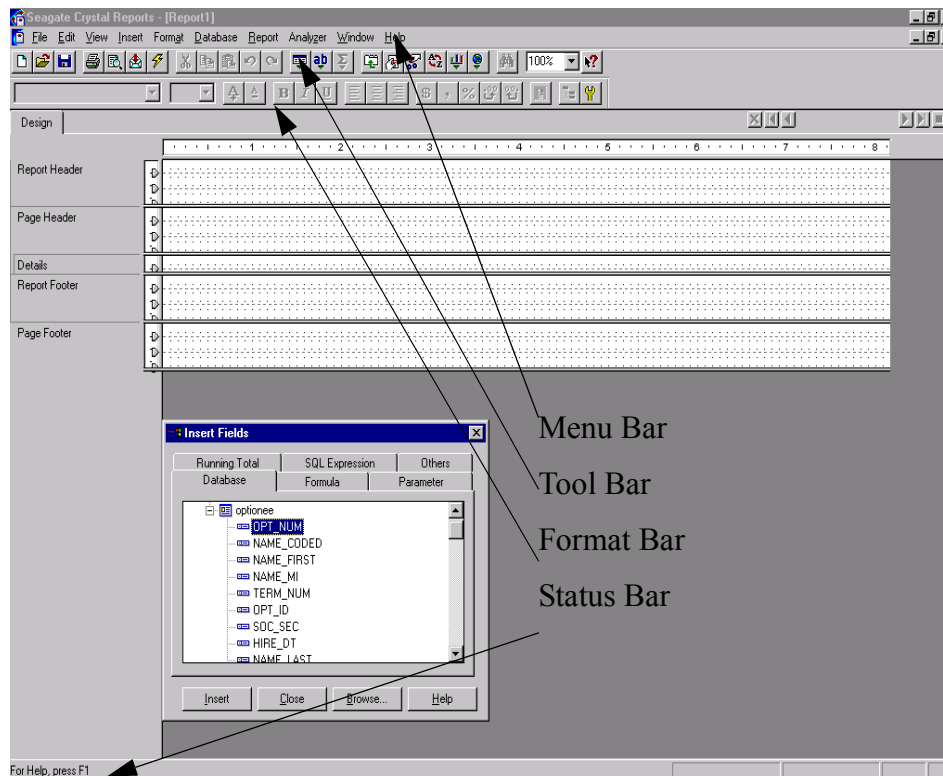
Details: area to place fields of data to populate the bulk of your report.

Report Footer: appears once on the last page of your report.

Page Footer: repeats at the bottom of every report page.

Note that you can adjust the relative size of any of these fields by putting your mouse on the line dividing the fields and dragging it horizontally up or down to resize each field.

Notes



The **Insert Fields** window is also displayed on this design window, and is used to select and drag specific data fields into your report.

Note that it is recommended that you bring in database tables one at a time to avoid linking issues (see [page 18](#)). Since you selected DBA.optionee, all the fields within Express Option's optionee table are displayed in this window.

Before you insert fields in your report, however, there are certain system defaults that need to be checked and possibly modified.

Getting Started/Preparing to Design a Crystal Report

Before you start designing a Crystal Report, there are certain options that **Seagate** recommends verifying or modifying for ease of design. The selections that you make will apply to all Crystal Reports that you run, not just for the report you are designing in today's course.

Select the **File** menu and **Options**. The Options window opens with the **Layout** tab displayed.

Appendix

Data Dictionary (Excerpt)

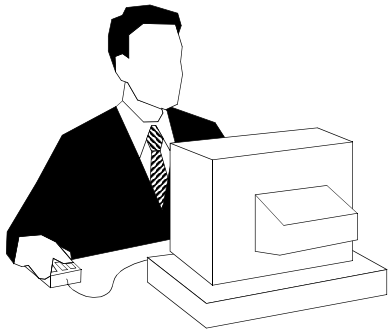
This Data Dictionary excerpt contains the names of tables and views that make up the Exercise, Grant, Location,, Optionee, and Subsidiary databases for the [REDACTED] system.

Note: This is only a portion of the entire dictionary. For the entire dictionary, please refer to the Microsoft Word file contained on your [REDACTED] software CD.

Table names are referenced on the left, the specific column or field name in the middle and then a description of the field on the right. If a view is being described, the description of the field will be the actual table and column that the view is referencing for that field.

DATA DICTIONARY-EXCERPT

ENTITY / TABLE NAME	COLUMN NAME	ATTRIBUTE DEFINITION
EXERCISE	ACTIV_DT	Last edit of record.
EXERCISE	USER_ID	User ID used for last edit of record.
EXERCISE	DEL_FLAG	Transient field used in the processing of deletions. Field Value = 0.
EXERCISE	EXER_ID	Identifier to identify an exercise. An Exercise ID is created for each exercise.
EXERCISE	MKT_PRC	This is the Fair Market Value (FMV) on exercise date. If entered on-line, this value is populated from that. If you don't enter on-line, it gets populated from the FMV in the price table.
EXERCISE	SWAP_PRC	Only Stock Swap Exercises. The swap price of the shares swapped or the actual sale price on the date of the exercise. If NQ Stock Swap, SwapPrice = MarketPrice.
EXERCISE	PRE_MPRC	The previous market price before the last stock split.
EXERCISE	CASH_DUE	Only Stock Swap Exercises Exercises. This field is calculated by (Option Cost - (SharesSwapped * OptionPrice)). Can be overridden by user.
EXERCISE	BROKR_CD	The broker that did the exercise. = BROKCD.ITEM_CD
EXERCISE	IADDR_NUM	EQ ADDRESS.ADDR_NUM Issue to name and address for share registration.



