PeopleSoft®

EnterpriseOne Xe
Enterprise Report Writing
PeopleBook

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Enterprise Report Writing Overview

OneWorld provides fully integrated applications for managing information throughout your enterprise. This information might include data such as employee data, accounts receivable and payable, your company's financial data, or product information. OneWorld allows you to view and evaluate this information to make critical decisions to improve your business' operation and profitability. You can also distribute this data to others with whom you do business, such as shareholders, fellow employees, and business consultants.

Reports allow you to view data online or as printed material, in an organized and useful format. OneWorld provides report templates, which may be suitable for general use. However, some of your reporting needs are truly specific to your business. To meet these needs, you must be able to design a report to extract and present the information vital to your company. You can use the OneWorld Report Design tool to customize OneWorld report templates or design your own original reports.

The OneWorld Enterprise Reporting solution includes a report design tool to create reports and batch processes, a batch engine for processing, and an output management system to output information.

Report
Design

Report
Processing

Report
Output

The OneWorld Report Design Tool

You can use Report Design to create a variety of simple and complex reports. Report Design's interface is simple enough to be used without programming expertise, yet powerful enough to create the most complex reports. You can use Report Design to:

- Create batch applications

- Create reports (a special type of batch application)

- Read data from tables and display it in a useful format

- Manipulate and convert data in tables

Report Design uses the Report Design Director (the Director) to guide you through the report creation process. You can create different types of reports, including reports for specific uses, such as financial reporting. In addition, you can configure the Director to help users create various reports that your company needs.

After you use the Director to create your initial report you can enhance your report by:

- Adding report sections

- Modifying report section properties

- Inserting and modifying data fields and their properties

- Moving or deleting data fields

- Performing data field calculations and comparisons

- Previewing your report while you design it

Report Design also lets you set your preferences for the workspace on the Report Design form. You can configure your design workspace by changing user options, selecting toolbars, and moving docked windows.

As of B73.3.3, you can use Report Design on terminal servers. However, when you check out a report template on a terminal server, other terminal server users will not be able to access the template.

OneWorld Reports Guide

OneWorld provides more than 300 commonly used reports across Financials, Human Resources, Distribution and Logistics, and Manufacturing. You can easily generate and view these application reports online and in Adobe Acrobat. You can also export these reports for display and manipulation in another software program, such as a spreadsheet program. You can copy and customize any of the OneWorld reports to meet your specific needs instead of creating a completely new report.

You can view the OneWorld Reports Guide on the J.D. Edwards Knowledge Garden. See appendix D for a list of some of the specific application reports that OneWorld provides.

Report Processing

Report processes are are type of batch process. Once submitted, a batch process occurs without user interaction. When you submit a report you do not interact with it again until the report is done. Consequently a report, after it is designed and submitted for processing, becomes a batch process.

After a batch process is launched, you have no control over the flow of the logic within the batch process. If you need to change the flow of the logic within the process or report, you make those changes using Report Design and then resubmit the report.

You can also create batch processes to manipulate data or update tables and then process and output a report using that data.

Output Management

Typically, after a report has been processed by the batch engine, you will want to see the report. You can output reports to different file types, to different printers, and to different forms and paper sizes. OneWorld accommodates simple output processes like printing a simple report online or directly to a printer. OneWorld also accommodates more complex output processes such as using a batch process to print three different versions of the same report to three different printers that are each loaded with the logo from a different company.

OneWorld Report Components

A OneWorld Report exists within OneWorld as a set of components that allows OneWorld to identify and process it. You can create variations of a report based on a single report template. The first step in creating a report is to create a report object within OneWorld. The report you create will become either a template or a version of a template, based on your designation.

Furthermore, each OneWorld report itself comprises one or more sections. These sections are the building blocks of all OneWorld reports. You can add, remove, and rearrange report sections at will.

OneWorld Report Components describes:

❏ OneWorld system report components

❏ Report sections

OneWorld System Report Components

OneWorld system report components consist of the following:

- Report object
- Report template
- Batch versions

Report Object

OneWorld is object based; therefore, each OneWorld report is defined in the Object Librarian as an object. Its type is UBE (Universal Batch Engine). When you add a report object, you create a header record that contains information about the report, such as its name and description. The header record is stored in the Object Librarian Master table (F9860).

Report Template

Report templates hold the master specifications, which you add through Report Design. These specifications describe the report to OneWorld and specify how the data is selected, sorted, organized, and formatted. The template, when fully designed, becomes the basis for all versions of the report.

Batch Versions

A batch version (or simply version) is a version of a report. Each batch version is based on a specific report template. Typically, batch versions vary slightly from the report template upon which they are based in the data they display or in their processing options. A batch version is required to process the specifications described in the template. You can create a batch version when you create a new report template. You can create additional batch versions by copying an existing batch version.

Batch versions enable you to preserve template integrity. Instead of creating a template for each variation of a report that you might need, you can create different batch versions of a single template. For example, you might design a monthly variance report that contains totals for the entire company. However, if you need to run a quarterly variance report that includes only data for the Western region, you can create a batch version of the monthly variance report to accomplish this.

Report Sections

Report sections are the building blocks of a report. Most reports have more than one section. You can reference one section in another or use sections for special purposes, such as performing calculations and totaling. Three types of sections are available:

- Detail
- Header
- Footer

Detail sections contain the information that the report was designed to convey. Three types of detail sections exist:

- Columnar
- Group
- Tabular

Data displayed in detail sections is based on business views. A business view is used in OneWorld to access data from database tables. The business view is a means for selecting specific columns from one or more tables whose data will be used in a report. Choosing columns from the business view provides a link between the data in your database and the report you are creating.

In addition to selecting business view columns to build the report sections, you can define and add data fields such as:

- Constants

- Run-time fields

- Alpha variables

Many of these data fields are used most commonly in a report's header and footer sections. You can include information at the beginning or end of the report and at the top or bottom of every page. Besides report and page headers and footers, reports can include detail section headers and footers as well.

In a report, a set of records that all have the same value for one of their fields are said to be in the same *level*. For example, in a report that is sorted by telephone numbers, all records having the same area code would be in the same level. When the value in that field changes, a *level break* occurs. Level breaks are useful because you can add processing when they occur. Two special report section types make it easy to add processing to level breaks: they are the *level-break header* and *level-break footer* sections.

Report Sections describes the following:

- Characteristics of a columnar section

- Characteristics of a group section

- Characteristics of a tabular section

- Characteristics of a report header section

- Characteristics of a report footer section

- Characteristics of a page header section

- Characteristics of a page footer section

Characteristics of a Columnar Section

Columnar sections are characterized by their simplicity. The layout of a columnar section consists of column headings with the associated column values listed under the headings. Each data field is a column, and each record is a row. The column heading is linked to its column data, and the two cannot be disconnected in the report. If one is deleted, the other is deleted also. Because you cannot change the column format, the columnar section is the least flexible detail section.

The following is an illustration of a columnar section:

Address Number	Alpha Name	Region Code	Search Type
1001	ABC Office Supplies	DEN	C
1556	XYZ Manufacturing	NYC	C
1785	Abbot, Dominque	TOR	E
3452	Paper Supplies, Inc.	CHI	V

Within a columnar section, you can:

- Attach any business view
- Sequence data and designate level breaks based on the data fields in the business view
- Create multiple levels of totaling
- Attach event rules (logic statements that you create and attach to report objects)
- Call business functions (related groups of logic statements)
- Call system functions
- Join the section to other sections
- Make the section conditional (that is, it processes only if a specified condition is true)

You can include multiple columnar sections in a report.

To print level-break headers and totals on a columnar report, level-break header and footer sections are required. When the level break occurs, the level-break header prints above the column headings.

Deciding When to Use a Columnar Section

The following criteria can help you decide when to use a columnar section in your report:

- The column style layout is desired.
- The totaling levels in the report are mostly static; therefore, they are not subject to change at run time.
- The section needs to be joined to other sections.

- Control over the format and appearance of level-break headers and footers is required.

- You need to make the section conditional.

Characteristics of a Group Section

Group sections, characterized by their free-form layout, are not restricted to standard column and row layout. This section type is the most flexible because you can place data fields anywhere in the group section. Data fields in group sections are called controls. Controls are composed of a constant component and a variable component. Initially, the constant and variable of the control are linked; however, you can disconnect the constant and variable to meet your reporting needs. Because of the free-form layout, group sections are almost always used for level-break header and footer sections.

The following is an illustration of a group section:

1001	ABC Office Supplies	
	DEN	C
1556	XYZ Manufacturing	
	NYC	C
1785	Abbot, Dominque	
	TOR	E
3452	Paper Supplies, Inc.	
	CHI	V

Within a group section, you can:

- Attach any business view

- Sequence data and designate level breaks based on the data fields in the business view

- Create multiple levels of totaling

- Attach event rules (logic statements that you create and attach to report objects)

- Call business functions (related groups of logic statements)

- Call system functions

- Join the section to other sections

- Make the section conditional (that is, it processes only if a specified condition is true)

You can use multiple group sections for each report. Any description or heading in a group section prints for each row processed.

To print level-break headers and totals on a group report, level-break header and footer sections are required.

Deciding When to Use a Group Section

The following criteria can help you decide when to use a group section in your report:

- The free-form layout is desired.
- The totaling levels in the report are mostly static; therefore, they are not subject to change at run time.
- The section needs to be joined to other sections.
- Control over the format and appearance of level-break headers and footers is required.
- You need to make the section conditional.

Characteristics of a Tabular Section

Although a tabular section appears in the same column and row format as a columnar section, it has built-in spreadsheet functionality. This makes the tabular section suitable for presenting numerical data that has to be summarized with subtotals and grand totals.

The following is an illustration of a tabular section:

Account Description	Net June Posting
Revenue	376,697
Cost of Goods Sold	272,091
Gross Profit	104,606
General Expenses	63,911
Net Income	168,517

Within a tabular section, you can:

- Attach any business view

- Sequence data and designate level breaks based on the data fields in the business view

- Create multiple levels of totaling

- Calculate grand totals

- Attach event rules (logic statements that you create and attach to report objects)

- Call business functions (related groups of logic statements)

- Call system functions

- Select data at the column level

- Use drill-down functionality (lets you research values in the report by creating a link between your report output file and the associated OneWorld application)

You can include multiple tabular sections in a report. The section processes when a level-break field changes.

Tabular sections automatically include the Description column. This column displays descriptions for rows based on data sequencing and level-break fields.

Totaling is dynamic in a tabular section. If a column does not require totaling, you can turn the totaling function off. Because the totaling logic is built into a tabular section, you do not have to use level-break footer sections for totals. This means that you can change the totaling without redesigning the report.

The advantages of using tabular reports are:

- They require fewer sections than columnar or group reports.

- You can make use of smart fields (groups of related logic statements that prompt the user for input).

- Totaling is automatic.

- An audit trail can be created with the drill-down feature.

- Totaling levels can be changed easily, without redesign of the report.

- Multiple descriptions can be displayed in the Description column.

Deciding When to Use a Tabular Section

The following criteria can help you decide when to use a tabular section in your report:

- You need to add rows such as a calculation row.

- You need to work with individual cell properties.

- The report requires totaling.

- The totaling level changes frequently.
- Conditional execution at the section level is required.
- Data selection is required at the column level.
- You need to calculate grand totals.
- Drill down functionality is required.

Characteristics of a Report Header Section

A report can contain only one report header, which prints once at the beginning of the report. The report header might include the report title and date the report was processed and list the names of the people to receive the report. Typically, report headers include data fields, such as constant and run-time fields, and alpha, numeric, and date variables.

The following is an illustration of a report header as it might appear on a report:

XYZ Manufacturing

Fourth Quarter Financial Report

For the Period Ending 12/31/05

For Internal use only

Characteristics of a Report Footer Section

A report can contain only one report footer, which prints once at the end of the report. The report footer might contain a reminder that the contents of this report are for internal use only. Typically, report footers include data fields, such as constant fields, and alpha, numeric, and date variables.

The following is an illustration of a report footer as it might appear on a report:

All information contained in this report is the legal and exclusive property of this company.

Characteristics of a Page Header Section

A report can contain only one page header, which prints once at the beginning of each report page. A page header might have a company name, page number, and date. Page headers are usually generated by the system. You can, however,

manually create your own page header, and include data fields, such as constant and run-time fields, and text, numeric, and date variables.

The following is an illustration of a page header as it might appear on a report:

R09450   XYZ Manufacturing   12/31/98 09:15:54

                          Quarterly Revenues   Page: 1

Characteristics of a Page Footer Section

A report can contain only one page footer, which prints once at the end of each report page. A page footer might have an explanation about what is found in the report. Typically, page footers include data fields, such as constant and run-time fields, and alpha, numeric, and date variables.

The following is an illustration of a page footer as it might appear on a report:

This page reflects Revenue earnings for a single Region or
Branch/Plant.

Report Design

Report Design Process

You have seen examples of the OneWorld reporting functionality and characteristics that make up the individual report sections. In addition to this information, it is important to know the procedures involved with designing reports. Report design usually involves planning, creating the report, viewing the report, and modifying the report.

Report design process describes:

❑ Report design checklist

❑ Report planning

Report Design Checklist

The following checklist is suggested for each report template or batch version you create:

❏ Plan your report. Make a list of the information you want your report to show. Sketch out the layout and format of the report. See *Report Planning* for tips on planning your report.

❏ Start a report in OneWorld. See *Report Object Creation* for information on creating and opening reports.

❏ If creating a new report, follow the Report Design Director, which leads you through the steps in designing a report with a single group, columnar, or tabular report section. The Director also uses director templates to help you create an application report. See *Report Design Director* for more information on using this tool.

❏ Enhance the report using Report Design. You can add sections, data fields, columns, and rows; modify the properties of the sections and objects; create subsection joins; and format the report. See *Basic Report Enhancements* for information on modifying how your report looks and functions.

❏ Create additional batch versions of a report template. Versions are a powerful and convenient way to modify the behavior of reports without changing the report template. See *Batch Versions for Reports* for information about creating and modifying batch versions.

❏ Enhance your report by attaching event rules; turning on the drill-down feature, setting up business view favorites, modifying report properties, attaching processing options templates; creating your own director templates, and adding text attachments. See *Advanced Report Enhancements* for advanced information on modifying how your report looks and functions.

❏ Submit and output the report. Prior to submitting a report, you can change data selection, data sequencing, and processing location. After submitting the report, you can view it online, print it, or modify job properties. See *Submitting a Report* for information on how to select data and processing options and how to view and print your report.

Report Planning

Perhaps the most important task in designing an effective report is planning. This requires asking questions of those who will use the report. You might also want to draw the report to visualize how the information must be presented. Planning the report prior to creating it helps you design a report that is functional and useful.

Report planning discusses:

❑ Planning your report

❑ Deciding which report components to include

Planning Your Report

Before you create a report, answer the following questions to help plan your report:

- What is the purpose of the report?
- Who will use the report?
- Have these users been consulted about what information they want to see on the report?
- What data fields and records should be included in the report?
- What is the most useful format in which to present the information?
- What reports are used to produce this information now?
- Is there an existing report to copy and modify?
- Will the report be run frequently, or is this a one-time occurrence?
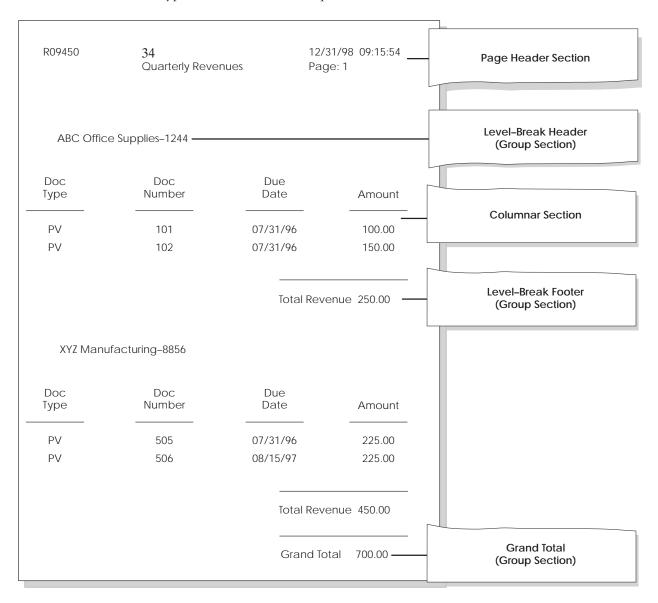
Before You Begin

❑ Review the group, columnar, and tabular section types. See *Report Sections* for a discussion of the characteristics of each section type and criteria for deciding when to use a specific section.

Deciding Which Report Components to Include

As the illustration below shows, a report might include a page header to provide general information, level-break headers and footers (group sections) that subtotal and total, and a columnar section to present your data in a columnar format. Uses for this type of report might be invoicing or ordering. You must determine how you want your data to be formatted and presented, and what section type best meets those requirements.

| R09450 | **34**
Quarterly Revenues | 12/31/98 09:15:54
Page: 1 | **Page Header Section** |

ABC Office Supplies–1244 ⟶ **Level–Break Header (Group Section)**

Doc Type	Doc Number	Due Date	Amount	**Columnar Section**
PV	101	07/31/96	100.00	
PV	102	07/31/96	150.00	

Total Revenue 250.00 ⟶ **Level–Break Footer (Group Section)**

XYZ Manufacturing–8856

Doc Type	Doc Number	Due Date	Amount
PV	505	07/31/96	225.00
PV	506	08/15/97	225.00

Total Revenue 450.00

Grand Total 700.00 ⟶ **Grand Total (Group Section)**

Before creating the report with Report Design, draw a picture of the report that would best present the required information. In addition to using the answers to the preceding questions to create this picture, ask the questions in the following list to determine which report components to include. Check all items that you want to include in your report. Use the list when you start creating your report with Report Design.
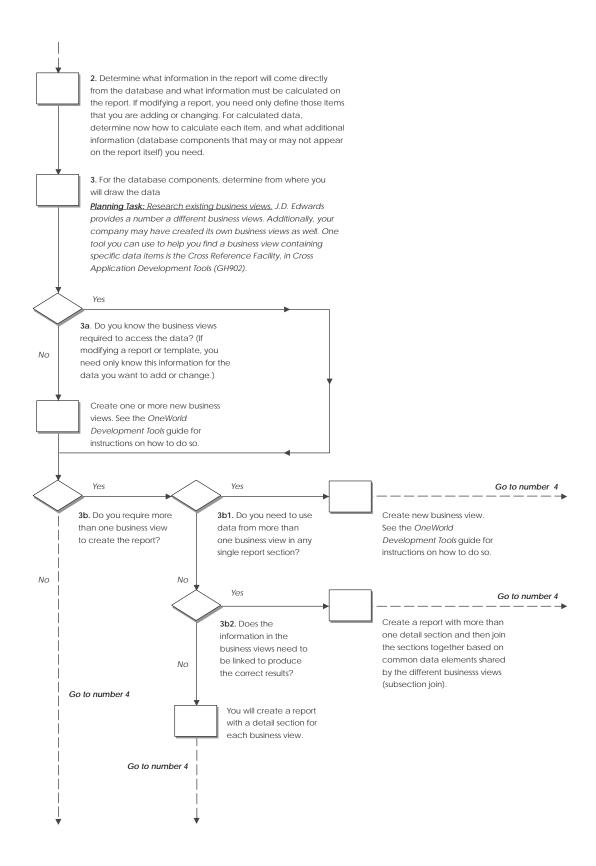
❏ Is a report header required at the beginning of the report for clear and meaningful presentation of the printed information?

❏ Is a report footer required at the end of the report to highlight an important function of or fact about the report?

❏ Is a page header required to present information on each page of the report?

❏ Is a page footer required to give the reader vital information on each page of the report?

❏ Is there an existing business view that contains the data fields that you want to report on?

❏ Do you need to create a subsection join; that is, do you need to refer to data in one section in another section?

❏ What is the best format to present the information?

- Do you want the free-form format of the group section?
- Do you want the columnar format of a columnar or tabular section?
- Do you need the flexibility of a tabular section to create rows in your report?

❏ If you use a group or columnar section, do you need to add level-break headers or footers for totaling purposes?

❏ Would the automatic header and totaling features of a tabular section make it the best choice for your report?

❏ Does a director template exist to help you create a specific application report?

❏ Do you need to modify a director template or create a new one?

❏ How will you sequence the data fields and records from the business view?

❏ How will you sort the rows from your business view?

❑ What enhancements need to be made to report objects to make the report more useful? For example, do you want to emphasize the information in one column by changing the column spacing? Do you want to change the font size of the column's contents to call attention to the information?

❑ Are event rules required; that is, do you need to define conditional, mathematical, or other logic for the report?

❑ Is drill-down required to create an audit trail?

Following is a logical series of questions in a flowchart format to help you further determine what sections you might need in your report based on what you want the report to do. It combines the report planning process with these decision-making elements.

1. Determine what you want the report to show – what the end result is to be.

Planning Task: *Research existing reports.* Appendix D *lists a number of reports created by J.D. Edwards that meet a variety of reporting needs (the reports are described in more detail online). These reports have been grouped logically with OneWorld forms and tools and can be accessed from the OneWorld Explorer. Additionally, your organization may have created its own unique report templates and batch versions.*

Yes → Use the existing report

1a. Does a report[1] already exist that will allow you to achieve this result?

No

Familiarize yourself with the report

Yes

1b. Can you modify an already existing report to achieve this result?

No

1b1. Do you need to delete sections or change the business view attached to any of the sections?

Yes

No

Create a new report[2] template based on the already existing report

Go to number 2

No

Create a new report template from scratch

Go to number 2

1c. Is one of the application reports (director templates) similar to what you need? (See *Report Design Director* for more information on application reports)

Yes

1b2. Are you creating a report that others will want to use as a basis for their own reports?

No

1b3. Are you creating an ad hoc report?

No

Familiarize yourself with the template

1d. Are you creating a report that others will want to use as a basis for their own reports?[3]

No

Create a new batch version based on the already existing report

Go to number 2

Yes

Create a new report template based on the already existing report.

Go to number 2

Submit the report. You can override data sequencing, data selection, and certain processing options at runtime without saving the changes. See *Batch Versions for Reports* for more information.

No | *Yes*

1b4. Are your changes confined to data sequencing, data selection, or processing options (see *Batch Versions for Reports* for a description of configurable runtime processing options)?

2. Determine what information in the report will come directly from the database and what information must be calculated on the report. If modifying a report, you need only define those items that you are adding or changing. For calculated data, determine now how to calculate each item, and what additional information (database components that may or may not appear on the report itself) you need.

3. For the database components, determine from where you will draw the data

Planning Task: Research existing business views. J.D. Edwards *provides a number a different business views. Additionally, your company may have created its own business views as well. One tool you can use to help you find a business view containing specific data items is the Cross Reference Facility, in Cross Application Development Tools (GH902).*

Yes

3a. Do you know the business views required to access the data? (If modifying a report or template, you need only know this information for the data you want to add or change.)

No

Create one or more new business views. See the *OneWorld Development Tools* guide for instructions on how to do so.

Yes

3b. Do you require more than one business view to create the report?

No

Go to number 4

Yes

3b1. Do you need to use data from more than one business view in any single report section?

No

Yes

3b2. Does the information in the business views need to be linked to produce the correct results?

No

Go to number 4

Go to number 4

Create new business view. See the *OneWorld Development Tools* guide for instructions on how to do so.

Go to number 4

Create a report with more than one detail section and then join the sections together based on common data elements shared by the different businesss views (subsection join).

You will create a report with a detail section for each business view.

4. You may want to vary the appearance or the calculation methodology of some components of your report based on certain criteria.

Yes

No

4a. Are some elements of the report contingent upon others? Should some elements not appear in some cases?

You can define event rules with standard "If/Then" logic to vary the appearance and calculation logic of your report based on conditional criteria. See *Advance Report Enhancements* for more information on creating event rules. Note that objects within report sections as well as entire report sections can be conditional; however, tabular report sections cannot be conditional.

5. In step 2, you determined how to calculate data on the report. In step 3, you determined which business views contained the base data you required for those calculations. In step 4, you determined if any of the calculation methodologies were contingent upon variable factors. Now determine how to calculate the data in terms of business view components, smart fields, and manual calculations, if the report needs to do so. Compete step 4 for each calculation in your report.

Planning Task: Research existing business views. J.D. Edwards provides a number a different sets of calculation logic – smart fields – to simplify complex report calculations. Most smart fields were designed for financial reports and are included in the application report. See Report Design Director *and* Basic Report Enhancements *for more information about smart fields in this context. In addition, your company may have created its own smart fields.*

See Report Design and Basic Report Enhancements for information on adding smart fields to a report section.

Yes

Yes

Yes

5a. Does your report need to perform any calculations?

5b. Are the calculations complex (more than simple totaling, averaging, counting, and so forth columnar data)?

5c. Do you know the smart fields to use to perform the calculations?

No

No

No

Go to section 6

For totaling, you may want to use a tabular section which performs implicit totaling automatically. Otherwise, create a level–break section where you can perform the calculations and display the results. See *Basic Report Enhancements* for more information on these two options.

Perform the calculations manually. See *Advanced Report Enhancements* for information about working with event rules. You can perform simple and complex mathematical calculations by defining and attaching a Do Event to a numerical variable.

Go to section 6

Go to section 6

Go to section 6

6. Determine how the report should appear overall. Note that you can arrange data elements in any order on the page.

Yes → **6a.** Do you want to use the OneWorld system to output your report (either in print or online)?

No

Yes → **6a1.** Do you want to manually format the output data once imported into the target software package?

Yes → Send your report output to a Comma Separated Value (CSV) file when it runs. You can then import the CSV file into any software package that can accept CSV data. See *Output Management* for information on exporting to CSV.

No

Use Output Stream Access (OSA) to allow OneWorld to pass data to a software package such as Excel. The software package then processes and formats the data itself. Note that an OSA interface must be defined before you can invoke it. See *Output Management* for more information on OSA.

Yes → Make a note of the data. You will refine it in a Report Header Section when you create the report.

6b. Do you want any data to precede the body of the report?

No

Your report will not need a Report Header Section.

Yes → Make a note of the data. You will refine it in a Report Footer Section when you create the report.

6c. Do you want any data to follow the report?

No

Your report will not need a Report Footer Section.

Yes → Make a note of the data. You will refine it in a Page Header Section when you create the report.

6d. Do you want any data to appear on the top of every page?

No

Your report will not need a Page Header Section.

Go to number 6e

6e. Do you want any data to appear at the bottom of every page?

Yes → Make a note of the data. You will refine it in a Page Footer Section when you create the report.

No → Your report will not need a Page Footer Section.

6f. Are you using a director template to create an application report?

Yes → **6f1.** Will you be adding information to the report from one or more additional business views?

No (from 6f)

6f1. *No* → (continues right)

6f1. *Yes* → Add a detail section for each additional business view.

6g. Are you using more than one business view in your report?

Yes → Create a detail section for each business view. Multiple detail sections can be formatted differently, if desired. For example, in a report with two detail sections, one detail section could be a columnar section while the other could be a group section. Repeat the following step for each detail section.

No (from 6g)

6h. Is the information better arranged in a columnar or spreadsheet format?

Yes → **6h1.** Is the appearance of the entire section based on control through event rules?

No → Use a group section to format the information.

6h1. *Yes* → Use a columnar section to format the information.

6h1. *No* → **6h2.** Do you require the ability to audit the information in a report online (that is, drill down) or to control row or cell specifications?

6h2. *Yes* → Use a tabular section to format the information.

6h2. *No* → Use a columnar section to format the information.

7. Determine which columns from the business view you wish to appear in each detail section and in what sequence.

Go to number 8

8. Determine how you want the data sorted. Data can be sorted alpha–numerically in ascending or descending order on multiple columns.

9. Determine how you want to group the data. For example, in a financial report, you might want to group information by business unit. These groupings are called *level breaks*. Level break headers are used typically for organization (such as printing the name of the business unit at the top of each group). Level break footers are used typically for totaling. Level breaks can be set to trigger page breaks, if desired.

10. Determine what records you need to see. You probably do not want all of the applicable data in the database to appear on your report. Perhaps you want financial information only from the last quarter or you only want employee information for individuals hired in the last three years, for example. Selection criteria can be constant information like these examples; however, selection criteria may also be based on report, system, or event rule variables, as applicable.

Yes

Make note of the section and what data you want to be able to drill down on. You will need to know to which business view element you wish to drill down (what values need to be passed). See *Advanced Report Enhancements* for more information on the drill down feature.

No

11. Do any of the tabular sections require auditing (down drill) capability?

END

Report Object Creation

For a OneWorld report to exist, it must first be defined as a UBE object type in the Object Librarian Master table (F9860). A report object must have at least a name, a description, and a product code to which the object is connected. After you have created the report object, you can save it and add additional specifications, such as the report format, at a later time.

Complete the following tasks to work with a report object:

❏ Creating a report object

❏ Opening an existing report

❏ Deleting a report object

Creating a Report Object

OneWorld categorizes each report object in one of two ways: as a report template or as a batch version. All batch versions are based on report templates. Batch versions vary from report templates based on overrides; you can override any report element in a batch version. Changes to a report template are reflected in all its batch versions, except where prohibited by overrides.

OneWorld offers two methods for creating report objects: the Report Design tool and the Object Management Workbench (OMW). You can also create batch versions with the Batch Versions tool. Creating a report template with Report Design is faster and might be more convenient if you wish to design the report immediately after creating it. When you create a report object with Report Design, you create a new report template and, optionally, a batch version. This is the only time you can use Report Design to create a batch version; any other batch versions you need must be created with either the OMW or the Batch Versions tool.

Creating a report with the OMW gives you greater control over how the report object is classified within the OneWorld system. Additionally, you can create either a template or a batch version based on an already existing template. Complete one of the following tasks to create a report object:

- Creating a report object with Report Design
- Creating a report template with the OMW
- Creating a batch version with the OMW

See Also

- *Object Management Workbench* in the *OneWorld Development Tools* guide for more information on using the OMW.
- *Batch Versions for Reports* for more information on using the Batch Versions tool to create batch versions.

▶ **To create a report object with Report Design**

1. From the Report Writer menu (GH9111), choose Report Design Tool.
2. On Report Design, click New.
3. On Create New Report, complete the following fields, and then click OK:

- Report Name

  The report name appears in the upper left corner of the page header. The J.D. Edwards naming convention begins report names with the letter R, followed by the product code, and ending with a unique identifier.

- Description

  The description appears in the center of the page header below the company name. J.D. Edwards recommends that you make this a useful identifier, such as G/L by Batch - Columnar.

- Product Code

  Codes 55 – 59 are reserved for customers. Use these codes to ensure that your object remains unaltered by OneWorld upgrades.

  The Report Design Director launches.

4. Continue with the Report Design Director to design the report. Note that the option to create a version based on the new report template you created appears on the final Report Design Director form.

▶ **To create a report template with the OMW**

1. From the Cross Application Development Tools menu (GH902), choose Object Management Workbench (P98220).

2. On the OMW, click Find.

   Your project list appears.

3. Choose the project to which the new report object will be added and then click Add.

4. On Add OneWorld Object to the Project, choose to create a Batch Application, and then click OK.

5. On Add Object, complete the following fields, and then click OK.

   - Object Name

     Object Name is the name of the report. The name appears in the left corner of the page header. The J.D. Edwards naming convention begins report names with the letter R, followed by the product code, and ending with a unique identifier.

- Description

  The description appears in the center of the page header below the company name. J.D. Edwards recommends that you make this a useful identifier, such as G/L by Batch - Columnar.

- Product Code

  Codes 55 – 59 are reserved for customers. Use these codes to ensure that your object remains unaltered by OneWorld upgrades.

- Product System Code

  You can use any code you wish in this field.

- Object Use

  Depending on how you want to classify the report's use, you probably will want to use one of codes 160 – 166, which are all report–related classifications.

  The Object Librarian Batch Application Design form appears.

6. Click the Design Tools tab and then click Start Report Design Aid.

   Continue with the Report Design Director to begin designing a report.

Field	Explanation
Object Name	The OneWorld architecture is object-based. This means that discrete software objects are the building blocks for all applications, and that developers can reuse the objects in multiple applications. Each object is tracked by the Object Librarian. Examples of OneWorld objects include: • Batch Applications (such as reports) • Interactive Applications • Business Views • Business Functions • Business Functions Data Structures • Event Rules • Media Object Data Structures
Object Use	Designates the use of the object. For example, the object may be used to create a program, a master file, or a transaction journal. See UDC 98/FU.

▶   **To create a batch version with the OMW**

1. From Cross Application Development Tools (GH902), choose Object Management Workbench (P98220).

2. On the OMW, click Find.

    Your project list appears.

3. Choose the project to which the new report object will be added and then click Add.

4. On Add OneWorld Object to the Project, choose to create a Batch Version, and then click OK.

5. On Adding a Version, enter the report template's name, or use the Visual Assist to search for the report template, and then click OK.

6. On Version Add, complete the following fields, and then click OK.

    - Print Cover Page

    - Version

    - Version Title

    - Prompting Options

      This field is disabled if no processing options were associated with the report template.

    - Security

    - Job Queue

    - Version Detail

Field	Explanation
Version	A version is a user-defined set of specifications. These specifications control how applications and reports run. You use versions to group and save a set of user-defined processing option values and data selection and sequencing options. Interactive versions are associated with applications (usually as a menu selection). Batch versions are associated with batch jobs or reports. To run a batch process, you must choose a version.

Field	Explanation
Version Title	A description of the version that appears next to the version number. The version title is different from the report title.
	This field should describe the use of a version. For example, an application for generating pick slips might have a version called Pick Slips - Accounting and another version called Pick Slips - Inventory Management.
Prompting Options	This code specifies how processing options will be executed based on user defined code table 98/CR. Valid values are: Blank Disables the processing options for the version. 1 The application will use existing processing option without prompting the user. This is sometimes referred to as blind execution. 2 The application will prompt the user for processing options at runtime.
Job Queue	The job queue to which the job was submitted. On the AS/400 this is an actual system job queue. On other systems it is a OneWorld logical queue.
Version Detail	Use this space to list all the overriding specifications and differences in functionality between the base report specifications and the version level report specifications. The information you provide in this field will allow version developers to easily see the functional difference between this version and the base report. Examples of things you should list includes additions such as sections that you have added in your version that do not exist in the base report. You should also list changes in your version for areas that function differently than the base report. For example, you should list areas where you use different criteria for data sequencing or data selection.

Opening an Existing Report

If you know the name of a report that already exists, you can open the report to make changes with Report Design. However, the first time you try to open the report, you might receive an error message that tells you that the report does not exist on your workstation. You must then get the specifications from the server before you can work with the report. See *Object Management Workbench* in the *OneWorld Development Tools* guide for information on getting object specifications.

You can open either a report template or a batch version. If you open and modify a report template, the changes you make will be reflected in the template's versions (unless prohibited by overrides in the batch versions). Open a batch version if you want to modify it or define overrides for it.

When you open an existing report, the Director is not available to assist with changes. Rather, the report template or batch version opens automatically to the Report Design form. You can open a report object with Report Design or with the Object Management Workbench (OMW).

Opening an existing report describes the following methods to open a report template or a batch version:

- Opening a report object with the OMW
- Opening a report object with Report Design

▶ **To open a report object with the OMW**

1. From the Cross Application Development Tools (GH902) menu, choose Object Management Workbench (P98220).

2. On the OMW, click Find.

   Your project list appears.

3. Choose the report object you want to open and click the Design button in the center column.

   If the report object you want to open is not in your project list, you must add it to one of your projects before you can work with it. See *Object Management Workbench* in the *OneWorld Development Tools* guide for information on adding objects to your projects.

4. If you chose a report template, on Object Librarian Batch Application Design, click the Design Tools tab, and then click Start Report Design Aid.

5. If you chose a batch version, on Batch Version Design, click the Tools tab, and then click Report Design.

▶ **To open a report template with Report Design**

1. From the Report Writer menu (GH9111), choose Report Design Tool.

2. On Report Design, click Open.

3. On the Open form, choose the report template you want to open.

   You can narrow your search by entering information in any of the fields in the Query by Example (QBE) line above the grid, and then clicking Find.

   Even if you want to open a batch version, you must first choose the report template upon which the batch version is based.

4. In the Version field, click the down arrow, choose Template or the version title of the version you want to open, and then click OK.

   If you choose to modify a version, you will see the Version tab on Report Design - Report View rather than the Report tab.

See Also

- *Basic Report Enhancements* and *Advanced Report Enhancements* for information about using the Report Design tool to modify or enhance the existing report

Deleting a Report Object

From time to time, you might need to delete report objects from your system. You can delete batch versions and report templates. If you delete a report template, all of its batch versions will be deleted automatically.

You can delete a report object at three different levels:

- You can delete an object from the check-in server
- You can delete an object from your local environment only
- You can delete the object completely from the system

Note: You can delete report objects only if they are checked in and if you have the proper roles and permissions to delete them. For more information, see *Object Management Workbench* in the *OneWorld Development Tools* guide.

▶ **To delete a report object**

1. From the Cross Application Development Tools menu (GH902), choose Object Management Workbench.

2. On Object Management Workbench, click Find.

   Your project list appears.

3. Choose the object to be deleted and then click Del (delete).

4. On Delete of, click one of the following options:
   - Delete Object from the Server
   - Delete Object Locally
   - Mark Object To Delete Completely

5. Click OK. (Objects marked to be deleted completely will be highlighted in bold text in the project display window. They will be deleted when you close OneWorld.)

Field	Explanation
Delete Object from the Server	For Object Librarian Objects, turn this option on to delete the object from your primary check-in location. For non-Object Librarian Objects, check this box to delete the object from your sign-on environment.
Delete Object Locally	This is for Object Librarian Objects Only. This option deletes local specifications for this object.
Mark Object To Delete Completely	Turn on this option to delete an object completely from the system. Once an object is marked to be deleted, the Object Management Workbench deletes the object from all locations within the system as the status of this project is advanced.
	The OneWorld Administrator defines what locations to delete from and at what project status the deletions happen.
	Note: If the object exists only locally, the object is considered completely deleted if you select to delete locally. If the object exists only in the primary check-in location, the object is be considered completely deleted if you delete from server & local. In both cases, references to this object are eliminated from the project once the object is deleted completely. Once an object is promoted to another path code or environment, the object must be deleted through the process described in the first paragraph. In this case, the reference to the deleted object is never removed from the project. It will be left in the project with a status of 'Deleted' as a permanent record that the object existed.

Report Design Director

The Report Design Director (the Director) gives you a quick start in designing a report by leading you through a linear process and setting up some basic elements for you. As you proceed through the Director, you answer simple questions, such as whether you want header and footer sections, what type of detail section to use, on what business view the data selection will be based, what columns to include in the report, and how to sequence and sort the records in your report. Based on your answers to these questions, the Director sets up a report and opens it in Report Design. You can then use Report Design to format and enhance the report and change anything set up through the Director.

The Director also includes director templates to help you create an application report. These templates contain default criteria, such as a recommended business view, a list of smart fields, data selection, and data sequencing options to include. When you choose one of the templates in the Director, the Director reads the template specifications (stored in OneWorld tables) and presents the default criteria through the Director forms. Several director templates are included with OneWorld. You can also create your own through the Smart Field Templates (P91420) and Report Director Templates (P91400) programs.

If you want to design your report without assistance of the Director, bypass the Director by clicking Finish or Cancel, and build your report, section by section, within Report Design.

Report Design Director includes the following tasks:

❏ Creating a columnar report

❏ Creating a group report

❏ Creating a tabular report

❏ Creating application reports

See Also

- *Working with Director Templates* for more information about modifying and adding report director templates
- *Creating Detail Sections* for information about creating sections by using Report Design rather than the Director

Creating a Columnar Report

After creating a new report object, use the Director to design a columnar report. The Director leads you through a linear process for creating a columnar report by asking you questions about its structure and content. When you are finished creating the report, you can enhance it by using additional features of Report Design.

Creating a columnar report includes the following tasks:

- Choosing report sections to include in the columnar report
- Choosing a business view for the columnar section
- Adding business view columns to the columnar section
- Defining section data sequencing for the columnar section
- Defining sort properties for the columnar section
- Choosing records to include in the columnar section
- Creating a batch version of the columnar report
- Reviewing the results of the Director
- Saving a report
- Example: Creating a columnar report with the Director

Before You Begin

❑ Create a report object. See *Creating a Report Object* for information about starting the report design process and the Director. The last step in creating a report object opens Report Design Director automatically.

See Also

- *Characteristics of a Columnar Section* for an overview of columnar sections and criteria for using them

Choosing Report Sections to Include in the Columnar Report

Based on your report planning, you select the headers, columnar section, and footers necessary for your report. You can select only one detail section (the

columnar section) initially. You can select any combination of header and footer sections based on your reporting needs.

▶ **To choose report sections to include in the columnar report**

After you create a report object, the Director's Welcome form appears.

The Director includes a Navigation Assistant that lets you move from step to step of the report creation process. The Navigation Assistant shows you where you are in the process. You can hide the Navigation Assistant by right-clicking it and choosing Hide.

1. On the Director's Welcome form, click the following headers and footers you want to include in your report:

   - Report Header

   - Page Header

   - Page Footer

   - Report Footer

2. Choose to create a columnar report, and then click Next.

   If you chose a page header, the Page Header Details form appears. Continue with step 3.

   If you did not choose a page header, the Business View Selection Option form appears. Go to the next task, *Choosing a Business View for the Columnar Section.*

3. On Page Header Details, turn on the option to automatically include the following standard data fields (Report Name, Company Name, Report Title, Date, Time, and Page). After you complete the Director process, you can use Report Design to add or delete data fields from the page header.

   If you turn the option off, the Director will create an empty page header. You can manually add data fields to the page header from the Section menu on the Report Design form.

4. Click Next.

   The Business View Selection Option form appears.

Field	Explanation
Report Header	A header that appears once at the beginning of your report that contains user defined information such as a legal notification or a brief description of the information that appears in the report.
Page Header	A header that appears at the top of each page in your report that contains user defined information such as company name and the title of the report.
Columnar	This section type arranges information in columns. Column headings appear at the top of each page with data appearing beneath.
Page Footer	A footer that appears at the end of each page in your report. The page footer contains user defined information about the report.
Report Footer	A footer that appears at the end of the report. The report footer contains user defined information about the report.

Choosing a Business View for the Columnar Section

Business views are the link between your report and the data in your OneWorld tables. They are used in OneWorld to access data from database tables. A business view is a means for selecting specific columns from one or more tables whose data will be used in a report. It does not select specific rows and does not contain any physical data.

After you click Next as described in the previous task, the Business View Selection Options form appears.

You can choose a business view from a list of favorites, or you can search for a specific business view. Perform one of the following tasks:

- Choosing from a list of favorite business views
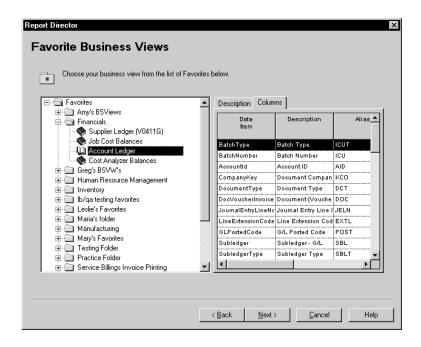- Using the Select Business View form to find a business view

▶ **To choose from a list of favorite business views**

After you choose the report sections for the report, the Business View Selection Option form appears.

1. On the Business View Selection Options form, click *I'd like help finding an appropriate business view.* Then click Next.

2. On Favorite Business Views, open the folder that contains the business view that you want to use for your report section. Click the + icons to expand the tree until you see the business view you want.

3. Click the Description tab to see a brief description about the business view you have chosen, if one is available.

4. Click the Column tab to see the data fields that are included in the business view you have chosen.

5. When you have chosen the business view you want to use, click Next.

   The Section Layout form appears.

See Also

- *Setting up Business Views as Favorites* for information about adding your own business views to this list

▶ **To use the Select Business View form to find a business view**

After you choose the report sections for the report, the Business View Selection Option form appears.

1. On the Business View Selection Option form, click *I'll find a business view myself.* Then click Next.

2. On Select Business View, click Find or press Enter.

   The form displays a list of all available business views. You can narrow your search by entering search criteria in the QBE row.

3. Choose a business view, and then click Next.

   The Section Layout form appears.

See Also

- *Business View Design* in the *OneWorld Development Tools* guide

Adding Business View Columns to the Columnar Section

From the business view columns list, you can choose the columns to include in your report.

▶ **To add business view columns to the columnar section**

After you choose a business view as described in the previous task, the Section Layout form appears.

1. From the Available Business View Columns list, choose the columns you want in the report, and then click the right arrow to move them to the Selected Columns list.

   Alternately, you can drag each column individually into the Selected Columns list, or you can click the right double-arrow to move all of the columns from the Available Business View Columns list to the Selected Columns list.

   The first item in the list will appear as the left-most column in the report.

2. To remove a column from your report, choose a column in the Selected Columns list, and then click the left arrow to move it to the Available Business View Columns list.

   Alternately, you can click the left double-arrow to move all of the columns from the Selected Columns list to the Available Business View Columns list.

3. To change the order that the columns appear on your report, choose a column in the Selected Columns list, and then click the up or down arrow to move the selected column up or down one line in the list.

   Alternately, you can drag a column to a new location in the list, or you can click the up or down double-arrows to move the selected column to the top or bottom of the list.

4. When you finish the layout of your section, click Next.

   The Section Data Sequencing form appears.

Defining Section Data Sequencing for the Columnar Section

OneWorld data fields are stored in tables. Through section data sequencing, you determine the order in which the records of the business view are read from the database and displayed on your report. For example, if you are including columns from the Address Book Update business view (V0101E), you could use data sequencing to alphabetize the rows by the name of the person or company.

Because OneWorld can sequence the records in the report by any column in the record (regardless of whether you choose to display the column in the report), the data sequencing columns you select in this task do not need to match the business view columns selected on Section Layout.