Glossary

This glossary is an excerpt from the Crystal Reports help system glossary (v7.0.1.200).

To view the entire glossary:

1. Start the Express Options system, select the Crystal Reports icon.
2. Select **Create/Modify a Report** to start the Crystal Reports software.
3. From the **Help** menu, select **Seagate Crystal Reports Help > Glossary**.

B

Bitmap: A graphic file that can be added to a report.

C

Case sensitive: Case sensitive means that a program differentiates between uppercase and lowercase letters when evaluating a text string. Thus, a case-sensitive search for the word "house" will return only the value "house", but a non-case-sensitive search will return "house", "House", "HOUSE", and similar mixed-case strings. Seagate Crystal Reports operators (Equal, In string, etc.) are case-sensitive.

Column: A column is the display of data from a single field or formula. Columns run up and down the page. The words column and field are sometimes used interchangeably in the documentation. Compare with Row.

Comments: Comments are blocks of descriptive text that accompany formulas. Seagate Crystal Reports ignores comments when it runs the formula.

Concatenate: To concatenate is to join two or more text strings together to form a single contiguous string.

Condition: In an If-Then-Else formula, the condition is the If part of the formula, the set of circumstances that must take place (be true) to trigger the Then (or consequence) part of the formula. In the formula If $x < 5$ Then x Else 5, the expression $x < 5$ is the condition.

Conditional Formatting: Conditional formatting is formatting that applies only if certain situations occur. For example, you can conditionally format numeric database fields to display in red when negative.

Conditional Formatting Formulas: Conditional formatting formulas are expressions that apply specific attributes to objects or sections only if certain criteria is met.

D

Database: A database is a bank of related data. Each unit (record) of the database is typically organized in a fixed format to make it easier to retrieve selected portions of the data on demand. Each record is made up of one or more data fields, and each data field can hold one piece of data (known as a value).

Data field: A data field (or field) is the basic building block of a record. Each record is made up of one or more data fields, and each data field can hold one piece of data (known as a value). A customer record in a typical customer mailing list Database might contain data fields similar to these: Name, Address, City, State, Zip, Phone, Fax. A data field can be empty or contain a value. Data field data is generally displayed or printed in Columns in the Details section of a report.

Data Source: A data source is a database, table, query, dictionary, or stored procedure result set that provides the data for a report.

Data types: A data type is a classification of the data that appears in a field or formula. Each piece of data used in a report or formula has one of the following data types: string, currency, number, date, date/time, time, or Boolean (TRUE/FALSE). It is important to understand data types because each function and operator works with only a limited number of data types (often as few as one). For some operators (+ and - for example), the program uses a different set of calculation rules for one type of data than it uses for another.

Debug: Eliminating errors that occur when you run a formula.

Default: A default is a pre-loaded response to a software request for data. It is the response the computer accepts automatically if you do not enter different data.

Details area: A collection of one or more Details sections (i.e., Details A, Details B, etc.).

Details section: The Details section of a report is the core section of the report. You structure the report in this section by inserting Data field, formulas, and other report elements.

Dictionary: A one-stop, ready-to-use source of data that is usually created for end users by computer professionals within the organization. The dictionary takes away the need for the end user to search multiple databases, struggle with links, build formulas, and decode cryptic field names. The user just selects the data he or she needs from the dictionary and builds the report.

Drag: Drag can mean different things, depending on the context in which the word is used:

- When referring to moving a field, drag means to click the field frame and, while keeping the mouse button pressed, move the frame to a new position. You release the mouse button when the field is in the desired position.
- When referring to resizing a field, drag means to click one of the field frame handles and, while keeping the mouse button pressed, make the field bigger or smaller. You release the button when the field is the desired size.
- When referring to formatting text, drag means to highlight text by moving the I-beam cursor across it while the mouse button is pressed. You release the button when you have finished highlighting.

E

Element: The word element is used in the documentation to describe individual report components such as database fields, formulas, and group fields. The Design Tab uses rectangular frames to represent fields.

Expert: Seagate Crystal Reports offers you several Experts. Experts are tools designed to take you step-by-step through various aspects of report creation. In most cases Experts have a series of numbered tabs. Simply begin at step one and proceed through the steps. When you have completed the final step, the Expert will do the rest of the work. See Using Crystal Reports Experts Overview for more information.

Note: The term "Expert" in Seagate Crystal Reports is the equivalent of the term "Wizard" in Microsoft Access.

Export: To export is to distribute your report to a disk file or through e-mail. Seagate Crystal Reports allows you to export your reports in many popular spreadsheet, database, word processor, HTML, and data interchange formats.