Note: To be able to define sort properties in the next task, you must select the column on which you plan to sort in this task.

▶   **To define section data sequencing for the columnar section**

After you select a Business View as described in the previous task, the Section Data Sequencing form appears.

1. To select columns for section data sequencing, choose the columns from the Available Columns list, and then click the right arrow to move them to the Selected Columns list.

    Alternately, you can drag each column individually into the Selected Columns list, or you can click the right double-arrow to move all of the columns from the Available Columns list to the Selected Columns list.

2. To remove a column from the Selected Columns list, choose a column in the Selected Columns list, and then click the left arrow to move it to the Available Columns list.

    Alternately, you can click the left double-arrow to move all of the columns from the Selected Columns list to the Available Columns list.

3. To change the order that the columns that you selected for data sequencing, choose a column in the Selected Columns list, and then click the up or down arrow to move the selected column up or down one line in the list.

    Alternately, you can drag a column to a new location in the list, or you can click the up or down double-arrows to move the selected column to the top or bottom of the list.

4. When you finish the section data sequencing for your report, click Next.

    The Define Sort Properties form appears.

Defining Sort Properties for the Columnar Section

After you choose data fields to use for section data sequencing, you can define sort properties for those data fields. These properties determine whether the rows are sorted in ascending or descending order, whether a level break should occur, and whether the level break should produce a page break. For example, you can sequence your information for Search Type in ascending order, designate Search Type as a level break, and have a new page begin for each Search Type.

Caution: If you define a section data sequencing column as a level break or page break, returning to the Section Data Sequencing form and then moving that column from the Selected Columns list back to the Available Columns list could cause unpredictable results.

See Also

- *Working with Level-Break Header and Footer Sections* for detailed information about working with level breaks

▶ **To define sort properties for the columnar section**

After you define data sequencing as described in the previous task, the Define Sort Properties form appears.

1. On Define Sort Properties, complete the following field:

- Sort Order

2. If you want to specify level and page breaks, complete the following fields:

    - Level Break

    - Page Break

3. When finished, click next.

    The Section Data Selection form appears.

Field	Explanation
Sort Order	Sets the sort order to ascending or descending.
Level Break	This enables an object to function as a level break indicator. Sections can be joined at level breaks, totals can occur at level breaks, and level break header sections can be triggered at level breaks.
Page Break	This enables an object to function as a page break indicator. Note: An object must be selected as a level break before you can select the object as a page break.

Choosing Records to Include in the Columnar Section

After determining your column layout, choosing data fields by which to sort, and applying sort properties to those data fields, you can define which records from the database table to include in your report.

Section data selection lets you define the criteria by which records are included in your report. This is critical for system performance and report conciseness. For example, if you included in a report every address book record in the database, your report might display 10,000 records. However, if you define your criteria to retrieve only records with Search Type equal to E, you might reduce your record count to 400. Not only would this make the information more readable, but it would also improve system performance.

The Section Data Selection form filters the data for one detail section only. If your report includes one detail section, your report will display only the records that match the criteria entered on this form. If you add additional detail sections in Report Design, you must define data selection for each new section.

To limit the records retrieved from the OneWorld tables, specify data selection criteria based on comparisons between the following:

- Data fields in the OneWorld tables

- Values that define the data in the data fields, such as ledger types, search types, or account numbers

▶   **To select records to include in the columnar section**

After you define sort properties as described in the previous task, the Section Data Selection form appears.

1. On Section Data Selection, click in the Operator column and choose an operator.

   Where is the default value in the Operator column for the first set of criteria. For subsequent statements, *And* and *Or* become the available values for the Operator column and are selected by double-clicking the appropriate one.

2. Click in the Left Operand column to display the list of available objects, and then perform one of the following:

   - Scroll through the list until you find the desired object, choose the object, and then double-click the object to populate the Left operand column.

- Type the first letters of the object name in the Left Operand field to display the object in the list, and then double-click the highlighted object.

When you double-click the object for the Left operand column, the list in the Comparison column automatically appears.

3. Double-click one of the following comparison operators to select it:
   - is equal to
   - is greater than
   - is greater than or equal to
   - is less than
   - is less than or equal to
   - is not equal to

When you double-click the object for the Comparison column, the list in the Right Operand column automatically appears. The objects, special values, and variables available depend on the comparison operator you choose.

4. Double-click a value from the list in the Right Operand column to select it.

Your choices in this column depend on the choice you made in the Comparison column. Some of the following options could be available:

Blank	Enters a blank (space) value
Literal	Allows you to enter specific values, as described below
Null	Indicates that no value is associated with the field
Zero	Enters a value of zero
BC	Indicates a business view column available for this report
FI	Indicates a value passed through form interconnection to this report
PC	Indicates the previous value for the constant
PO	Indicates a processing option value for this report

PV	Indicates the previous value for the variable
RC	Indicates a constant from this report
RV	Indicates a variable from this report
SV	Indicates a system variable
SL	Indicates a system literal
VA	Indicates an event rule variable

If you chose Literal for the Right Operand column, the form that appears enables you to enter any of the value types described below. When finished defining the values you want, click OK.

- Single value

  Enter a single value, and then click OK. For example, you might enter the address book number for a particular company.

- Range of values

  Enter a range of values, and then click OK. For example, a range of values might include companies from 00001 to 00060. Only *is equal to* and *is not equal to* are valid logical operators when using range of values.

- List of values

  To add values to or remove values from the list, perform the following:

  - Type each value in the field, and then press Enter or click the Add button at the top of the form.

  - Repeat this process until your list of values is complete. For example, a list of values might include several user defined codes for search types such as C for Customers, E for Employees, and V for Vendors. Only *is equal to* and *is not equal to* are valid logical operators when using a list of values.

  - Delete a value by choosing the value, and then clicking the Delete button at the top of the form.

5. Repeat steps 1 through 4 to define more selection criteria rows.

6. To delete a line of criteria on Section Data Selection, choose the row header to highlight the row, and then click the Delete button at the top of the form.

7. To change the order of the criteria, choose the row header to highlight the row, and then click the up or down button.

8. When finished defining selection criteria, click Next.

The Director's Finish form appears.

Creating a Batch Version of the Columnar Report

You can generate a batch version of the columnar report simultaneously with the template. The batch version will be identical to the template as it first appears in Report Design after the Director process.

If you choose not to create a batch version at this time, you can create batch versions later with the Object Management Workbench or with the Batch Versions tool.

See Also

- *Object Management Workbench* in the *OneWorld Development Tools* guide
- *Batch Versions for Reports*

▶   **To create a batch version of the columnar report**

After you define selection criteria as described in the previous task, the Director's Finish form appears.

1. To automatically generate a batch version of the template, click *Yes, create a version of this report.*

    The Director suggests a name for the batch version, XJDE0001 being the default value. You can change the name if you wish.

2. On Finish, to review your choices, click Back to move backwards through the Director forms, or click the form on the Navigation Assistant that you want to review. When you are satisfied, click Finish.

    Caution: When you click Finish, you can no longer access the Director for this report. Prior to clicking Finish, you have one more opportunity to review your choices on all forms of the Director.

    The Report Design - Report View form appears.

Reviewing the Results of the Director

When you click Finish, the Director process is complete. Based on the choices you made during the process, Report Design displays the sections of your report and the data fields you included in them. Each section includes the following:

*   Its own display window
*   Corner brackets enclosing each field within the section
*   An icon that displays the section type
*   A title description

    The title of the main detail section of the report uses a bold font to distinguish it from the titles of the other report sections.

Saving a Report

Note that when you finish with the Director, your report is not yet saved. Save your report before proceeding in Report Design. As you work on your report design, remember to save your changes regularly.

After you finish your report design and test the output of your report, you need to check in the report to make it available to others. If you do not check the report in, it is available only on your workstation. See *Object Management Workbench* in the *OneWorld Development Tools* guide for more information.

See Also

- *Basic Report Enhancements* and *Advanced Report Enhancements* for information about using Report Design to modify or enhance your report.

▶ To save a report

On Report Design, perform one of the following:

- From the Report menu, choose Save
- Click the Save button on the toolbar

Example: Creating a Columnar Report with the Director

The sample columnar report below, used for an annual salary review, was created with the Director. It is based on the business view V060116A – Employee Master, and it uses the following columns from that business view:
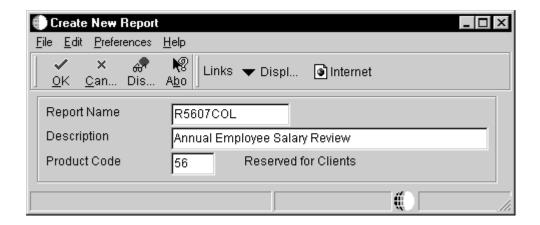
- Address Number
- Name – Alpha
- Business Unit – Home
- Pay Class (H/S/P)
- Date – Original Employment
- Rate – Salary, Annual

```
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                                     Employee Listing
                                                                              Page -        1

  Address              Alpha                Home          P      Orig          Annual
  Number               Name           Business Unit       C      Start         Salary
      6002  Abbott, Dominique               9             S     4/10/99         38,000.00
      6001  Allen, Ray                      9             S     8/15/90         75,000.00
      8014  Anderson, Jeanette              9             H     2/1/98          53,040.00
      6832  Ato, Connie                     9             S     2/15/97         39,000.00
      7703  Bellas, Debbie               7071             S     3/15/97         53,000.00
      8446  Bennett, Jody                 M30             H     12/13/97        31,200.00
      8447  Brown, Harvey J.              M30             H     6/2/97          41,600.00
      5056  Carmichael, Bradley P.       5100             S     8/5/03          45,000.00
      4802  Carol Fraser                 6100             H     6/1/04          37,440.00
      7564  Chamberlain, Carol M.           9             S     5/7/04          32,000.00
      9200  Dobson, Jane                    9             S     7/27/04         55,750.00
      5127  Ebby, Chester                   9             S     3/15/05         25,000.00
      8012  Edwards, Angela                 9             H     2/1/98          52,520.00
      2479  Ellis, Jody A.                  9             H     6/29/04         29,640.00
      2428  Escalante, George               9             H     10/15/04        28,808.00
      7550  Fuentes, Jason               5100             H     3/20/99         55,120.00
      9400  Hawkins, Jack                  30             S     1/15/03         34,750.00
      7701  Holiday, Anthony             7071             H     6/1/03          23,400.00
      2111  Ingram, Paul                    9             S     3/15/05         22,250.00
      2129  Jackson, John                5000             S     3/15/98         50,000.00
      7704  Jacques Rivard                777             H     6/12/03         44,362.50
      4803  Jeremy Beck                  6100             H     3/22/00         45,000.80
```

A columnar report format was selected for this report because, being no more than a straightforward listing, the information is best displayed in rows and columns of data. Furthermore, because no column calculations were required, a tabular report format was not needed.
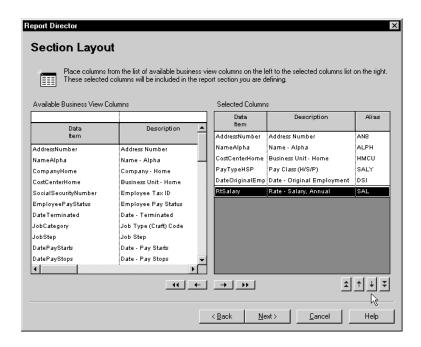
▶   **To create the example columnar report**

1.   Launch the Report Design tool.

2.   On Report Design, choose New from the Report menu.

3.   On Create New Report, fill out the form as illustrated below, and then click OK.

Note that the text you enter in the Report Name field appears on the left side of the page header and that the text you enter in the Description field appears in the center of the page header under the company name.
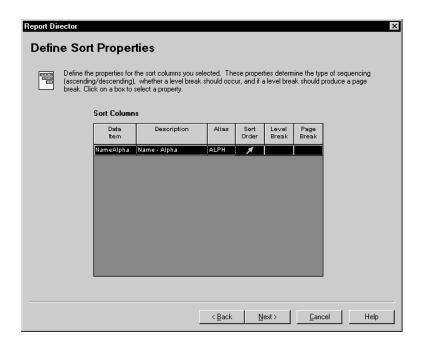
4. On the Director's Welcome form, choose Page Header and Columnar, and then click Next.

5. On the Page Header Details form, click Next.

6. On the Business View Selection Option form, choose I'll Find a Business View Myself, and then click Next.

7. On the Director's Select Business View form, search for and choose the V060116A – Employee Master business view, and then click Next.

8. On the Section Layout form, use the horizontal arrow buttons to select the following columns and move them to the Select Columns column:

   - Address Number
   - Name – Alpha
   - Business Unit – Home
   - Pay Class (H/S/P)
   - Date – Original Employment
   - Rate – Salary, Annual

9. Ensure that the columns are ordered as listed above. Use the vertical buttons to change the order of the selected business columns, if necessary. Note the correlation between the order of the columns on this form and the order of the columns on the report illustration.

10. Click Next when the selected columns are arranged as shown.

11. On the Section Data Sequencing form, use the horizontal arrow buttons to select and move the Name – Alpha column to the Selected Columns column, and then click Next.

12. On the Define Sort Properties form, ensure the sort arrow points up (to alphabetize the report in ascending order by name), and then click next.
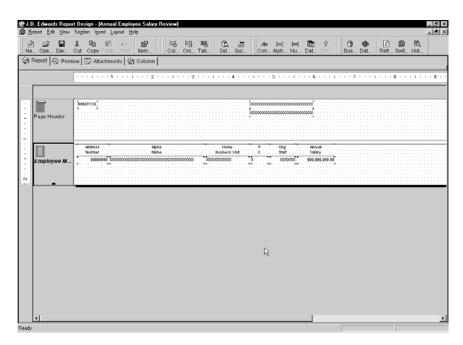
13. On the Section Data Selection form, click Next.

No data selection was defined for this example.

14. On the Director's Finish form, click Finish.

    Report Design appears, displaying the report you just created.

15. Click Save to save the report.

16. Click the Preview tab to see the report. It should look similar to the sample report illustration at the beginning of this section.

Creating a Group Report

After you create a new report object, use the Director to design a group report. The Director leads you through a linear process for creating a group report by asking you questions about its structure and content. When you are finished creating the report, you can enhance it by using additional features of Report Design. Complete the steps through which the Director leads you in the following order:

Creating a group report includes the following tasks:

- Choosing the report sections to include in the group report
- Choosing a business view for the group section
- Adding business view columns to the group section
- Defining section data sequencing for the group section
- Defining sort properties for the group section
- Choosing records to include in the group section
- Creating a batch version of the group report
- Reviewing the results of the Director
- Saving a report
- Example: Creating a group report with the Director

Before You Begin

❑ Create a report object. See *Creating a Report Object* for information about starting the report design process and the Director. The last step in creating a report object opens Report Design Director automatically.

See Also

- *Characteristics of a Group Section* for an overview of group sections and criteria for using them

Choosing the Report Sections to Include in the Group Report

Based on your report planning, you will select the headers, group section, and footers necessary for your report. You can select only one detail section (the

group section) initially. You can select any combination of header and footer sections based on your reporting needs.

▶ **To choose report sections to include the group report**

After you create a report object, the Director's Welcome form appears.

The Director includes a Navigation Assistant that lets you move from step to step of the report creation process. The Navigation Assistant shows you where you are in the process. You can hide the Navigation Assistant by right-clicking it and choosing Hide.

1. On the Director's Welcome form, click the following headers and footers you want to include in your report:

   - Report Header

   - Page Header

   - Page Footer

   - Report Footer

2. Choose to create a group report, and then click Next.

   If you chose a page header, the Page Header Details form appears. Continue with step 3.

   If you did not choose a page header, the Business View Selection Option form appears. Go to the next task, *Choosing a Business View for the Group Section.*

3. On Page Header Details, turn on the option to automatically include the following standard data fields (Report Name, Company Name, Report Title, Date, Time, and Page). After you complete the Director process, you can use Report Design to add or delete data fields from the page header.

   If you turn the option off, the Director will create an empty page header. You can manually add data fields to the page header from the Section menu on the Report Design form.

4. Click Next.

   The Business View Selection Option form appears.

Field	Explanation
Report Header	A header that appears once at the beginning of your report that contains user defined information such as a legal notification or a brief description of the information that appears in the report.
Page Header	A header that appears at the top of each page in your report that contains user defined information such as company name and the title of the report.
Group	This section type provides the flexibility to determine a custom format. You can organize the fields into any setup you choose.
Page Footer	A footer that appears at the end of each page in your report. The page footer contains user defined information about the report.
Report Footer	A footer that appears at the end of the report. The report footer contains user defined information about the report.

Choosing a Business View for the Group Section

Business views are the link between your report and the data in your OneWorld tables. They are used in OneWorld to access data from database tables. A business view is a means for selecting specific columns from one or more tables whose data will be used in a report. It does not select specific rows and does not contain any physical data.

After you click Next from Page Header Details as described in the previous task, the Business View Selection Options form appears.

You can choose a business view from a list of favorites, or you can search for a specific business view. Perform one of the following tasks:

- Choosing from a list of favorite business views

- Using the Select Business View form to find a business view

▶ To choose from a list of favorite business views

After you choose the report sections for the report, the Business View Selection Option form appears.

1. On the Business View Selection Options form, click *I'd like help finding an appropriate business view.* Then click Next.

2. On Favorite Business Views, open the folder that contains the business view that you want to use for your report section. Click the + icons to expand the tree until you see the business view you want.

3. Click the Description tab to see a brief description about the business view you have chosen, if one is available.

4. Click the Column tab to see the data fields that are included in the business view you have chosen.

5. When you have chosen the business view you want to use, click Next.

    The Section Layout form appears.

See Also

*   *Setting up Business Views as Favorites* for information about adding your own business views to this list.

▶   **To use the Select Business View form to find a business view**

After you choose the report sections for the report, the Business View Selection Option form appears.

1. On the Business View Selection Options form, click *I'll find a business view myself.* Then click Next.

2. On Select Business View, click Find or press Enter.

    The form displays a list of all available business views. You can narrow your search by entering search criteria in the QBE row.

3. Choose a business view, and then click Next.

    The Section Layout form appears.

See Also

- *Business View Design* in the *OneWorld Development Tools* guide

Adding Business View Columns to the Group Section

From the business view columns list, you can choose the columns to include in your report.
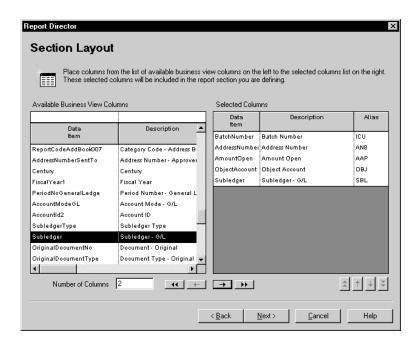
You can also specify how many of the data items you selected should be listed vertically before starting on the next vertical grouping. The default value is two. For example, if you selected six business view columns, they would appear initially as three across and two deep. If you changed the value to three, the columns would be arranged two across and three deep.

BV Column 1	BV Column 3	BV Column 5
BV Column 2	BV Column 4	BV Column 6

Number of Columns = 3

BV Column 1	BV Column 4
BV Column 2	BV Column 5
BV Column 3	BV Column 6

Number of Columns = 2

Note: The term "business view column" might be confusing in relation to a group section because a group section is not organized in a columnar fashion. Remember, a business view column is simply a field; despite its name, it is not truly a column in and of itself. The business view column data can appear in columnar format, as it does in columnar and tabular sections, or in a free-floating field, as it does in group sections.

▶ **To add business view columns to the group section**

After you choose a business view as described in the previous task, the Section Layout form appears.

1. From the Available Business View Columns list, choose the columns you want in the report, and then click the right arrow to move them to the Selected Columns list.

   Alternately, you can drag each column individually into the Selected Columns list, or you can click the right double-arrow to move all of the columns from the Available Business View Columns list to the Selected Columns list.

   The first item in the list will appear as the left-most column in the report.

2. To remove a column from your report, choose a column in the Selected Columns list, and then click the left arrow to move it to the Available Business View Columns list.

   Alternately, you can click the left double-arrow to move all of the columns from the Selected Columns list to the Available Business View Columns list.

3. To change the order that the columns appear on your report, choose a column in the Selected Columns list, and then click the up or down arrow to move the selected column up or down one line in the list.

   Alternately, you can drag a column to a new location in the list, or you can click the up or down double-arrows to move the selected column to the top or bottom of the list.

4. To change the initial number vertical groupings in the report, enter the desired number in Number of Columns.

5. When you finish the layout of your section, click Next.

The Section Data Sequencing form appears.

Defining Section Data Sequencing for the Group Section

OneWorld data fields are stored in tables. Through section data sequencing, you determine the order in which the records of the business view are read from the database and displayed on your report. For example, if you are including columns from the Address Book Update business view (V0101E), you could use data sequencing to alphabetize the rows by the name of the person or company.

Because OneWorld can sequence the records in the report by any column in the record (regardless of whether you choose to display the column in the report), the data sequencing columns you select in this task do not need to match the business view columns selected on Section Layout.

Note: To be able to define sort properties in the next task, you must select the column on which you plan to sort in this task.

▶ **To define section data sequencing for the group section**

After you select a business view as described in the previous task, the Section Data Sequencing form appears.

1. To select columns for section data sequencing, choose the columns from the Available Columns list, and then click the right arrow to move them to the Selected Columns list.

Alternately, you can drag each column individually into the Selected Columns list, or you can click the right double-arrow to move all of the columns from the Available Columns list to the Selected Columns list.

2. To remove a column from the Selected Columns list, choose a column in the Selected Columns list, and then click the left arrow to move it to the Available Columns list.

   Alternately, you can click the left double-arrow to move all of the columns from the Selected Columns list to the Available Columns list.

3. To change the order that the columns that you selected for data sequencing, choose a column in the Selected Columns list, and then click the up or down arrow to move the selected column up or down one line in the list.

   Alternately, you can drag a column to a new location in the list, or you can click the up or down double-arrows to move the selected column to the top or bottom of the list.

4. When you finish the section data sequencing for your report, click Next.

   The Define Sort Properties form appears.

Defining Sort Properties for the Group Section

After you choose data fields to use for section data sequencing, you can define sort properties for those data fields. These properties determine whether the rows are sorted in ascending or descending order, whether a level break should occur, and whether the level break should produce a page break. For example, you can sequence your information for Search Type in ascending order, designate Search Type as a level break, and have a new page begin for each Search Type.

Caution: If you define a section data sequencing column as a level break or page break, returning to the Section Data Sequencing form and then moving that column from the Selected Columns list back to the Available Columns list could cause unpredictable results.

See Also

- *Working with Level-Break Header and Footer Sections* for detailed information about working with level breaks

▶ To define sort properties for the group section

After you define data sequencing as described in the previous task, the Define Sort Properties form appears.

1. On Define Sort Properties, complete the following field:

   - Sort Order

2. If you want to specify level and page breaks, complete the following fields:

   - Level Break

   - Page Break

3. When finished, click next.

   The Section Data Selection form appears.

Field	Explanation
Sort Order	Sets the sort order to ascending or descending.
Level Break	This enables an object to function as a level break indicator. Sections can be joined at level breaks, totals can occur at level breaks, and level break header sections can be triggered at level breaks.

Field	Explanation
Page Break	This enables an object to function as a page break indicator.

Note: An object must be selected as a level break before you can select the object as a page break. |

Choosing Records to Include in the Group Section

After determining your section layout, choosing data fields by which to sort, and applying sort properties to those data fields, you must define which records from the database table to include in your report.

Section data selection lets you define the criteria by which records are included in your report. This is critical for system performance and report conciseness. For example, if you included in a report every address book record in the database, your report might display 10,000 records. However, if you define your criteria to retrieve only records with Search Type equal to E, you might reduce your record count to 400. Not only would this make the information more readable, but it would also improve system performance.

The Section Data Selection form filters the data for one detail section only. If your report includes one detail section, your report will display only the records that match the criteria entered on this form. If you add additional detail sections in Report Design, you must define data selection for each new section.

To limit the records retrieved from the OneWorld tables, specify data selection criteria based on comparisons between the following:

- Data fields in the OneWorld tables
- Values that define the data in the data fields, such as ledger types, search types, or account numbers

► **To select records to include in the group section**

After you define sort properties as described in the previous task, the Section Data Selection form appears.

1. On Section Data Selection, click in the Operator column and choose an operator.

    Where is the default value in the Operator column for the first set of criteria. For subsequent statements, *And* and *Or* become the available values for the Operator column and are selected by double-clicking the appropriate one.

2. Click in the Left Operand column to display the list of available objects, and then perform one of the following:

    *   Scroll through the list until you find the desired object, choose the object, and then double-click the object to populate the Left operand column.

    *   Type the first letters of the object name in the Left Operand field to display the object in the list, and then double-click the highlighted object.

    When you double-click the object for the Left operand column, the list in the Comparison column automatically appears.

3. Double-click one of the following comparison operators to select it:

    *   is equal to

    *   is greater than

    *   is greater than or equal to

    *   is less than

    *   is less than or equal to

    *   is not equal to

When you double-click the object for the Comparison column, the list in the Right Operand column automatically appears. The objects, special values, and variables available depend on the comparison operator you choose.

4. Double-click a value from the list in the Right Operand column to select it.

Your choices in this column depend on the choice you made in the Comparison column. Some of the following options could be available:

Blank	Enters a blank (space) value
Literal	Allows you to enter specific values, as described below
Null	Indicates that no value is associated with the field
Zero	Enters a value of zero
BC	Indicates a business view column available for this report
FI	Indicates a value passed through form interconnection to this report
PC	Indicates the previous value for the constant
PO	Indicates a processing option value for this report
PV	Indicates the previous value for the variable
RC	Indicates a constant from this report
RV	Indicates a variable from this report
SV	Indicates a system variable
SL	Indicates a system literal
VA	Indicates an event rule variable

If you chose Literal for the Right Operand column, the form that appears enables you to enter any of the value types described below. When finished defining the values you want, click OK.

- Single value

  Enter a single value, and then click OK. For example, you might enter the address book number for a particular company.

- Range of values

  Enter a range of values, and then click OK. For example, a range of values might include companies from 00001 to 00060. Only *is equal to* and *is not equal to* are valid logical operators when using range of values.

- List of values

  To add values to or remove values from the list, perform the following:

  - Type each value in the field, and then press Enter or click the Add button at the top of the form.

  - Repeat this process until your list of values is complete. For example, a list of values might include several user defined codes for search types such as C for Customers, E for Employees, and V for Vendors. Only *is equal to* and *is not equal to* are valid logical operators when using a list of values.

  - Delete a value by choosing the value, and then clicking the Delete button at the top of the form.

5.   Repeat steps 1 through 4 to define more selection criteria rows.

6.   To delete a line of criteria on Section Data Selection, choose the row header to highlight the row, and then click the Delete button at the top of the form.

7.   To change the order of the criteria, choose the row header to highlight the row, and then click the up or down button.

8.   When finished defining selection criteria, click Next.

     The Director's Finish form appears.

9.   On Section Data Selection, *Where* is the default value in the Operator column for the first set of criteria.

Creating a Batch Version of the Group Report

You can generate a batch version of the group report simultaneously with the template. The batch version will be identical to the template as it first appears in Report Design after the Director process.

If you choose not to create a batch version at this time, you can create batch versions later with the Object Management Workbench or with the Batch Versions tool.

See Also

- *Object Management Workbench* in the *OneWorld Development Tools* guide
- *Batch Versions for Reports*

▶   **To create a batch version of the group report**

After you define selection criteria as described in the previous task, the Director's Finish form appears.

1.   To automatically generate a batch version of the template, click *Yes, create a version of this report.*

     The Director suggests a name for the batch version, XJDE0001 being the default value. You can change the name if you wish.

2.   On Finish, to review your choices, click Back to move backwards through the Director forms, or click the form on the Navigation Assistant that you want to review. When you are satisfied, click Finish.

> **Caution:** When you click Finish, you can no longer access the Director for this report. Prior to clicking Finish, you have one more opportunity to review your choices on all forms of the Director.

The Report Design - Report View form appears.

Reviewing the Results of the Director

When you click Finish, the Director process is complete. Based on the choices you made during the process, Report Design displays the sections of your report and the data fields you included in them. Each section includes the following:

- Its own display window
- Corner brackets enclosing each field within the section
- An icon that displays the section type
- A title description

  The title of the main detail section of the report uses a bold font to distinguish it from the titles of the other report sections.

Saving a Report

Note that when you finish with the Director, your report is not yet saved. Save your report before proceeding in Report Design. As you work on your report design, remember to save your changes regularly.

After you finish your report design and test the output of your report, you need to check in the report to make it available to others. If you do not check the report in, it is available only on your workstation. See *Object Management Workbench* in the *OneWorld Development Tools* guide for more information.

See Also

- *Basic Report Enhancements* and *Advanced Report Enhancements* for information about using Report Design to modify or enhance your report.

▶   **To save a report**

On Report Design, perform one of the following:

- From the Report menu, choose Save
- Click the Save button on the toolbar

Example: Creating a Group Report with the Director

The sample group report below was created with the Director. It is based on the business view V41021E – Item Location, Item Master Join, and it uses the following columns from that business view:

- Location
- Item Number – Short
- Primary Location
- Category G/L
- Quantity on Hand – Primary units
- Quantity on Backorder
- Business Unit

Additionally, the report displays items from Business Unit 27 only.

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Location                            G/L Category    IN30              Business Unit    27

Item Number (Short)      60011      Quantity on Hand

Primary Location (P/S)   P          Quantity on Backorder
Location                            G/L Category    IN30              Business Unit    27

Item Number (Short)      60020      Quantity on Hand

Primary Location (P/S)   P          Quantity on Backorder
Location                            G/L Category    IN30              Business Unit    27

Item Number (Short)      60038      Quantity on Hand

Primary Location (P/S)   P          Quantity on Backorder
Location                            G/L Category    IN30              Business Unit    27

Item Number (Short)      60062      Quantity on Hand

Primary Location (P/S)   P          Quantity on Backorder
Location                            G/L Category    IN30              Business Unit    27

Item Number (Short)      60071      Quantity on Hand

Primary Location (P/S)   P          Quantity on Backorder
Location                            G/L Category    IN30              Business Unit    27

Item Number (Short)      60177      Quantity on Hand
```

▶ **To create the example group report**

1. Launch the Report Design tool.

2. On Report Design, choose New from the Report menu.

3. On Create New Report, fill out the form as illustrated below, and then click OK.

Note that the text you enter in the Report Name field appears on the left side of the page header and that the text you enter in the Description field appears in the center of the page header under the company name.
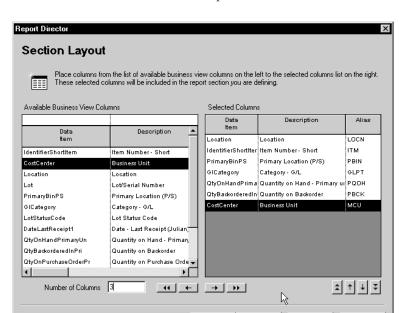
4. On the Director's Welcome form, choose Page Header and Group on the Welcome form, and then click Next.

5. On the Page Header Details form, click Next.

6. On the Business View Selection Option form, choose I'll Find a Business View Myself, and then click Next.

7. On the Select Business View form, search for and choose the V41021E – Item Location, Item Master Join business view, and then click Next.

   The Director's Section Layout form appears.

8. On the Section Layout form, use the horizontal arrow buttons to select the following columns and move them to the Selected Columns column:

   - Location
   - Item Number – Short
   - Primary Location
   - Category G/L
   - Quantity on Hand – Primary units
   - Quantity on Backorder
   - Business Unit

9. Ensure that the columns are ordered as listed above. Use the vertical buttons to change the order of the selected business columns, if necessary.
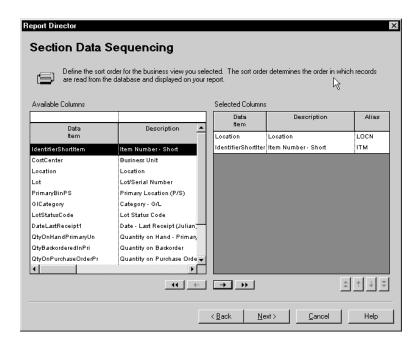
Note the correlation between the order of the columns on this form and the order of the columns on the report illustration.

10. When the selected columns are arranged as shown, enter a 3 in the Number of Columns field, and then click Next.
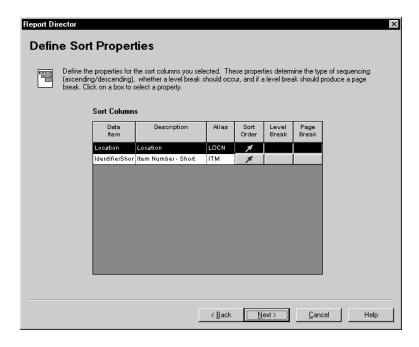
11. On the Section Data Sequencing form, use the horizontal arrow buttons to select and move the Location and Item Number – Short columns to the Selected Columns column.

12. Ensure the columns appear in the Selected Columns column as indicated in the figure below. In this way, items on the report will be sorted first by location and then second by item number.

13. Click Next when the selected columns are arranged as shown.

14. On the Define Sort Properties form, ensure the sort arrows point up (to alphabetize the report in ascending order in both categories), and then click next.
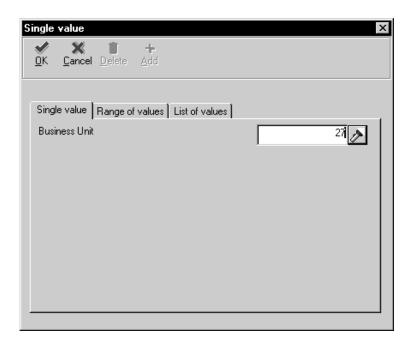
The Director's Section Data Selection form appears.

15. On the Section Data Selection form, fill out the grid fields as follows:

- Left Operand – BC Business Unit (F41021)
- Comparison – is equal to
- Right Operand – <Literal>

When you double-click <Literal>, the Single Value form appears.
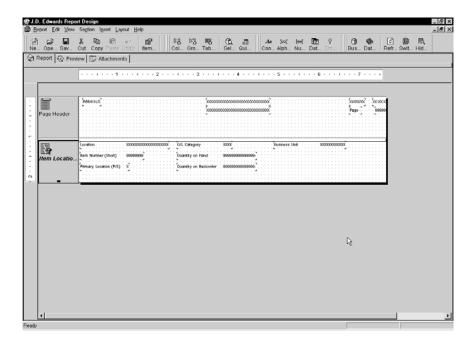
16. Click the Single Value tab, enter 27 in the Business Unit field, and click OK.

    Steps 15 and 16 limit the report to displaying records associated with Business Unit 27 only.

17. On the Section Data Selection form, click Next.

18. On the Director's Finish form, click Finish.

    Report Design appears, displaying the report you just created.

19. Click Save to save the report.

20. Click the Preview tab to see the report. It should look similar to the sample report illustration at the beginning of this section.

Creating a Tabular Report

After you create a new report object, use the Director to design a tabular report. The Director leads you through a linear process for creating a tabular report by asking you questions about its structure and content. When you are finished creating the report, you can enhance it by using additional features of Report Design. Complete the steps through which the Director leads you in the following order:

- Choosing the report sections to include in the tabular report
- Choosing a business view for the tabular section
- Adding business view columns to the tabular section
- Defining section data sequencing for the tabular section
- Defining sort properties for the tabular section
- Choosing records to include in the tabular section
- Creating a batch version of the tabular report
- Reviewing the results of the Director
- Saving a report
- Example: Creating a tabular report with the Director

Before You Begin

❑ Create a report object. See *Creating a Report Object* for information about starting the report design process and the Director. The last step in creating a report object opens Report Design Director automatically.

See Also

- *Characteristics of a Tabular Section* for an overview of tabular sections and criteria for using them

Choosing the Report Sections to Include in the Tabular Report
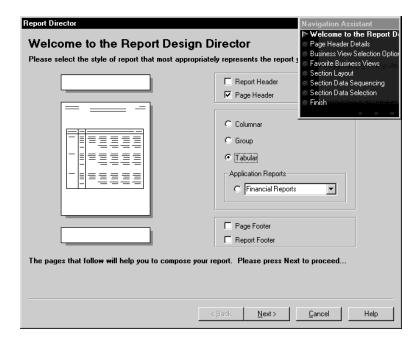
Based on your report planning, you select the headers, columnar section, and footers necessary for your report. You can select only one detail section (the columnar section) initially. You can select any combination of header and footer sections based on your reporting needs.

▶   **To select sections to include in a tabular report**

After you create a report object, the Director's Welcome form appears.

The Director includes a Navigation Assistant that lets you move from step to step of the report creation process. The Navigation Assistant shows you where you are in the process. You can hide the Navigation Assistant by right-clicking it and choosing Hide.

1. On the Director's Welcome form, click the following headers and footers you want to include in your report:

    - Report Header

    - Page Header

    - Page Footer

    - Report Footer

2. Choose to create a tabular report, and then click Next.

    If you chose a page header, the Page Header Details form appears. Continue with step 3.

    If you did not choose a page header, the Business View Selection Option form appears. Go to the next task, *Choosing a Business View for the Tabular Section.*

3. On Page Header Details, turn on the option to automatically include the following standard data fields (Report Name, Company Name, Report

Title, Date, Time, and Page). After you complete the Director process, you can use Report Design to add or delete data fields from the page header.

If you turn the option off, the Director will create an empty page header. You can manually add data fields to the page header from the Section menu on the Report Design form.

4. Click Next.

The Business View Selection Option form appears.

Field	Explanation
Report Header	A header that appears once at the beginning of your report that contains user defined information such as a legal notification or a brief description of the information that appears in the report.
Page Header	A header that appears at the top of each page in your report that contains user defined information such as company name and the title of the report.
Tabular	This section type provides information in the format of a spreadsheet. Report information appears organized in cells, rows, and columns.
Page Footer	A footer that appears at the end of each page in your report. The page footer contains user defined information about the report.
Report Footer	A footer that appears at the end of the report. The report footer contains user defined information about the report.

Choosing a Business View for the Tabular Section

Business views are the link between your report and the data in your OneWorld tables. They are used in OneWorld to access data from database tables. A business view is a means for selecting specific columns from one or more tables whose data will be used in a report. It does not select specific rows and does not contain any physical data.

After you click as described in the previous task, the Business View Selection Options form appears.

You can choose a business view from a list of favorites, or you can search for a specific business view. Perform one of the following tasks:

- Choosing from a list of favorite business views
- Using the Select Business View form to find a business view

▶   **To choose from a list of favorite business views**

After you choose the report sections for the report, the Business View Selection Option form appears.

1. On the Business View Selection Options form, click *I'd like help finding an appropriate business view.* Then click Next.

2. On Favorite Business Views, open the folder that contains the business view that you want to use for your report section. Click the + icons to expand the tree until you see the business view you want.

3. Click the Description tab to see a brief description about the business view you have chosen, if one is available.

4. Click the Column tab to see the data fields that are included in the business view you have chosen.

5. When you have chosen the business view you want to use, click Next.

The Section Layout form appears.

See Also

- *Setting up Business Views as Favorites* for information about adding your own business views to this list.

▶ **To use the Select Business View form to find a business view**

After you choose the report sections for the report, the Business View Selection Option form appears.

1. On the Business View Selection Option form, click *I'll find a business view myself.* Then click Next.

2. On Select Business View, click Find or press Enter.

The form displays a list of all available business views. You can narrow your search by entering search criteria in the QBE row.

3. Choose a business view, and then click Next.

The Section Layout form appears.

See Also

- *Business View Design* in the *OneWorld Development Tools* guide

Adding Business View Columns to the Tabular Section

From the business view columns list, you can choose the columns to include in your report.

▶ **To add business view columns to the tabular section**

After you choose a business view as described in the previous task, the Section Layout form appears.

1. From the Available Business View Columns list, choose the columns you want in the report, and then click the right arrow to move them to the Selected Columns list.

    Alternately, you can drag each column individually into the Selected Columns list, or you can click the right double-arrow to move all of the columns from the Available Business View Columns list to the Selected Columns list.

    The first item in the list will appear as the left-most column in the report.

2. To remove a column from your report, choose a column in the Selected
    Columns list, and then click the left arrow to move it to the Available
    Business View Columns list.

    Alternately, you can click the left double-arrow to move all of the columns
    from the Selected Columns list to the Available Business View Columns
    list.

3. To change the order that the columns appear on your report, choose a
    column in the Selected Columns list, and then click the up or down arrow
    to move the selected column up or down one line in the list.

    Alternately, you can drag a column to a new location in the list, or you
    can click the up or down double-arrows to move the selected column to
    the top or bottom of the list.

4. When you finish the layout of your section, click Next.

    The Section Data Sequencing form appears.

Defining Section Data Sequencing for the Tabular Section

OneWorld data fields are stored in tables. Through section data sequencing, you
determine the order in which the records of the business view are read from the
database and displayed on your report. For example, if you are including
columns from the Address Book Update business view (V0101E), you could use
data sequencing to alphabetize the rows by the name of the person or company.

Because OneWorld can sequence the records in the report by any column in the
record (regardless of whether you choose to display the column in the report),
the data sequencing columns you select in this task do not need to match the
business view columns selected on Section Layout.

Note: To be able to define sort properties in the next task, you must select the
column on which you plan to sort in this task.

▶   **To define section data sequencing for the tabular section**

After you select a business view as described in the previous task, the Section
Data Sequencing form appears.

1. To select columns for section data sequencing, choose the columns from the Available Columns list, and then click the right arrow to move them to the Selected Columns list.

    Alternately, you can drag each column individually into the Selected Columns list, or you can click the right double-arrow to move all of the columns from the Available Columns list to the Selected Columns list.

2. To remove a column from the Selected Columns list, choose a column in the Selected Columns list, and then click the left arrow to move it to the Available Columns list.

    Alternately, you can click the left double-arrow to move all of the columns from the Selected Columns list to the Available Columns list.

3. To change the order that the columns that you selected for data sequencing, choose a column in the Selected Columns list, and then click the up or down arrow to move the selected column up or down one line in the list.

    Alternately, you can drag a column to a new location in the list, or you can click the up or down double-arrows to move the selected column to the top or bottom of the list.

4. When you finish the section data sequencing for your report, click Next.

    The Define Sort Properties form appears.

Defining Sort Properties for the Tabular Section

After you choose data fields to use for section data sequencing, you can define sort properties for those data fields. These properties determine whether the rows are sorted in ascending or descending order, whether a level break should occur, and whether the level break should produce a page break. For example, you can sequence your information for Search Type in ascending order, designate Search Type as a level break, and have a new page begin for each Search Type.

Caution: If you define a section data sequencing column as a level break or page break, returning to the Section Data Sequencing form and then moving that column from the Selected Columns list back to the Available Columns list could cause unpredictable results.

See Also

- *Working with Level-Break Header and Footer Sections* for detailed information about working with level breaks

▶ **To define sort properties for the tabular section**

After you define data sequencing as described in the previous task, the Define Sort Properties form appears.

1. On Define Sort Properties, complete the following field:

- Sort Order

2. If you want to specify level and page breaks, complete the following fields:

    - Level Break

    - Page Break

3. When finished, click next.

    The Section Data Selection form appears.

Field	Explanation
Sort Order	Sets the sort order to ascending or descending.
Level Break	This enables an object to function as a level break indicator. Sections can be joined at level breaks, totals can occur at level breaks, and level break header sections can be triggered at level breaks.
Page Break	This enables an object to function as a page break indicator. Note: An object must be selected as a level break before you can select the object as a page break.

Choosing Records to Include in the Tabular Section

After determining your section layout, choosing data fields by which to sort, and applying sort properties to those data fields, you must define which records from the database table to include in your report.

Section data selection lets you define the criteria by which records are included in your report. This is critical for system performance and report conciseness. For example, if you included in a report every address book record in the database, your report might display 10,000 records. However, if you define your criteria to retrieve only records with Search Type equal to E, you might reduce your record count to 400. Not only would this make the information more readable, but it would also improve system performance.

The Section Data Selection form filters the data for one detail section only. If your report includes one detail section, your report will display only the records that match the criteria entered on this form. If you add additional detail sections in Report Design, you must define data selection for each new section.

To limit the records retrieved from the OneWorld tables, specify data selection criteria based on comparisons between the following:

To access English documentation updates, see
https://knowledge.jdedwards.com/JDEContent/documentationcbt/overview/about_documentation_updates.pdf

- Data fields in the OneWorld tables
- Values that define the data in the data fields, such as ledger types, search types, or account numbers

▶ **To select records to include in the tabular section**

After you define sort properties as described in the previous task, the Section Data Selection form appears.

1. On Section Data Selection, click in the Operator column and choose an operator.

   Where is the default value in the Operator column for the first set of criteria. For subsequent statements, *And* and *Or* become the available values for the Operator column and are selected by double-clicking the appropriate one.

2. Click in the Left Operand column to display the list of available objects, and then perform one of the following:

   - Scroll through the list until you find the desired object, choose the object, and then double-click the object to populate the Left operand column.

   - Type the first letters of the object name in the Left Operand field to display the object in the list, and then double-click the highlighted object.

When you double-click the object for the Left operand column, the list in the Comparison column automatically appears.

3. Double-click one of the following comparison operators to select it:

    *   is equal to
    *   is greater than
    *   is greater than or equal to
    *   is less than
    *   is less than or equal to
    *   is not equal to

When you double-click the object for the Comparison column, the list in the Right Operand column automatically appears. The objects, special values, and variables available depend on the comparison operator you choose.

4. Double-click a value from the list in the Right Operand column to select it.

Your choices in this column depend on the choice you made in the Comparison column. Some of the following options could be available:

Blank	Enters a blank (space) value
Literal	Allows you to enter specific values, as described below
Null	Indicates that no value is associated with the field
Zero	Enters a value of zero
BC	Indicates a business view column available for this report
FI	Indicates a value passed through form interconnection to this report
PC	Indicates the previous value for the constant
PO	Indicates a processing option value for this report
PV	Indicates the previous value for the variable

RC	Indicates a constant from this report
RV	Indicates a variable from this report
SV	Indicates a system variable
SL	Indicates a system literal
VA	Indicates an event rule variable

If you chose Literal for the Right Operand column, the form that appears enables you to enter any of the value types described below. When finished defining the values you want, click OK.

- Single value

  Enter a single value, and then click OK. For example, you might enter the address book number for a particular company.

- Range of values

  Enter a range of values, and then click OK. For example, a range of values might include companies from 00001 to 00060. Only *is equal to* and *is not equal to* are valid logical operators when using range of values.

- List of values

  To add values to or remove values from the list, perform the following:

  - Type each value in the field, and then press Enter or click the Add button at the top of the form.
  - Repeat this process until your list of values is complete. For example, a list of values might include several user defined codes for search types such as C for Customers, E for Employees, and V for Vendors. Only *is equal to* and *is not equal to* are valid logical operators when using a list of values.
  - Delete a value by choosing the value, and then clicking the Delete button at the top of the form.

5. Repeat steps 1 through 4 to define more selection criteria rows.

6. To delete a line of criteria on Section Data Selection, choose the row header to highlight the row, and then click the Delete button at the top of the form.

7. To change the order of the criteria, choose the row header to highlight the row, and then click the up or down button.

8. When finished defining selection criteria, click Next.

    The Director's Finish form appears.

Creating a Batch Version of the Tabular Report

You can generate a batch version of the tabular report simultaneously with the template. The batch version will be identical to the template as it first appears in Report Design after the Director process.

If you choose not to create a batch version at this time, you can create batch versions later with the Object Management Workbench.

See Also

*   *Object Management Workbench* in the *OneWorld Development Tools* guide
*   *Batch Versions for Reports*

▶ To create a batch version of the tabular report

After you define selection criteria as described in the previous task, the Finish form appears.

1. To automatically generate a batch version of the template, click *Yes, create a version of this report.*

   The Director suggests a name for the batch version, XJDE0001 being the default value. You can change the name if you wish.

2. On Finish, to review your choices, click Back to move backwards through the Director forms, or click the form on the Navigation Assistant that you want to review. When you are satisfied, click Finish.

   Caution: When you click Finish, you can no longer access the Director for this report. Prior to clicking Finish, you have one more opportunity to review your choices on all forms of the Director.

   The Report Design - Report View form appears.

Reviewing the Results of the Director

When you click Finish, the Director process is complete. Based on the choices you made during the process, Report Design displays the sections of your report and the data fields you included in them. Each section includes the following:

- Its own display window
- Corner brackets enclosing each field within the section
- An icon that displays the section type
- A title description

  The title of the main detail section of the report uses a bold font to distinguish it from the titles of the other report sections.

Saving a Report

Note that when you finish with the Director, your report is not yet saved. Save your report before proceeding in Report Design. As you work on your report design, remember to save your changes regularly.

After you finish your report design and test the output of your report, you need to check in the report to make it available to others. If you do not check the report in, it is available only on your workstation. See *Object Management Workbench* in the *OneWorld Development Tools* guide for more information.

See Also

- *Basic Report Enhancements* and *Advanced Report Enhancements* for information about using Report Design to modify or enhance your report.

▶ **To save a report**

On Report Design, perform one of the following:

- From the Report menu, choose Save
- Click the Save button on the toolbar

Example: Creating a Tabular Report with the Director

The sample tabular report below was created with the Director. It shows the total amount in outstanding purchase orders for each business unit in a company. It is based on the business view V4311A – Purchase Order Detail Browse and it uses the following columns from that business view:

- Business Unit
- Order Type
- Amount Open

The report is organized by Company and displays item names. Also, it is filtered to display only those purchase orders (as opposed to items ordered by other methods such as purchase requisitions) for stocked parts that have a balance and are not yet closed. While this stipulation might seem obvious, you must plan for and define this filter when you set up the report.
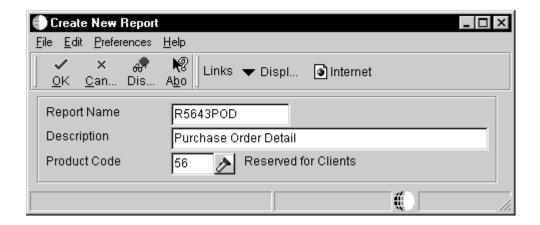
R5643POD		J.D. Edwards & Company		11/23/99	11:51:08
				Page -	1

Description	Business Unit	Or Ty	Amount Open
Financial/Distribution Compa			
Mountain Bike, Red	40	OP	588,411.00
Touring Bike, Green	20	OP	16,500.00
Youth Sport Bike	30	OP	9,632.00
Lid	30	OP	150.00
Bottle	30	OP	450.00
Bike Accessory Kit	30	OP	10,000.00
Helmet	30	OP	1,100.00
Helmet - Hi Flow	30	OP	1,800.00
Tire Repair Kit	30	OP	625.00
250 mm Cro-Moly Tubing	30	OP	140.00
500 mm Cro-Moly Tubing	30	OP	144.00
160 mm Cro-Moly	30	OP	112.00
500 mm Cro-Moly Bar	30	OP	240.00
60 mm Cro-Moly Plate	30	OP	150.00
Bolt - 6	30	OP	140.00

A tabular report format was selected for this report because of the automatic totaling and Display Column features of tabular reports.

▶ **To create the example tabular report**

1. Launch the Report Design tool.

2. On Report Design, choose New from the Report menu.

3. On Create New Report, fill out the form as illustrated below, and then click OK.

Note that the text you enter in the Report Name field appears on the left side of the page header and that the text you enter in the Description field appears in the center of the page header under the company name.
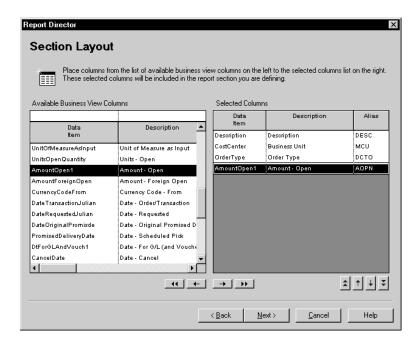
4. On the Director's Welcome form, choose Page Header and Tabular, and then click Next.

5. On the Page Header Details form, click Next.

6. On the Business View Selection Option form, choose I'll Find a Business View Myself, and then click Next.

7. On the Select Business View form, search for and choose the V4311A – Purchase Order Detail Browse business view, and then click Next.
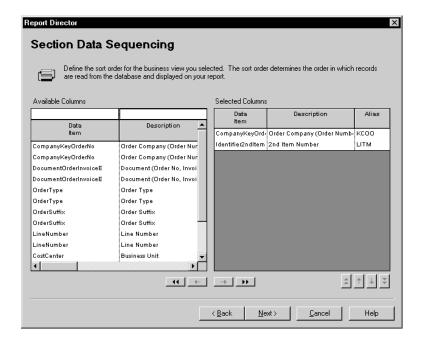
   The Director's Section Layout form appears. Note that the Director has added a Description column for you already.

8. On the Section Layout form, use the horizontal arrow buttons to select the following columns and move them to the Select Columns column:

   - Business Unit
   - Order Type
   - Amount Open

9. Ensure that the columns are ordered as listed above. Use the vertical buttons to change the order of the selected business columns, if necessary. Note the correlation between the order of the columns on this form and the order of the columns on the report illustration.

10. Click Next when the selected columns are arranged as shown.
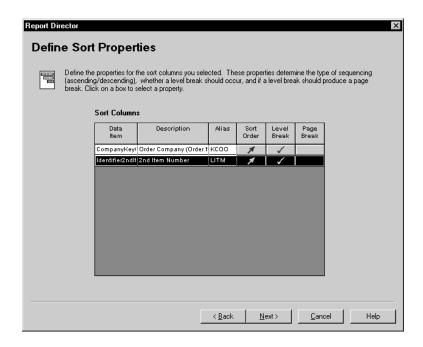
11. On the Section Data Sequencing form, use the horizontal arrow buttons to select and move the Order Company (from table F4311) and 2nd Item Number columns to the Selected Columns column. Ensure that the columns are ordered as shown below, and then click Next.

Note that this report is sorted on business view columns that are not included for display in the report.

12. On the Define Sort Properties form, ensure the sort arrow points up (to alphabetize the report in ascending order by name) and that Level Break is selected for both business view columns. Then click next.

Making these two columns level breaks ensures that the Description Column displays properly and that the system displays totals for open orders each time the system displays a new record.

13. Filter data to appear on the report as follows, and then click Next. Note that each succeeding line of the filter is connected with an And operator. You must use And in this case because every data item must meet all of the criteria to be included in the report.

- To include only purchase orders with a balance:

   - Left Operand – Amount – Open (F4311)

      Although you select Amount – Open (F4311) from the drop-down list, the item appears as BC Amount – Open (F4311). BC is a code that indicates the item is a business column.
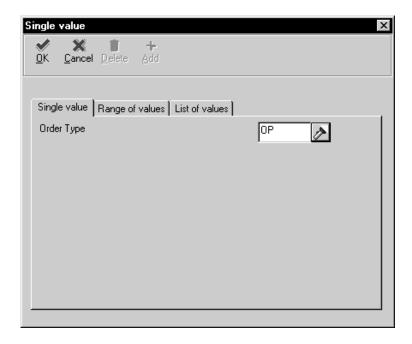
   - Comparison – is greater than

   - Right Operand – <Zero>

      Note that you cannot enter a value of zero as a literal value.

- To include only purchase order items (purchase orders in the F4311 table are indicated by the code PO):

- Operator – And

- Left Operand – Order Type (F4311)

- Comparison – is equal to

- Right Operand – OP

  OP is a literal value. To insert it, select <Literal>. The Single value form appears. Click the Single value tab, enter OP in the Order Type field, and click OK.

- To include only open purchase orders (indicated in the F4311 table by any code *except* 999):

  - Operator – And

  - Left Operand – Status Code – Next (F4311)

  - Comparison – is not equal to

  - Right Operand – 999

    999 is a literal value.

- To include only stocked items (indicated in the F4311 table by a code of S):

  - Operator – And

  - Left Operand – Line Type (F4311)

  - Comparison – is equal to
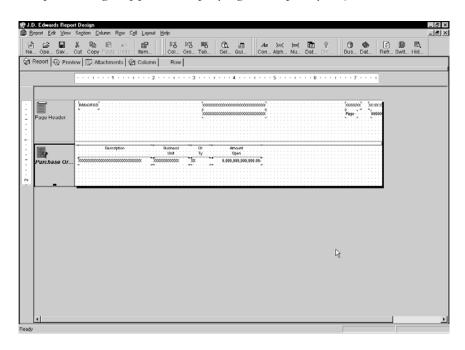
- Right Operand – S

  S is a literal value.

14. On the Director's Finish form, click Finish.

    Report Design appears, displaying the report you just created.

15. Click Save to save the report.

16. Click the Preview tab to see the report. It should look similar to the sample report illustration at the beginning of this section.

Creating an Application Report with the Director

Application reports can be created only through the Director. It provides director templates to help you create reports specific to a OneWorld product, such as financials, Fixed Assets, or Job Cost. OneWorld provides director templates that contain default criteria common to the type of reports they are used to create. When you choose one of the templates, the Director reads the template specifications and presents the default criteria through the Director forms. You can modify these templates or create your own. Complete the steps through which the Director leads you in the following order:

- Choosing an application report template
- Choosing a business view for an application report
- Adding smart fields to an application report
- Creating calculation columns
- Defining section data sequencing for an application report
- Choosing records to include in an application report
- Performing manual data selection
- Defining additional properties for an application report
- Creating a batch version of the application report
- Reviewing the results of the Director
- Saving a report

Before You Begin

☐ Create a report object. See *Creating a Report Object* for information about starting the report design process and the Director. The last step in creating a report object opens Report Design Director automatically.

See Also

- *Working with Director Templates* for information about setting up templates to use when creating an application report

Choosing an Application Report Template

If you want to use a director template to create an application report, you must use the Director. After you create a new report object, you can start the report design process and the Director. In the Director, choose the director template that most closely matches your application reporting needs.

► **To choose an application report template**

After you create a report object, the Director's Welcome form appears.

The Director includes a Navigation Assistant that lets you move from step to step of the report creation process. The Navigation Assistant shows you where you are in the process. You can hide the Navigation Assistant by right-clicking it and choosing Hide.

1. On the Director's Welcome form, click the following headers and footers you want to include in your report:

   - Report Header

   - Page Header

   - Page Footer

   - Report Footer

2. Under the Application Reports heading, click the down arrow to display a list of available director templates. Choose the template that is most appropriate for the type of report you are creating.

3. When you have chosen a template for your application report, click Next.

    If you chose a page header, the Page Header Details form appears. Continue with step 3.

    If you did not choose a page header, the Business View Selection Option form appears. Go to the next task, *Choosing a Business View for the Application Report.*

4. On Page Header Details, turn on the option to automatically include the following standard data fields (Report Name, Company Name, Report Title, Date, Time, and Page). After you complete the Director process, you can use Report Design to add or delete data fields from the page header.

    If you turn the option off, the Director will create an empty page header. You can manually add data fields to the page header from the Section menu on the Report Design form.

5. Click Next.

    The Business View Selection Option form appears.

Field	Explanation
Report Header	A header that appears once at the beginning of your report that contains user defined information such as a legal notification or a brief description of the information that appears in the report.
Page Header	A header that appears at the top of each page in your report that contains user defined information such as company name and the title of the report.
Page Footer	A footer that appears at the end of each page in your report. The page footer contains user defined information about the report.
Report Footer	A footer that appears at the end of the report. The report footer contains user defined information about the report.

Choosing a Business View for the Application Report

Business views are the link between your report and the data in your OneWorld tables. They are used in OneWorld to access data from database tables. A business view is a means for selecting specific columns from one or more tables whose data will be used in a report. It does not select specific rows and does not contain any physical data.

Director templates include a default (and recommended) business view. If the recommended business view does not contain data fields you need, you can search for another view that contains the required fields. If no existing business view contains all the fields you need for your report, you must create your own business view or join one or more sections together in your report.

Caution: The smart fields described in the next task rely on business view columns in the default business view that is associated with the application report. If you select a business view other than the default, the business view you select must contain the business view columns required by the smart fields you choose later or the smart fields will not function properly.

After you choose an application report template as described in the previous task, the Business View Selection Options form appears. Choose your business view according to the following guidelines:
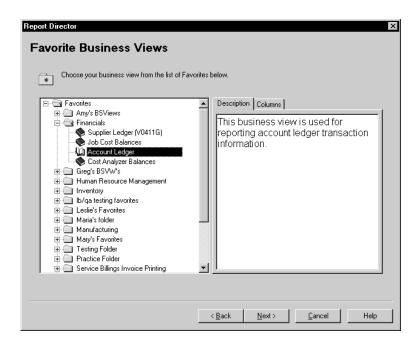
- If you know that the default business view contains the fields you want to include in your report, click *I'll use the predefined business view.* Then click Next. The Select Columns form appears.

- If you need to look for a different business view, click *I'd like help finding an appropriate business view* or *I'll find a business view myself,* and then click Next. Perform one of the following:

- Choosing from a list of favorite business views

- Using the Select Business View form to find a business view

- If you are uncertain, click *I'll use the predefined business view,* and then click Next. The Select Columns form appears.

See Also
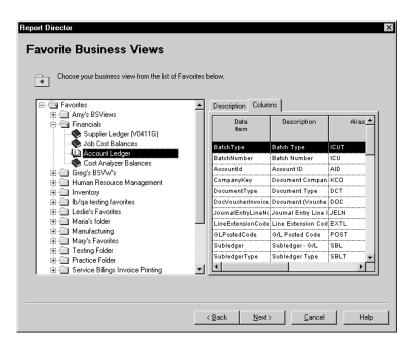
- *Business View Design* in the *OneWorld Development Tools* guide for information about creating your own business views

- *Setting up Business Views as Favorites* for information about setting up folders to hold frequently used business views

▶ **To choose from a list of favorite business views**

1. On the Business View Selection Options form, click *I'd like help finding an appropriate business view,* and then click Next.

2. On Favorite Business Views, open the folder that contains the business view that you want to use for your report section. Click the + icons to expand the tree until you see the business view you want.

3. Click the Description tab to see a brief description about the business view you have chosen, if one is available.

4. Click the Column tab to see the data fields that are included in the business view you have chosen.

5. When you have chosen the business view you want to use, click Next.

    The Section Layout form appears.

See Also

- *Setting up Business Views as Favorites* for information about adding your own business views to this list.

► **To use the Select Business View form to find a business view**

1. On the Business View Selection Option form, click *I'll find a business view myself.* Then click Next.

2. On Select Business View, click Find or press Enter.

   The form displays a list of all available business views. You can narrow your search by entering search criteria in the QBE row.

3. Choose a business view, and then click Next.

   The Section Layout form appears.

See Also

- *Business View Design* in the *OneWorld Development Tools* guide

Adding Smart Fields to an Application Report

Director templates present a list of related smart fields. Smart fields are data dictionary items (glossary group K) designed to retrieve and manipulate specific OneWorld table data. For example, by adding the smart field FINRPTAB - Account Balance to your report, you create a column that calculates the account balance as of the specified financial period and fiscal year.

Smart fields call business functions or named event rules. Business functions are programs that use data structures to do the following:

- Request specific data from OneWorld tables

- Return the data to the established parameters in the data structure

- Perform some type of calculation or other manipulation on the data

- Send the desired information, such as column headings and complex calculations, to your report

A named event rule is a business function that is created by using the event-rules scripting language. This scripting language is platform independent and is stored in a database as a OneWorld object.

Because the smart fields have already been created for you, you can include complex logic in your report without having to do any programming.

For each smart field you add to your report, you will be prompted to define parameters specific to that smart field through a series of forms. Although the number and content of the forms vary based on the smart field, the process occurs in three phases:
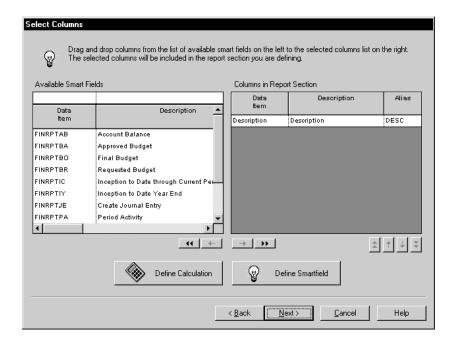
- First, you will be prompted to define how you want the column to appear in the report.

- Second, you will be prompted to define parameters such as period number offset, journal entry amount, fiscal year offset, and so forth. Some smart fields have only one parameter and therefore only one form in this phase; others have multiple parameters that you specify through a series of forms in this phase.

- Third, you will be prompted to limit the data returned by the report through data selection.

See Also

- *Creating Business Function Event Rules* in the *OneWorld Development Tools Guide* for more information on named event rules

▶   **To add smart fields to an application report**

After you select a business view as described in the previous task, the Select Columns form appears.

The Director automatically includes the Description column. After you finish the Director process, you can use Report Design to change its size, column heading

name, and position on the report. See *Understanding the Description Column* for additional information about this column.

1. Drag the appropriate field from the Available Smart Fields list to the Columns in Report Section list.

    The Smart Field Name form appears. This form marks the first phase of defining data for the smart field.

2. On Smart Field Name, complete the following fields, and then click Next:

    *   Variable Name

        Give the smart field a unique variable name. If you attach event rules to this report or want to use the column in a calculation, and require this column to appear in the event or calculation, you can easily identify the column by what appears in this field.
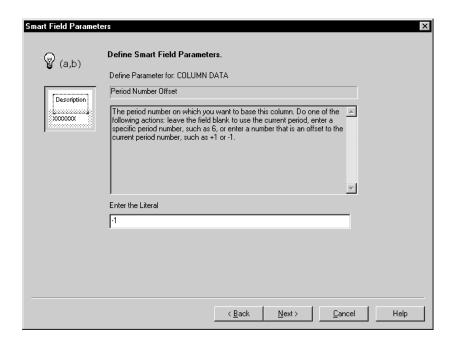
    *   Report Column Headings

        The Report Column Headings allow you to give the smart field a meaningful title as it appears on the report.

    *   Smart Column Heading

        If this option is turned on, the report will display a name that corresponds to the specific value entered on the Smart Field Parameter - Column Heading form. For a financial smart field, this might be the name of the period, such as June. If the option is not turned on, the report will display what you have indicated in the Report Column Headings.

The Smart Field Parameters form appears. One or more Smart Field Parameters forms might appear during the second phase of entering data for the smart field.
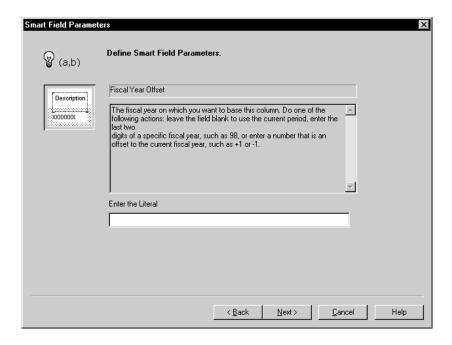
Note: The Smart Field Parameter forms vary depending on which smart field you included. For example, if you chose the FINRPTAB smart field, the following Smart Field Parameter forms will appear.

3. Complete the following field, and then click Next:

    •   Enter the Literal

        Leave the field blank to use the current year, enter a specific period number, or enter a number that is an offset to the current period number. For example, entering a 6 will result in data for period 6 being retrieved. Entering a –1 will result in data for the month prior to the current month being retrieved.
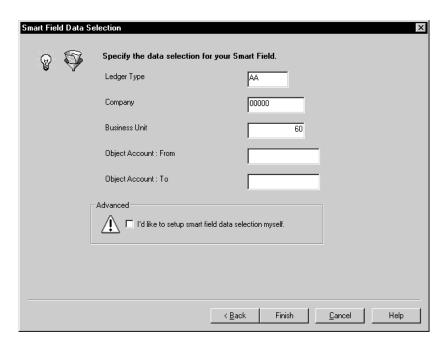
    The Smart Field Parameters [Fiscal Year Offset] form appears.

4. Complete the following field, and then click Next:

   • Enter the Literal
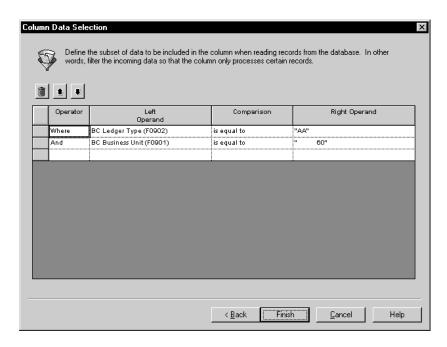
      Leave the field blank to use the current year, enter the last 2 digits of a specific fiscal year, such as 98, or enter a number that is an offset to the current fiscal year, such as +1 or −1.

   The Smart Field Data Selection form appears. The fields on this form vary depending on the director template you are using. This form marks the third phase of entering data for the smart field.

5. Complete the fields to define the data that you want retrieved for the smart field column, and then click Finish.

If the displayed fields do not meet your data selection criteria, you can define your own data selection by choosing the Advanced option. When you click Next, the Column Data Selection form appears. From this form you can define the criteria by which records are included in your report.

6. Repeat steps 1 – 5 for each smart field column that you want to include in the report.

You can click the Define Smartfield button on the Define Smartfields form to revise choices you made for any of the smart fields.

Creating Calculation Columns

Calculation columns contain values that are the result of a calculation involving two or more smart field columns. You can also perform a calculation between calculation columns. In a report based on a director template, the Director is aware only of the smart fields that are attached to the template; therefore, data fields included in the business view cannot be used in a calculation. After you complete the Director process, you can use Report Design to add calculation columns based on other columns in the report.

Note: Values in calculation columns are based on how the amounts appear on the report, not on how they are stored in the data tables.

▶   **To create calculation columns**

1. On Select Columns, click Define Calculation.

2. On Define Calculation, complete the following field:

    - Calculation Name

      This appears on the report as the column heading.

3. Choose one of the following calculation types:

    - Difference between
    - Percent variance between
    - Total of
    - Product of
    - Undefined

4. To define the Operands for your calculation column, perform one of the following, and then click Finish:

    - If you chose *Difference between*, *Percent variance between*, or *Product of,* perform the following:

        - First, under Operands, click the down arrow of the first operand field to display the existing columns, then choose the column that you want as the first column in the calculation.

        - Second, under Operands, click the down arrow of the second operand field to display the existing columns, then choose the column that you want as the second column in the calculation.

    - If you chose *Total of,* in the Operands window, choose the columns that you want to include in your calculation total.

      To choose multiple columns, click each column that you want included.

      To remove a column from your calculation total, click the column to deselect it. It will disappear from the calculation field that appears above the Calculation Type heading.

    - If you chose *Undefined,* a percent column is created without a calculation. You can define the percent calculation for the column after completing the steps of the Director and after rows have been created. See *Defining a Percent Calculation* for additional information.

    The Select Columns form appears.

5. Repeat steps 1 – 4 for each calculation column you want to create.

6. When you have defined all the calculation columns for your report, click Next on Select Columns.
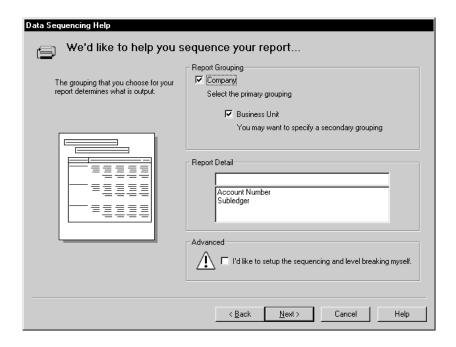
The Data Sequencing Help form appears.

Field	Explanation
Define Calculation	Opens the Define Calculation form where you can define mathematical operations on data within the report.
Define smart field	Opens the Define Smart Field form where you can associate a data item with a business function.
Calculation name	The name you want to appear as your column heading.
Calculation Type	Choose the mathematical operation for the calculation. The possible options are: • Difference between – to subtract data values • Percent variance between – to calculate the percentage of variance • Total of – to sum data values • Product of – to multiply data values
Undefined	Choose this option to create a numeric column without a calculation. You can define the percent calculation for the column after completing the Director steps and then creating rows in your report.
Operands	Columns used in the calculation.

Defining Section Data Sequencing for an Application Report

Each director template includes default data sequencing and level breaking that commonly occurs for the type of report it is used to create. For example, the Financial Reports template includes Company and Business Unit as default sequencing and level breaking.

After you create calculation columns as described in the previous task, the Data Sequencing Help form appears. The fields that appear on this form vary depending on the director template you have chosen.

Use the Report Grouping and Report Details sections to indicate how you want the report data grouped and sequenced. These options are based on the director template you chose. To override the suggested grouping and sequencing, click *I'd like to setup the sequencing and level breaking myself* to turn the Advanced option on. Complete one of the following tasks:

- Defining section data sequencing with the Advanced option off
- Defining section data sequencing with the Advanced option on

▶ **To define section data sequencing with the Advanced option off**
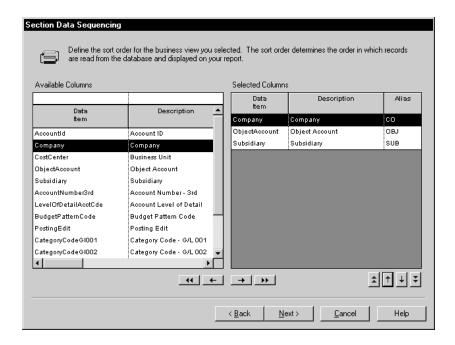
1. If necessary, choose additional data sequencing fields from the Report Detail list.

2. Click Next.

3. Perform one of the following:

   - If the Help with Section Data Selection form appears, proceed with the task *Selecting Records to Include in an Application Report*. This form appears if the Display Financial Criteria option is selected on the Report Director Templates Revisions - Properties tab for the template you chose.

   - If the Section Data Selection form appears, you can define the criteria by which records are included in your report. This form appears if the Display Generic Criteria option is selected on the Report Director Templates Revisions - Properties tab for the template you chose.

See Also

- *Adding or Modifying Director Templates* for information about the Display Financial Criteria and Display Generic Criteria options.

- *Performing Manual Data Selection* for information about using the Section Data Selection form.

▶ **To define section data sequencing with the Advanced option on**

1. If necessary, choose additional data sequencing fields from the Report Detail list.

2. Perform one of the following:

   - Turn the Advanced option on to further define the sequencing for default Report Grouping or Report Detail fields.

   - Turn the Advanced option on and deselect the fields in the Report Grouping or Report Detail lists to select your own data sequencing and level breaking.

3. Click Next.

4. On Section Data Sequencing, to select columns for section data sequencing, choose the columns from the Available Columns list, and then click the right arrow to move them to the Selected Columns list.

   Alternately, you can drag each column individually into the Selected Columns list, or you can click the right double-arrow to move all of the columns from the Available Columns list to the Selected Columns list.

5. To remove a column from the Selected Columns list, choose a column in the Selected Columns list, and then click the left arrow to move it to the Available Columns list.
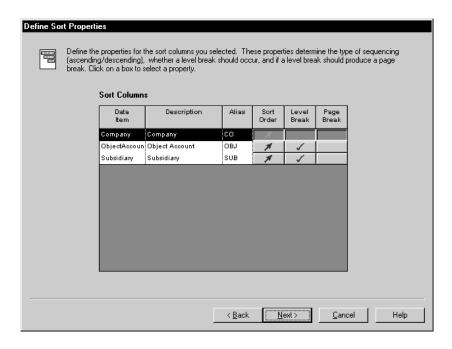
   Alternately, you can click the left double-arrow to move all of the columns from the Selected Columns list to the Available Columns list.

6. To change the order that the columns that you selected for data sequencing, choose a column in the Selected Columns list, and then click the up or down arrow to move the selected column up or down one line in the list.

   Alternately, you can drag a column to a new location in the list, or you can click the up or down double-arrows to move the selected column to the top or bottom of the list.

7. When you finish the section data sequencing for your report, click Next.

   If you selected any columns in addition to the default columns, the Define Sort Properties form appears.

8. On Define Sort Properties, complete the following fields, and then click Next:

   - Sort Order

   - Level Break

     Any report that includes a system-generated description column should sort on at least two columns, and the first two columns

should be set as level breaks. Otherwise, the description column will not be displayed properly.

- Page Break

9. Perform one of the following:

- If the Help with Section Data Selection form appears, proceed with the task *Selecting Records to Include in an Application Report.* This form appears if the Display Financial Criteria option is selected on the Report Director Templates Revisions - Properties tab for the template you chose.

- If the Section Data Selection form appears, you can define the criteria by which records are included in your report. This form appears if the Display Generic Criteria option is selected on the Report Director Templates Revisions - Properties tab for the template you chose. Proceed with the task *Performing Manual Data Selection.*

Field	Explanation
Sort Order	Sets the sort order to ascending or descending.
Level Break	This enables an object to function as a level break indicator. Sections can be joined at level breaks, totals can occur at level breaks, and level break header sections can be triggered at level breaks.
Page Break	This enables an object to function as a page break indicator.
	Note: An object must be selected as a level break before you can select the object as a page break.

See Also

- *Adding or Modifying Director Templates* for information about the Display Financial Criteria and Display Generic Criteria options.

- *Selecting Records to Include in an Application Report* for information about data selection.

Selecting Records to Include in an Application Report

Defining data selection is critical to creating a report that processes efficiently. Director templates that report over financial data help you with data selection by giving you the options to select data over your balance sheet or income statement accounts.

▶ **To select records to include in an application report**

After define section data sequencing as described in the previous tasks, the Help with Section Data Selection form appears. This form appears only if the Display Financial Criteria option is selected on the Report Director Templates Revisions - Properties tab for the template you chose.

Perform one of the following, and then click Next:

- To select data only from the balance sheet accounts, click *Select only BALANCE SHEET accounts from the automatic accounting instruction.* This will include data fields appropriate for a balance sheet, that is, the account range established in your company's General Purpose (GLGxx) automatic accounting instructions.

  The Additional Properties form appears. Proceed with the task *Defining Additional Properties for an Application Report*.

  For more information about automatic accounting instructions, see *Understanding AAIs for General Accounting* in the *General Accounting* guide.

- To select data only from the income statement accounts, click *Select only INCOME STATEMENT accounts from the automatic accounting instructions.* This will include data fields appropriate for an income statement, that is, the account range established in your company's General Purpose (GLGxx) automatic accounting instructions.

  The Additional Properties form appears. Proceed with the task *Defining Additional Properties for an Application Report*.

  For more information about automatic accounting instructions, see *Understanding AAIs for General Accounting* in the *General Accounting* guide.

- To base your data selection on the default balance-sheet data selection, but add your own criteria, click *Select only BALANCE SHEET accounts from the automatic accounting instructions,* and then click *I'll add my own data selection to the above balance sheet or income statement criteria.* This provides the criteria for including balance sheet accounts, while letting you define additional criteria as well.

  The Section Data Selection form appears. Define the criteria by which records are included to further define your Balance Sheet data selection.

- To base your data selection on the default income-statement data selection, click *Select only INCOME STATEMENT accounts from the automatic accounting instructions,* and then click *I'll add my own data selection to the above balance sheet or income statement criteria.* This

option provides the criteria for including income statement accounts, while letting you define additional criteria as well.

The Section Data Selection form appears. Define the criteria by which records are included to further define your Income Statement data selection.

- To set up data selection manually, click *Set up data selection manually.* This option lets you define criteria for which records appear in your report.

    The Section Data Selection form appears. Define the criteria by which records are included in your report.
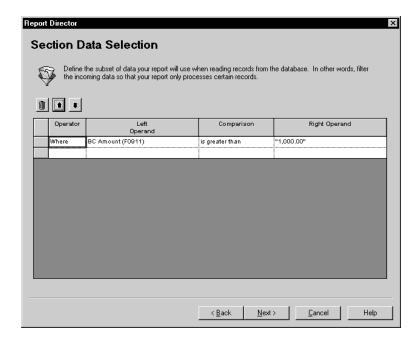
See Also

- *Performing Manual Data Selection* for information about using the Section Data Selection form

Performing Manual Data Selection

Section data selection lets you define the criteria by which records are included in your report. This is critical for system performance and report conciseness. For example, if you included in a report every address book record in the database, your report might display 10,000 records. However, if you define your criteria to retrieve only records with Search Type equal to E, you might reduce your record count to 400. Not only would this make the information more readable, but it would also improve system performance.

The Section Data Selection form filters the data for one detail section only. If it includes only one detail section, your report will display only the records that match the criteria entered on this form. If you add additional detail sections in Report Design, you must define data selection for each new section.

To limit the records retrieved from the OneWorld tables, specify data selection criteria based on comparisons between the following:

- Data fields in the OneWorld tables

- Values that define the data in the data fields, such as ledger types, search types, or account numbers

▶ **To perform manual data selection**

1. On Section Data Selection, click in the Operator column and choose an operator.

   Where is the default value in the Operator column for the first set of criteria. For subsequent statements, *And* and *Or* become the available values for the Operator column and are selected by double-clicking the appropriate one.

2. Click in the Left Operand column to display the list of available objects, and then perform one of the following:
   - Scroll through the list until you find the desired object, choose the object, and then double-click the object to populate the Left operand column.
   - Type the first letters of the object name in the Left Operand field to display the object in the list, and then double-click the highlighted object.

   When you double-click the object for the Left operand column, the list in the Comparison column automatically appears.

3. Double-click one of the following comparison operators to select it:

   - is equal to
   - is greater than
   - is greater than or equal to
   - is less than
   - is less than or equal to
   - is not equal to

   When you double–click the object for the Comparison column, the list in the Right Operand column automatically appears. The objects, special values, and variables available depend on the comparison operator you choose.

4. Double-click a value from the list in the Right Operand column to select it.

   Your choices in this column depend on the choice you made in the Comparison column. Some of the following options could be available:

Blank	Enters a blank (space) value
Literal	Allows you to enter specific values, as described below
Null	Indicates that no value is associated with the field
Zero	Enters a value of zero
BC	Indicates a business view column available for this report
FI	Indicates a value passed through form interconnection to this report
PC	Indicates the previous value for the constant
PO	Indicates a processing option value for this report
PV	Indicates the previous value for the variable
RC	Indicates a constant from this report

RV	Indicates a variable from this report
SV	Indicates a system variable
SL	Indicates a system literal
VA	Indicates an event rule variable

If you chose Literal for the Right Operand column, the form that appears enables you to enter any of the value types described below. When finished defining the values you want, click OK.

- Single value

    Enter a single value, and then click OK. For example, you might enter the address book number for a particular company.

- Range of values

    Enter a range of values, and then click OK. For example, a range of values might include companies from 00001 to 00060. Only *is equal to* and *is not equal to* are valid logical operators when using range of values.

- List of values

    To add values to or remove values from the list, perform the following:

    - Type each value in the field, and then press Enter or click the Add button at the top of the form.

    - Repeat this process until your list of values is complete. For example, a list of values might include several user defined codes for search types such as C for Customers, E for Employees, and V for Vendors. Only *is equal to* and *is not equal to* are valid logical operators when using a list of values.

    - Delete a value by choosing the value, and then clicking the Delete button at the top of the form.

5. Repeat steps 1 through 4 to define more selection criteria rows.

6. To delete a line of criteria on Section Data Selection, choose the row header to highlight the row, and then click the Delete button at the top of the form.

7. To change the order of the criteria, choose the row header to highlight the row, and then click the up or down button.

8. When finished defining selection criteria, click Next.

   The Additional Properties form appears.

Defining Additional Properties for an Application Report

Additional properties provide the same functionality as tabular section properties. They govern how the report runs and displays information. For example, if you do not want your report to display revenues as a negative value (−) and expenses as a positive value (+) as they appear in the database tables, you can choose to display them both as positive values.

The options that appear on this form change based on the selections made in the Report Director Templates program.

See Also

- *Working with Objects in Report Sections* for information about tabular section properties.

- *Adding or Modifying Director Templates* for information about displaying all, some, or none of the additional properties.

▶ **To define additional properties for an application report**

After you define data selection as described in the previous task, the Additional Properties form appears.

As with most other parameters for your report, you can change your choices in Report Design. For example, if you do not select the drill down option now and then decide you want to enable it later, you can do so. Depending on the application report, some of these options might be unavailable.

1. On Additional Properties, choose the following options, as applicable:

    • AAI (Automatic Accounting Instructions) Subtotaling, based on Financial Statement (FSxx) AAIs

       For more information about automatic accounting instructions, see *Understanding AAIs for General Accounting* in the *General Accounting* guide.

    • Reverse Sign For

    • Account Level of Detail Rollup

    • Drill Down

    • Zero Row Suppression

       If you choose *Suppress Zero Detail Rows Only,* header accounts print even if the detail accounts have a zero balance.

2. Click Next.

    The Director's Finish form appears.

Field	Explanation
AAI Subtotaling	This property inserts additional accounting lines that include running totals of the accounts, depending on the object account value. A final net income or loss is totaled for the business unit or company.
Reverse Sign For	Changes a number from positive to negative or negative to positive.
Level of Detail Rollup	This is a flag that is turned on to display the indentations of the accounts and introduce artificial level breaks that are dependent on the level of detail value. The actual value for level of detail is entered in the processing options only.

Field	Explanation
Drill Down	Determines whether the Report Director displays the Drill Down property. You must also specify the application, form, and version to launch. To enable drill down in the actual report, the report designer must also turn on this option when designing the report in the Report Director.
Zero Row Suppression	Suppresses the printing of a row in a tabular section using on of the following options: • No Zero Row Suppression • Suppress Zero Detail Rows • Suppress All Zero Rows

Creating a Batch Version of the Application Report

You can generate a batch version of the application report simultaneously with the template. The batch version will be identical to the template as it first appears in Report Design after the Director process.

If you choose not to create a batch version at this time, you can create batch versions later with the Object Management Workbench.

See Also

• *Object Management Workbench* in the *OneWorld Development Tools* guide

▶ **To create a batch version of the application report**

After you select additional properties as described in the previous task, the Director's Finish form appears.

1. To automatically generate a batch version of the template, click *Yes, create a version of this report.*

    The Director suggests a name for the batch version, XJDE0001 being the default value. You can change the name if you wish.

2. On Finish, to review your choices, click Back to move backwards through the Director forms, or click the form on the Navigation Assistant that you want to review. When you are satisfied, click Finish.

    Caution: When you click Finish, you can no longer access the Director for this report. Prior to clicking Finish, you have one more opportunity to review your choices on all forms of the Director.

    The Report Design - Report View form appears.

Reviewing the Results of the Director

When you click Finish, the Director process is complete. Based on the choices you made during the process, Report Design displays the sections of your report and the data fields you included in them. Each section includes the following:

- Its own display window

- Corner brackets enclosing each field within the section

- An icon that displays the section type

- A title description

  The title of the main detail section of the report uses a bold font to distinguish it from the titles of the other report sections.

Saving a Report

Note that when you finish with the Director, your report is not yet saved. Save your report before proceeding in Report Design. As you work on your report design, remember to save your changes regularly.

After you finish your report design and test the output of your report, you need to check in the report to make it available to others. If you do not check the report in, it is available only on your workstation. See *Object Management Workbench* in the *OneWorld Development Tools* guide for more information.

See Also

- *Basic Report Enhancements* and *Advanced Report Enhancements* for information about using Report Design to modify or enhance your report.

▶   **To save a report**

On Report Design, perform one of the following:

- From the Report menu, choose Save

- Click the Save button on the toolbar

Basic Report Enhancements

After you create a report, either manually or through the Report Design Director, Report Design offers many features to help you further refine the data, structure, and physical appearance of your report. You can add report sections and data fields; modify the properties of entire sections and individual data fields; add, move, or delete columns and rows; and perform calculations. You can also preview your report from the Report Design form as you make your changes.

Basic report enhancements describes the following tasks:

❑ Working with the Report Design user interface

❑ Creating detail sections

❑ Creating header and footer sections

❑ Working with level-break header and footer sections

❑ Joining subsections

❑ Working with objects in report sections

❑ Modifying the appearance of report objects

The Report Design user interface provides you with various views of the report and its component objects, tools for creating those objects, and tools for configuring your design workspace.

Complete the following tasks to work with the Report Design tool and your design workspace:

- Previewing a report from Report Design
- Adding and removing attachments or comments
- Viewing properties for report sections, fields, columns and rows
- Configuring your design workspace

Previewing a Report from Report Design

The Preview tab lets you see, while in design mode, how your report will appear when printed. Use the report preview to review your report for content and format as you make design changes.

▶   To preview a report from Report Design

1. On Report Design, click the Preview tab.

   The Report Preview form appears, asking if you want to run the preview.

   To prevent this form from appearing prior to previewing your report, from the View menu choose User Options. Turn the *Prompt before Running Preview* option off.

2. Click Yes on Report Preview.

   If you made changes since you last saved your report, Report Design prompts you to save prior to previewing your report.

3. Click Yes to save the changes.

A preview of your report appears.

Report Design uses the Adobe Acrobat Reader to show the preview. You can use all of its functions to view the report.

4. Each time you make changes to the report, you must refresh the preview. To refresh your preview, perform one of the following:

   - From the View menu, choose Refresh Preview Window.

   - If the View toolbar is displayed, click the Refresh Preview Window button.

   - Push F5 on your keyboard.

5. To change the number of table records to process and display in Preview mode, from the View menu, choose User Options.

   The User Options form appears.

6. Complete the following field to indicate how many table records to process in the preview:

   - Rows to preview

Adding and Removing Attachments or Comments

You can attach media objects to reports and versions. A media object can be text, an image, a shortcut, or any file that conforms to the OLE (object linking and embedding) standard. For example, you can use attachments to provide generic help text about selected application reports that need to be made company specific or to document changes you made to a report. You cannot print attachments with a report; you can only view the attachments in Report Design.

In addition to adding attachments to reports, you can attach text-only comments to individual data fields within your report.

Complete the following tasks:

- Adding or deleting attachments to a report

- Adding, modifying, or deleting comments to a data field

▶ **To add or delete attachments to a report**

1. On Report Design, click the Attachments tab.

The Attachments workspace appears. It is split into two panels. The left panel is the icon panel and the right panel is the viewer panel.

2. To add text, type the desired text in the viewer panel.

   You can use the formatting tools at the top of the viewer panel to format the text of your note.

3. If you want to add an object other than text, right-click in the icon panel.

4. From the pop-up menu, choose Add, and then choose one of the following:

   - Image
   - OLE
   - Shortcut

5. To remove an object, right-click the object's icon in the icon panel and choose Delete from the pop-up menu.
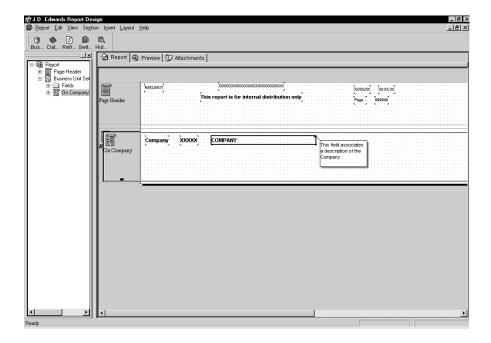
See Also

- *Working with Media Objects* in the *OneWorld Foundation* guide for more information about image, OLE, and shortcut attachments

▶ **To add, modify, or delete comments to a data field**

1. On Report Design, click the Report tab (or Version tab if you are working with a version).

2. Right-click the object you want to attach the comment to, and then choose Insert Comment.

3. Type the text, and then click anywhere in the design workspace to close the text window.

   A red flag appears in the upper right corner of the object to indicate that a comment is attached to this object.

4. To edit, delete, show, or hide the comment, right-click the object and choose the appropriate option from the pop-up menu.

Viewing Properties for Report Sections, Fields, Columns, and Rows

This topic covers the following tasks:

- Viewing report section properties
- Viewing data field properties
- Viewing column properties
- Viewing row properties
- Selecting a viewing method

Viewing Report Section Properties

Report Design offers two methods of viewing the properties for a report section:

- Menu method
- Double-click method

▶ **To view a report section's properties using the menu method**

1. On Report Design, click the Report tab.

2. Click the section for which you want to view properties.

3. Choose Section Properties from the Section menu.

   Depending on the section type, the appropriate Section form appears.

▶ **To view a report section's properties using the double-click method**

1. On Report Design, click the Report tab.

2. Double-click the section for which you want to view properties.

   Depending on the section type, the appropriate Section form appears.

Viewing Data Field Properties
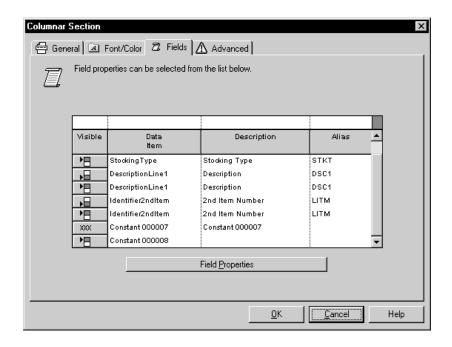
Report Design offers two methods of viewing the properties for a data field. Note that the first method offers you a quick overview of all the data fields in the section.

- Report section method
- Double-click method

▶ **To view a data field's properties using the report section method**

1. On Report Design, click the Report tab.

2. Double-click the section containing the data field for which you want to view properties.

   Depending on the section type, the appropriate Section form appears.

3. Click the Fields tab.

The Fields tab lists all of the data fields in the section. The various field types are represented by different icons in the Visible column as follows:

- XXX. This icon represents a constant field.

- Dual-shaded box. This icon indicates a column object. If the arrow is pointing to the top section, the icon refers to the column header. If the arrow is pointing to the bottom section, the icon refers to the column variable.

- Gray, black, and white diamond. This icon represents a run-time field, such as report date, report time, page number, company title, or report title.

- Multicolored diamond. This icon represents a variable data item, such as an alpha, numeric, or date variable.

In all cases, if the data field is invisible, a circle with a line through it appears next to the icon. Double-click the icon to toggle the visible or invisible property. Note that if a column header is invisible, its associated column variable is also invisible.

4. Choose the data field for which you want to view properties and click Field Properties.

Depending on the field type, an appropriate Properties form appears.

► **To view a data field's properties using the double-click method**

1. On Report Design, click the Report tab.

2. Double-click the data field for which you want to view properties.
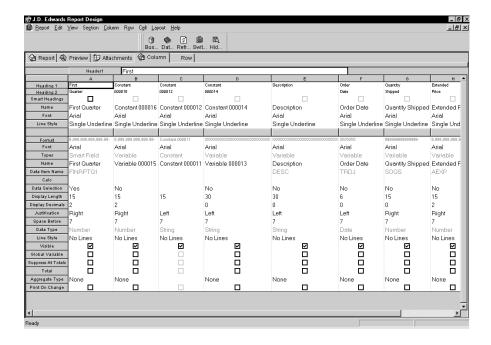
    You can double-click data fields on the Report Design form and in the Report Tree form. Depending on the field type, the appropriate Properties form appears.

Viewing Column Properties

Report Design treats columns (both the headings and the bodies) as fields, so you can view their properties as described in *Viewing Data Field Properties*. In addition to these methods, Report Design offers a third way to view column properties: the column tab method.

► **To view a column's properties using the column tab method**

1. On Report Design, click anywhere within the columnar or tabular section which you want to view column properties.

2. Click the Column tab.

	A	B	C	D	E	F	G	H
Heading 1	First	Constant	Constant	Constant	Description	Order	Quantity	Extended
Heading 2	Quarter	000016	000012	000014		Date	Shipped	Price
Smart Headings	☐	☐	☐	☐	☐	☐	☐	☐
Name	First Quarter	Constant 000016	Constant 000012	Constant 000014	Description	Order Date	Quantity Shipped	Extended P
Font	Arial	Arial	Arial	Arial	Arial	Arial	Arial	Arial
Line Style	Single Underline	Single Underline	Single Underline	Single Underline	Single Underline	Single Underline	Single Underline	Single Und
Format	9,999,999,999,999.99-	9,999,999,999,999.99-	Constant 000011	XXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXX	XX/XX/XX	999999999999999-	9,999,999,999,9
Font	Arial	Arial	Arial	Arial	Arial	Arial	Arial	Arial
Types	Smart Field	Variable	Constant	Variable	Variable	Variable	Variable	Variable
Name	First Quarter	Variable 000015	Constant 000011	Variable 000013	Description	Order Date	Quantity Shipped	Extended P
Data Item Name	FINRPTQ1				DESC	TRDJ	SOQS	AEXP
Calc								
Data Selection	Yes	No		No	No	No	No	No
Display Length	15	15	15	30	30	6	15	15
Display Decimals	2	2		0	0	0	0	2
Justification	Right	Right	Left	Left	Left	Left	Right	Right
Space Before	7	7	7	7	7	7	7	7
Data Type	Number	Number	String	String	String	Date	Number	Number
Line Style	No Lines	No Lines	No Lines	No Lines	No Lines	No Lines	No Lines	No Lines
Visible	☑	☑	☑	☑	☑	☑	☑	☑
Global Variable	☐	☐	☐	☐	☐	☐	☐	☐
Suppress At Totals	☐	☐	☐	☐	☐	☐	☐	☐
Total	☐	☐	☐	☐	☐	☐	☐	☐
Aggregate Type	None	None		None	None	None	None	None
Print On Change	☐	☐	☐	☐	☐	☐	☐	☐

3. Right-click anywhere on the Column form grid.

4. Click Field Selection.

The Object Design Properties form appears.

5. Use the Basic or Advanced tab to turn off or on any of the default field options, and then click OK. This lets you determine what fields are displayed on the Column tab grid.

6. To change a property, from the Column tab grid, double-click any field. Depending on the property you are changing, an appropriate control appears.

Viewing Row Properties

Rows exist in tabular sections only. As with columns, Report Design offers three methods to view row properties.

- Report section method
- Double-click method
- Row tab method

▶ **To view a row's properties using the report section method**

1. On Report Design, click the Report tab.

2. Double-click the tabular section containing the row for which you want to view properties.

   The Tabular Section form appears.

3. Click the Row List tab.

   The Row List tab lists all of the rows in the section. The various row types are represented by different icons in the Visible column.

   In all cases, if the row is invisible, a circle with a line through it appears next to the icon. Double-click the icon to toggle the visible or invisible property.

4. Choose the row for which you want to view properties and click Row Properties.

   Depending on the row type, an appropriate Properties form appears.
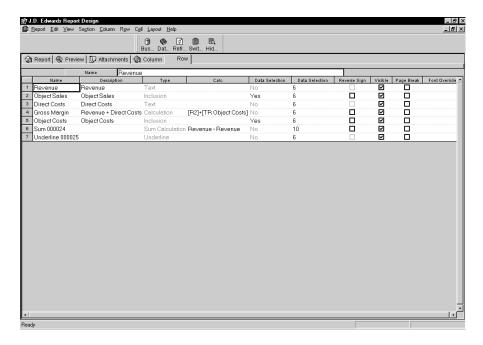
▶ **To view a row's properties using the double-click method**

1. On Report Design, click the Report tab.

2. Double-click the row for which you want to view properties.

Depending on the row type, the appropriate Properties form appears.

▶ **To view a row's properties using the row tab method**

1. On Report Design, click the Row tab.

2. Right-click anywhere on the Row form grid.

3. Choose Field Selection.

   The Object Design Properties form appears.

4. From this form, use the Basic or Advanced tab to turn off or on any of the default field options, and then click OK. This lets you determine what fields are displayed on the Row tab grid.

   The row grid displays fields, such as Display Decimals and Display Length, that override column properties. These fields appear with no data if they are not overriding what was set at the column level.

5. If you want to change a property, from the Row tab grid, double-click any field. Depending on the property you are changing, an appropriate control appears.

Selecting a View Method

Throughout the remainder of this chapter, to access Section or Properties forms, you are instructed to use the double-click methods. If you prefer the other methods, then substitute them as desired.

Configuring Your Design Workspace

Report Design offers a variety of ways to configure your design workspace.

Perform the following tasks:

- Setting user options
- Setting the grid alignment
- Showing and hiding the display tree
- Showing and hiding the Business View Column Browser
- Showing and hiding the Data Dictionary Browser

▶ **To set user options**

User options let you show or hide the elements of the user interface, such as rulers and tabs. You can also set user options to control the number of rows processed for preview.

1. On Report Design, from the View menu, choose User Options.

   The User Options form appears.

2. Click any of the following options under the General heading, and then click Apply to see your changes immediately:

   - Show Invisible Sections at Startup
   - Show Section Titles
   - Show Right Margin

     Showing the right margin is helpful when you change the orientation of your report because it enables you to see whether any fields fall outside the page's new margins.

   - Show Tabs
   - Show Navigational Assistant

     Compared to hiding the Navigation Assistant, which turns off the Navigation Assistant for the current report only, disabling the Navigation Assistant here turns off the Navigation Assistant for the current report as well as all reports you create in the future.

   - Show Data Dictionary Text Overrides

     This option displays a small triangle in the bottom right corner of the fields where the display name is not the same as the data

dictionary name. The indicator appears in Report Design only; it will not print on the report.

3. Click the following options under the Ruler heading:

    - Show Rulers

    - Ruler Units

▶ To set the grid alignment

1. On Report Design, choose Grid Alignment from the Layout menu.

    The Alignment Grid form appears.

2. Change the following spacing fields:

    - Horizontal

    - Vertical

    The spacing value represents pixels on the workstation that are used for designing the report. The value is converted to a workstation-independent measurement when it is saved. This ensures that the report will maintain the same proportions when it is displayed on a different workstation.

    Note: If you will be exporting your output to a Comma Separated Values (CSV) file on the Printer Setup form, J.D. Edwards recommends that you set the Horizontal spacing to 52. This number corresponds to the default width of a column in Microsoft Excel. See *Exporting to Comma Separated Value (CSV)* for more information about the exporting to a CSV file.

3. Choose the following options:

    - Display Grid

        This option displays grid lines in the workspace.

    - Snap to Grid

        This option aligns objects to the nearest grid line. The option functions whether the grid lines are visible or not.

4. Click OK.

▶ To show and hide the display tree

The display tree is a dockable window in Report Design that lists the fields in your report in a hierarchical tree structure. The tree displays the sections

included in the report as well as the objects associated with each section. Even invisible fields appear in the tree structure. The top-most component of the tree displays the name of the report. Under the report name, the first created section is displayed. Next to each component is a + or − icon. Expand (+) and collapse (−) the Report Tree by clicking the + or − sign.

Expanding the first section displays a Fields folder. By expanding this folder, a list of objects included in this section appears (rows and cells do not appear in the Report Tree). If you expand a detail section and its Fields folder, two entries for each field appear. One entry represents the constant (header portion of field) and the other represents the variable (data portion of field).

You can also double-click objects in the tree structure to change their properties.

The Report Tree shows only the structure of your report; it does not represent the processing flow for your report. You can use the Preview tab to see how your report will be formatted.

To toggle the display tree on or off, on Report Design, from the View menu, choose Display Tree.

▶ To show and hide the Business View Column Browser

The Business View Column Browser is a dockable window in Report Design that lists the business view columns you can use in your report. To add a business view column to your report, drag it from the Business View Column Browser and drop it where you want it. Because business view columns can be added only to detail sections, you can access the browsers only when a detail section is active.

1. On Report Design, click on a detail section in your report.

2. To toggle on or off the browser, from the View menu, choose Business View Column Browser.

▶ To show and hide the Data Dictionary Browser

The Data Dictionary browser is a dockable window in Report Design that lists the data dictionary fields you can use in your report. To add a data dictionary item to your report, drag it from the Data Dictionary Browser and drop it where you want it.

1. On Report Design, click on a detail section in your report.

2. To toggle the browser on or off, from the View menu, choose Data Dictionary Browser.

Creating Detail Sections

The Director guides you through the steps of creating a detail section. You might, however, need to modify an existing section or need to add one or more columnar, group, or tabular sections. Report Design provides features to help you accomplish these tasks.

To create an additional section using Report Design, forms similar to those displayed in the Director are available to help you design your section. This topic shows you how to add a detail section to a report.

Perform the following tasks:

- Adding a detail section
- Selecting a business view
- Adding business view columns to a detail section
- Defining section data sequencing
- Defining sort properties
- Defining section data selection
- Adding smart fields

Adding a Detail Section

Report Design lets you manually create as many group, columnar, or tabular sections as are required for your report. You can design each detail section by choosing a business view and adding individual columns from it.

► **To add a detail section**

1. On Report Design, from the Section menu, choose Create.
2. From Create, choose one of the following:
   - Group
   - Columnar
   - Tabular

   The Director appears to help you select a business view.

3. To create a new section, proceed through the director forms as they appear. See *Report Design Director* for information about using the forms that appear.

Selecting a Business View

Business views are the link between your report and the data in your OneWorld tables. A business view defines the data fields from one or more tables that a report uses. Report Design lets you limit your business column selection to only those columns that you need in your report.

▶ **To select a business view**

1. On Report Design, click inside the detail section.

2. From the Section menu, choose Select Business View.

   The Business View Director form appears.

3. Choose one of the following two options to determine how you select a business view for your report section:
   - Using the Select Business View tab to find a business view
   - Using the Favorite Business Views tab to find a business view

▶ **To use the Select Business View tab to find a business view**

1. On Business View Director, click the Select Business View tab.

2. On Select Business View, click Find or press Enter.

   The form displays a list of all available business views. You can narrow your search by entering search criteria in the QBE line. Search for a business view using the following naming conventions:

   The business view name starts with the letter V and is a maximum of 10 characters. It is formatted as follows: V*xx*zzzzzzzA.
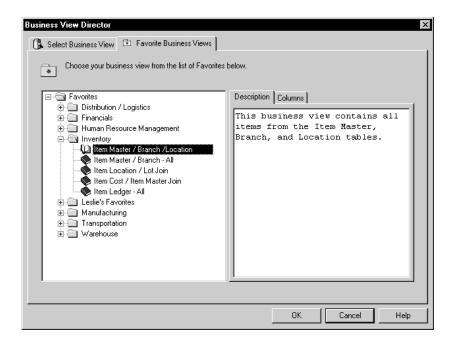
   - *xx* = the product code (55–59 is reserved for clients).
   - *zzzzzzz* = the characters of the primary table.
   - A = the letter to designate the view. For example, V0101A is the first view over the table F0101, and V0101B is the second view over the same table.

3. Choose a business view, and then click OK

See Also
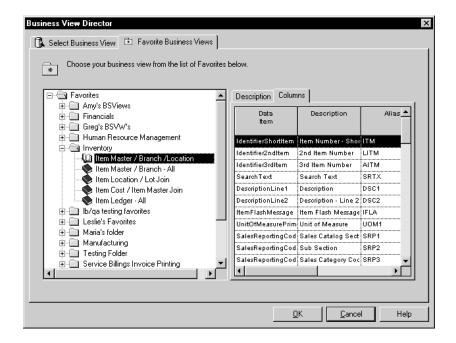
- *Business View Design* in the *OneWorld Development Tools* guide for more information about business views

▶ **To use the Favorite Business Views tab to find a business view**

1. On Business View Director, click the Favorite Business Views tab.

2. From the Favorites list, choose the folder that contains the business view you want to use for your detail section. Click the + icons to expand the folders until you see the business view you want.

3. Click the Description tab to see a brief description of the business view you have chosen.

4. Click the Columns tab to see the data fields that are included in the business view you have chosen.

5. When you have chosen the business view you want to use, click OK.

Whether you chose a business view through the Select Business Views tab or Favorite Business Views, the title bars in the Report Tree and Report View windows now reflect the business view you selected.

See Also

- *Setting up Business Views as Favorites* for information about adding your own business views to this list.
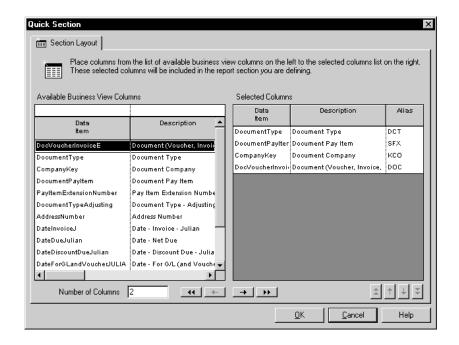
Adding Business View Columns to a Detail Section

Based on the business view selected, you can choose the business view columns to include in or remove from your report.

▶ **To add business view columns to a detail section**

1. On Report Design, click a detail section with an associated business view.

2. From the Section menu, choose Quick Section.

The Quick Section form appears.

3. On Quick Section, from the Available Business View Columns, choose columns, and then do one of the following:

   - Click the right arrow to move one or more columns to Selected Columns.

   - Drag columns to Selected Columns.

   - Click the right double-arrow to move all columns to Selected Columns.

4. To remove a column from your report, from the Selected Columns list, choose the column, and then do one of the following:

   - Click the left arrow or press Delete to remove only the selected columns.

   - Click the left double-arrow to remove all columns.

5. To change the order that the columns appear on your report, from the Selected Columns list, choose the column, and then do one of the following:

   - Click the up or down arrow to move the selected column up or down one line in the list.

   - Drag a column to change its order.

   - Click the up or down double-arrows to move the selected column to the top or bottom of the list.

   If you are creating a group section, the Number of Columns field appears below the Available Business View Columns list. This field determines how Report Design will organize your fields initially in the number of stacks it creates in the section. For example, if you have selected six business view columns and then set Number of Columns to 2, Report

Director arranges the business view columns in two stacks, each three business view columns deep. The first three appear in descending order in the first stack and the last three in descending order in the second. If you set Number of Columns to 3, however, it arranges the business view columns three across and two down. The default value is 2.

BV Column 1	BV Column 3	BV Column 5
BV Column 2	BV Column 4	BV Column 6

Number of Columns = 3

BV Column 1	BV Column 4
BV Column 2	BV Column 5
BV Column 3	BV Column 6

Number of Columns = 2

If you are creating a tabular section, the Description column is automatically added as a column on your report. This column appears in the Selected Columns list on the Section Layout form and appears as the first column on your report.

6. When you finish the layout of your section, click OK.

See Also

- *Adding Smart Fields to an Application Report* for information about how to define smart fields
- *Working with Columns in Tabular Sections* for information about how to define calculations

Defining Section Data Sequencing

OneWorld data fields are stored in tables. Through section data sequencing, you determine the order in which the records of the business view are read from the database and displayed on your report. For example, after selecting the Address Book Update business view (V0101E), you can specify through data sequencing to sequence records from this business view by Search Type.
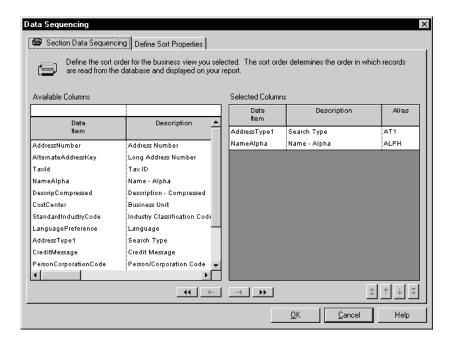
To access English documentation updates, see
https://knowledge.jdedwards.com/JDEContent/documentationcbt/overview/about_documentation_updates.pdf

Because OneWorld can sequence the records in the report by any column in the record (regardless of whether you choose to display the column in the report), the data sequencing columns you select in this task do not need to match the business view columns selected on Section Layout.

▶   **To define section data sequencing**

1. On Report Design, click the detail section for which you created the section layout in the previous task.

2. From the Section menu, choose Define Data Sequence.

   The Data Sequencing form appears.

3. Click the Section Data Sequencing tab.

4. To choose columns for data sequencing, from the Available Columns list, choose columns, and then do one of the following:

   - Click the right arrow to move one or more columns to Selected Columns.

   - Drag columns to Selected Columns.

   - Click the right double-arrow to move all columns.

5. To remove a column from the Selected Columns list, choose the column, and then do one of the following:

   - Click the left arrow or press Delete to remove only the selected columns.

   - Click the left double-arrow to remove all columns.

> **Caution:** If you define a data sequencing column as a level break or page break (as explained in the next task), moving that column from the Selected Columns list back to the Available Columns list could cause unpredictable results.

6. To change the order that the business view columns appear on your report, from the Selected Columns list, choose the column, and then do one of the following:

   - Click the up or down arrow to move the selected column up or down one line in the list.

   - Drag a column to change its order.

   - Click the up or down double-arrows to move the selected column to the top or bottom of the list.

7. When you finish determining the sequence order for your detail section, click the Define Sort Properties tab and proceed with *Defining Sort Properties*.

Defining Sort Properties
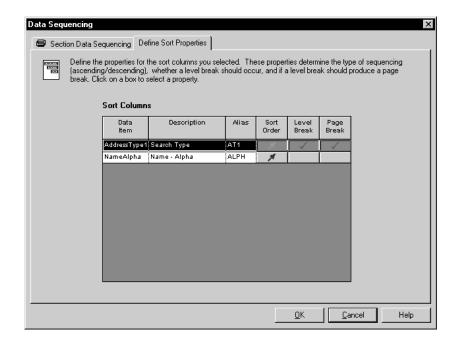
After you choose data fields to use for data sequencing, you can define sort properties for those data fields. These properties determine whether the rows are sorted in ascending or descending order, whether a level break should occur, and whether the level break should produce a page break. For example, you can sequence your information for Search Type in ascending order, designate Search Type as a level break, and have a new page begin for each Search Type.

See Also

- *Working with Level-Break Header and Footer Sections* for detailed information about working with level breaks

▶ **To define sort properties**

1. On the Data Sequencing form, click the Define Sort Properties tab.

2. On Define Sort Properties, complete the following fields, and then click OK:

- Sort Order

- Level Break

- Page Break

To set an object as a page break, you must first set the object as a level break.

Field	Explanation
Sort Order – Ascending/Descending	Objects can be sorted in ascending/descending order within a section.
Level Break	This enables an object to function as a level break indicator. Sections can be joined at level breaks, totals can occur at level breaks, and level-break headers can be triggered at level breaks.
Page Break	This enables an object to function as a page break indicator. Note: An object must be selected as a level break before you can select the object as a page break.

Defining Section Data Selection

Section data selection lets you define criteria whereby only specific, relevant records are included in your report.

The Section Data Selection form filters the data for one detail section only. If your report contains only one detail section, your report will display only the records that match the criteria entered on this form. If you add other detail sections to your report, you must define data selection for each section.

To limit the records retrieved from the OneWorld tables, specify data selection criteria, such as *is equal to* and *is less than* between the following:

- Data fields in the OneWorld tables
- Values that define the data in the data fields, such as ledger types, search types, or account numbers

▶ **To define section data selection**

1. On Report Design, click a detail section for which you have defined section data sequencing and sort properties.

2. From the Section menu, choose Define Data Selection.

   The Data Selection form appears.

3. On Section Data Selection, *Where* is the default value in the Operator column for the first set of criteria.

   For subsequent statements, *And* and *Or* become the available values for the Operator column and are selected by double-clicking the appropriate one.

4. Click in the Left Operand column to display the list of available objects, and then perform one of the following:

   - Scroll through the list until you find the desired object, choose the object, and then double-click the object to populate the Left Operand column.
   - Type the first letters of the object name in the Left Operand field to bring you to the object in the list, and then double-click the highlighted object.

   When you double-click the object for the Left Operand column, the list in the Comparison column automatically appears.

5. Select one of the following comparison operators:

   - is equal to
   - is greater than
   - is greater than or equal to
   - is less than

- is less than or equal to
- is not equal to

6. Click in the Right Operand column to display an available list of objects, special values, or variables. Your choices in this column depend on the choice you made in the Comparison column. Some of the following options could be available:

Blank	Enters a blank (space) value
Literal	Allows you to enter specific values (see the following step for information on entering specific values)
Null	Indicates that no value is associated with the field
Zero	Enters a value of zero
BC	Indicates a business view column available for this report
FI	Indicates a value passed through form interconnection to this report
PC	Indicates the previous constant
PO	Indicates a processing option value for this report
PV	Indicates the previous variable
RC	Indicates a constant from this report
RV	Indicates a variable from this report
SV	Indicates a system variable
SL	Indicates a system literal
VA	Indicates an event rule variable

7. If you chose to enter a literal in the Right Operand column, the form that opens automatically enables you to enter the following:

- Single value

  Enter a single value, and then click OK. For example, a value might be for a particular company.
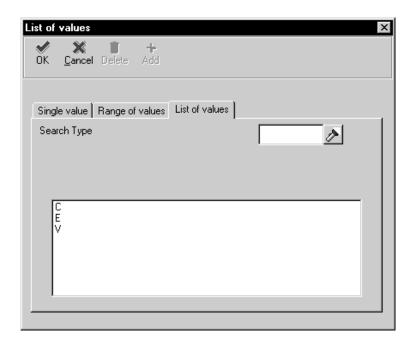
- Range of values

  Enter a range of values, and then click OK. For example, a range of values might include companies from 00001 to 00060. Only *is equal to* and *is not equal to* are valid logical operators when using range of values.

- List of values

  To add values to or remove values from the list, do the following:

  - Type each value in the field, and then press Enter or click the Add button at the top of the form.

  - Repeat this process until your list of values is complete. For example, a list of values might include several user defined codes for search types such as C for Customers, E for Employees, and V for Vendors. Only *is equal to* and *is not equal to* are valid logical operators when you are using list of values.

  - Delete a value by choosing the value, and then click the Delete button at the top of the form.

  - Click OK when you are finished.

8. To delete a line of criteria on Section Data Selection, choose the row header to highlight the row, and then click the Delete button at the top of the form.

9. To change the order of the criteria, choose the row header to highlight the row, and then click the up or down button.

Adding Smart Fields

You can add smart fields to one or more detail sections of your report. Smart fields provide the ability to add complex, reusable calculations to your report. Smart fields are grouped by smart field templates. Therefore, before you can add a smart field, you must first attach a smart field template to the detail section.

Every smart field template is based on a particular business view. If you attach a smart field template to a section and the section's business view is different from the business view required by the smart field template, then the system provides you the opportunity to change the section's business view.

Caution: If the business view attached to the section is not the same as the business view required by the smart field template, then any smart field you add to the section might not function correctly.

Complete the following tasks to add a smart field to a detail section:

- Choosing a smart field template
- Adding a smart field

▶ **To choose a smart field template**

1. On Report Design, choose User Options from the View menu.

2. On User Options, choose the *Allow Smart Field Template Selection* option, and then click OK.

3. On Report Design, click the detail section to which you want to add a smart field.

4. From the Section menu, choose Section Properties.

5. On the Properties form, click the General tab.

6. Choose a smart field template from the Smart Field Template field, and then click OK.

▶ **To add a smart field**

1. On Report Design, choose Smart Field from the Insert menu.

2. On Create New Smart Field, choose a smart field.

The Smart Field Director prompts you to set up the smart field. For more information on using the Smart Field Director, see *Adding Smart Fields to an Application Report.*

Creating Header and Footer Sections

Report header and footer sections and page header and footer sections are special-purpose sections that contain constant, variable, and run-time fields. Typical information to insert in headers and footers includes your company name, the name of your report, the date the report is printed, and page numbers. Because header and footer sections typically provide commentary or system-related information rather than data from tables, they are not associated with business views.

When you create header and footer sections, they are added to the bottom of the report view in Report Design. However, when you print your report, the sections print in the order that is appropriate for the designated type of section.

Creating header and footer sections describes the following tasks:

- Creating a report header
- Creating a report footer
- Creating a page header
- Creating a page footer
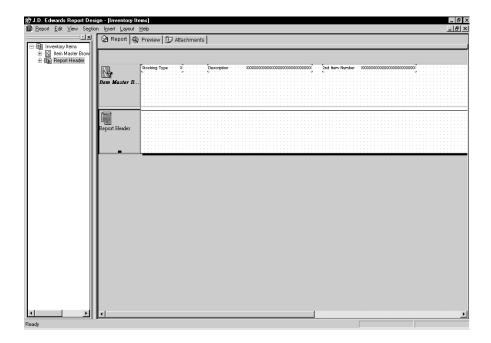
Creating a Report Header

A OneWorld report can contain only one report header, which prints once at the beginning of the report. A report header might include the title of the report or any other special notation.

▶ **To create a report header**

1. On Report Design, from the Section menu, choose Create.
2. From Headers and Footers, choose Report Header.

   An icon is added to the Report Tree window and a frame is added to the Report View window for the report header.

3. Click the report header.

4. Select fields from the Insert menu and add them to your section as needed by dropping them where you want them to appear. You can add any type of data field except business view columns, because there is no business view associated with this section.

   See Working with Objects in Report Sections for more information about adding data fields to a section.

5. From the Section menu, choose Section Properties or double-click in the Report Header section to open the Report Header form.

   The Report Header form appears.

   The properties of a report header are similar to those of a group section. See Working with Objects in Report Sections for more information about modifying these properties.

Creating a Report Footer
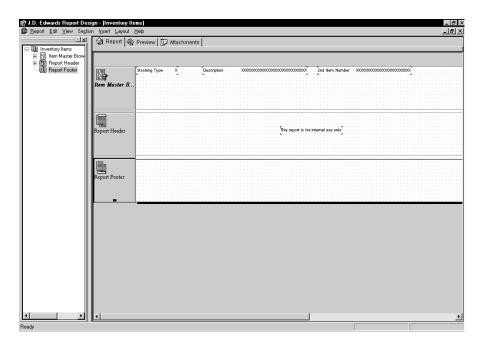
A OneWorld report can contain only one report footer, which prints once at the end of a report. A report footer might include a legal disclaimer or some other text to conclude the report.

▶ **To create a report footer**

1. On Report Design, from the Section menu, choose Create.

2. From Headers and Footers, choose Report Footer.

    An icon is added to the Report Tree window and a frame is added to the report view window for the report footer.

3. Click the report footer.

4. Select fields from the Insert menu and add them to your section as needed by dropping them where you want them to appear. You can add any type of data field except business view columns, because there is no business view associated with this section.

    See Working with Objects in Report Sections for more information about adding data fields to a section.

5. From the Section menu, choose Section Properties or double-click in the Report Footer section to open the Report Footer form.

    The Report Footer form appears.

    The properties of a report footer are similar to those of a group section. See Working with Objects in Report Sections for more information about modifying these properties.

Creating a Page Header

A OneWorld report can contain only one page header, which prints once at the beginning of each report page. A page header might include such data items as a company name, date title, page number, and date.

▶ **To create a page header**
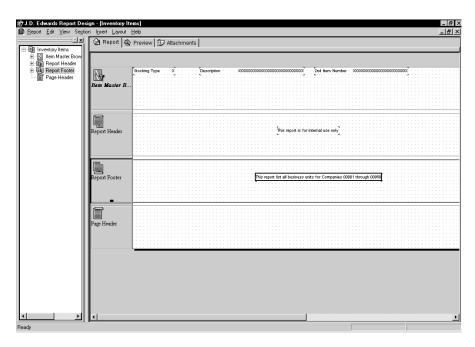
1. On Report Design, from the Section menu, choose Create.

2. From Headers and Footers, choose Page Header.

3. Choose one of the following:

   - Section Only

     This creates a page header without any fields.

   - Auto Create

     This creates a page header with fields for the system date, page number, company name, title, and report name.

   An icon is added to the Report Tree window and a frame is added to the report view window for the page header.

4. Click on the page header.

5. Select fields from the Insert menu and add them to your section as needed by dropping them where you want them to appear. You can add any type of data field except business view columns, because there is no business view associated with this section.

   See *Working with Objects in Report Sections* for more information about adding data fields to a section.

6. From the Section menu, choose Section Properties or double-click in the Page Header section to open the Page Header form.

The Page Header form appears.

The properties of a page header are similar to those of a group section. See Working with Objects in Report Sections for more information about modifying these properties.

Note: You can add extra white space between the report body and the header by placing a blank constant field below the header text. See *Working with Objects in Report Sections* for information about constant fields.

Creating a Page Footer
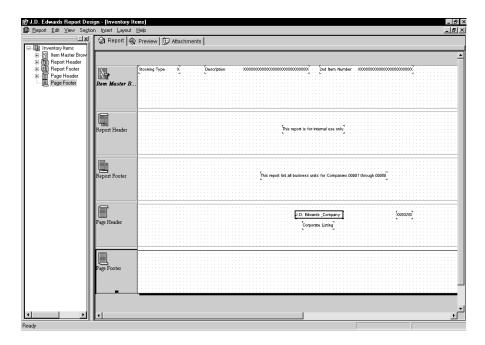
A OneWorld report can contain only one page footer, which prints once at the end of each report page. A page footer might include an explanation about what is found in the report.

▶ **To create a page footer**

1. On Report Design, from the Section menu, choose Create.

2. From Headers and Footers, choose Page Footer.

   An icon is added to the Report Tree window and a frame is added to the report view window for the page footer.

3. Click the page footer.

4. Select fields from the Insert menu and add them to your section as needed by dropping them where you want them to appear. You can add any type

of data field except business view columns, because there is no business view associated with this section.

See Working with Objects in Report Sections for more information about adding data fields to a section.

5. From the Section menu, choose Section Properties or double-click in the Page Footer section to open the Page Footer form.

The Page Footer form appears.

The properties of a page footer are similar to those of a group section. See Working with Objects in Report Sections for more information about modifying these properties.

Note: You can add extra white space between the report body and the footer by placing a blank constant field above the footer text. See *Working with Objects in Report Sections* for information about constant fields.

Working with Level-Break Header and Footer Sections

In a OneWorld report, a set of records that has the same value for one of its fields is said to be in the same *level*. For example, in a report that is sorted by telephone numbers, all records having the same area code would be in the same level. When the value in that field changes, that is known as a *level break*.

Level breaks are useful because you can add processing when they occur. Two special report sections make it easy to add processing to level breaks: they are the *level-break header* and *level-break footer* sections.

Associated with detail sections, level-break headers and footers are used to group large numbers of records into smaller, more manageable units. You can define any data field as a level-break field. When the system processes the report, the level break triggers an event, such as the printing of a heading or total.

You can also designate the level break to cause a page break. For example, you could designate Company as a level-break field and have a new page begin each time the value in the Company field changes.

Level-break headers appear at the beginning of a level to define the information within a detail section. For example, if the level break was associated with telephone numbers, the level-break header would announce the next group of phone numbers within a particular area code.

Level-break footers define the information presented after a level break has occurred in the preceding level. You could use a level-break footer in an employee listing to produce salary totals by department.

You can also conditionalize a level-break header or level-break footer section so that it will print only if you tell it to do so through a processing option. For example, you can create a report in which you want a total to print only when called by attaching the Hide Section system function to the level-break header or footer section in Event Rules. Then, in the Do_Section event you add an event rule for a processing option that will show or hide the section depending on the user's preference.

Working with Level-break header and footer sections contains the following tasks:

- Creating a level-break header
- Hiding the level-break field in the detail section

- Associating a description with a level-break header
- Creating a level-break footer
- Inserting a description into a level-break footer
- Modifying the properties of a level-break header or footer
- Example: Adding level breaks to a detail section

Creating a Level-Break Header

A level-break header presents a descriptive heading that you want to appear at the beginning of a level of records. For example, in a report in which the Company field is a level break, a level-break header could print the company number and its description at the beginning of each level of company. Because of their free-form layout, group sections are used for level-break headers.

▶ **To create a level-break header**

1. On Report Design, click the detail section to which you want to attach a level-break header.

2. From the Section menu, choose Create and then Level Break Header.

   The Level Break form appears.

3. Under the Show heading, choose one of the following options:
   - all columns

     This option displays a list of all available fields in the business view associated with the detail section you created.

   - only existing sort columns
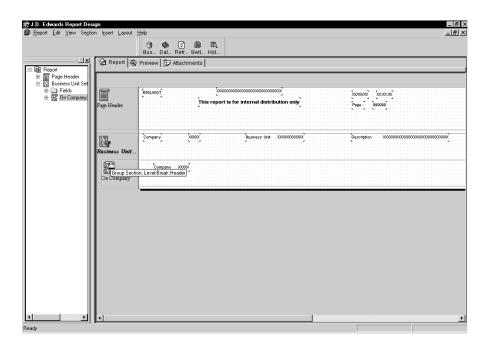
     This option displays the fields you chose as your data sequencing fields when you created the detail section.

4. Choose one of the fields to designate it as a level-break field.

   You can designate another field as a level-break field by modifying the section properties of the level-break header.

5. If you want the field chosen as the level break to appear in the level-break header on the report, turn the *Display selected column as part of this section* option on.

6. Click Finish.

In the report tree, the level-break header appears one branch below the section to which it is attached. In the report view, the level-break header appears within the detail section. The name of the level-break header will usually begin with "On..." to indicate which field of the the section the level break is associated with.

Hiding the Level-Break Field in the Detail Section

After adding the level-break header, you have the same data field in both your level-break section (if you turned on the *Display selected columns as part of this section* option) and your detail section. Because the data field in the detail section is the link to the level-break field, it should not be deleted. However, to avoid having it print in both sections, you can hide the data field in the detail section.

▶ **To hide the level-break field in the detail section**

1. On Report Design, in the detail section, double-click the variable or column variable portion of the level-break field.

   The Variable or Column Variable Properties form appears.

2. On the Advanced tab, turn the Visible option off.

   If you ever need to make this field visible again, in the report tree, double-click the object and turn the Visible option on. See *Configuring Your Design Workspace* for more information about using the report tree window.

Associating a Description with a Level-Break Header

You might want to add a description to the field in your level-break header to make it more meaningful to the report reader. When you associate a description, the system displays the description that relates to the current level-break header record being read. For example, Company 00060 might have a description of Financial Reporting Company associated with it. When the level-break header is processed, this description prints along with the Company number.

▶ **To associate a description with a level-break header**

1. On Report Design, click the variable portion of the level-break header field.

2. From the Edit menu, choose Associate, and then choose Description.

   The cursor changes, allowing you to add the description to the level-break header.

3. Place the Description field anywhere within the level-break header. As with any field, you can drag it to a new location.

4. To change the properties of this field, double-click the field.

   The Associated Description Properties form appears. Change options as required.

Creating a Level-Break Footer

A level-break footer presents information that appears after the level break. Often, fields within the level-break footer are used for accumulating totals. If you are using the level-break footer to accumulate totals, then the values in those fields will be calculated dynamically at run time.

▶ **To create a level-break footer**

1. On Report Design, click the detail section to which you want to attach a level-break footer.

2. From the Section menu, choose Create and then Level Break Footer.

   The Level Break Footer form appears.

3. On Level Break Footer, click of the following options, and then click OK:

   - Group Section
   - Columnar Section

The Level Break form appears.

4. Under the Show heading, choose one of the following options:

    *   all columns

        This option displays a list of all available fields in the business view associated with the detail section you created.

    *   only existing sort columns

        This option displays the fields you chose as your data sequencing fields when you created the detail section.

5. Choose one of the fields to designate it as a level-break field.
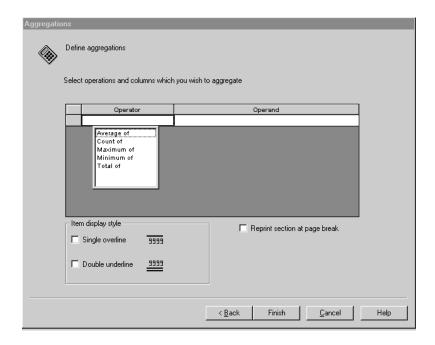
    You can designate another field as a level-break field by modifying the section properties of the level-break footer.

6. If you want the field chosen as the level break to appear in the level-break footer on the report, turn the *Display selected column as part of this section* option on.

7. Click Next.

    The Aggregations form appears.

    An *aggregate object* is an object that holds the result of a calculation on the values in other fields. For example, the calculation could be a sum of values, an average of values, or a count of how many records exist. After adding a level-break footer and assigning the totaling conditions to the aggregate object within the level-break footer, you might need to change the totaling conditions to meet other reporting requirements.

    In Report Design, hover the mouse cursor over the aggregate object; the fields in the detail section upon which the aggregate's calculations are based change color.

8. Define the Operator and Operand. The Operator logic you choose determines your choice of Operands. Choose one of the following Operators:

Average of   Reports the average of all the amounts in the column

Count of   Reports how many entries or records are in the column

Maximum of   Reports the maximum amount for a record in this column

Minimum of   Reports the minimum amount for a record in this column

Total of   Reports the sum of the values in this column
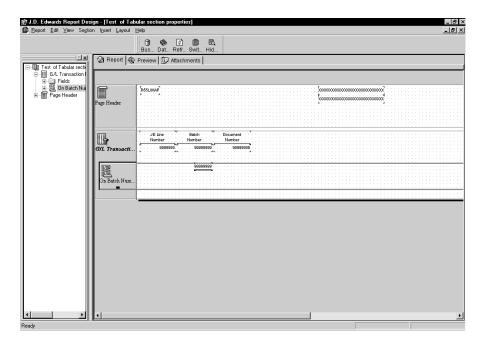
9. Click one of the following options under the Item display style heading:
   - Single overline
   - Double underline

10. Click *Reprint section at page break,* if necessary.

    This option causes the last line from the previous page to be reprinted as the first line of the next page.

11. Click Finish.

At any time in the future, you can modify the aggregate object or add additional aggregate objects by clicking the level-break footer and choosing Add Aggregates from the Section menu.

In the report tree, the level-break footer appears one branch below the section to which it is attached. In the report view, the level-break footer appears within the detail section. The name of the level-break footer will usually begin with "On..." to indicate which field of the the section the level break is associated with. The level-break footer field appears below the column that it is totaling.

See Also

- See *Aligning Fields or Columns within or across Report Sections* for information about aligning the level-break field with columns in the detail section

Inserting a Description into a Level-Break Footer

You might want to add a description to the field in your level-break footer to make it more meaningful to the report readers.

▶ **To insert a description into a level-break footer**

1. On Report Design, click the level-break footer section.
2. From the Insert menu, choose Constant Field.

3. Insert the constant field by clicking in the level-break footer where you want the object to appear.

4. Double-click the constant field to open the Constant Properties form.

5. Change the Name field to a meaningful description.

If you chose to display the selected column as part of the section when you created the level-break footer, a description might already exist. You can change the text by double-clicking the constant part of the variable and changing the wording on the resulting Constant Properties form. See *Working with Objects in Report Sections* for more information about changing an object's associated text description.

Modifying the Properties of a Level-Break Header or Footer

After you create the level-break header or footer, you can modify its properties, for example, to format the text that appears on the report. A level-break header is always a group section. A level-break footer might be either a group or columnar section. For more information about modifying section properties, see *Working with Objects in Report Sections*.

Example: Adding Level Breaks to a Detail Section

For this example, you will modify the example report described in *Creating a Columnar Report*. See that task for information about creating the base report. The report below differs from that report only in that a level-break header and footer has been associated with the business unit column.

Note the fact that even though an aggregate function is being performed on one column (totaling the salaries), that field is not designated as a level break. Business unit is the level break for the footer because the report totals all of the salaries in each business unit.
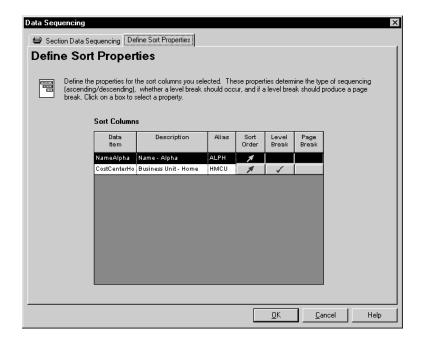
```
R5607COL                        J.D. Edwards & Company              11/23/99  16:18:42
                                                                    Page -        1

Home Business Unit      9       Corporate Administration
   Address              Alpha               P      Orig        Annual
   Number               Name                C      Start       Salary
        6002  Abbott, Dominique             S     4/10/99      38,000.00
        6044  Abrams, Brooke                S     4/18/98      60,000.00
        6001  Allen, Ray                    S     8/15/90      75,000.00
        8014  Anderson, Jeanette            S     2/1/98       53,040.00
        6832  Ato, Connie                   S     2/15/97      38,250.00
                                                              264,290.00

Home Business Unit      6100    Protective Services
        4803  Beck, Jeremy                  H     3/22/00      45,000.80
                                                               45,000.80

Home Business Unit      7071    Corporate Administration
        7703  Bellas, Debbie                S     3/15/97      53,000.00
```

▶ **To add level breaks to a detail section**

1. Launch the Report Design tool and open the R5607COL report.

2. Click the columnar section and from the Section menu, choose Define Data Sequence.

   The Section Data Sequencing form appears.

3. Using the horizontal arrow buttons, choose the Business Unit – Home business view column and move it to the right side of the Section Data Sequencing form.

4. Click the Define Sort Properties tab and enable level breaking for the Business Unit – Home. Then click OK.

Because this report was not set up originally for level-breaks, steps 2 through 4 were necessary to define the level break.

5. To create the level-break header, from the Section menu, choose Create Level Break Header.

   The Level Break form appears.

6. Choose Business Unit – Home and choose to display the data field in the header, and then click Finish.

   Report Design displays the header section within the columnar section.

7. The sample report includes a description for Business Unit – Home as well as its number. To include the description, click the variable part of the

Business Unit – Home field and from the Edit menu choose Associate Description. Click in the header section to place the description field, and then move it next to the Business Unit – Home field.

8. The sample report does not repeat the Business Unit – Home column in the columnar section. To hide the field, double-click Home Business Unit in the columnar section, click the Advanced tab on the resulting Properties form, and choose to make the section not visible. Then click OK.

9. To create the level-break footer, click the columnar section and from the Section menu choose Create Level Break Footer.

   The Level Break Footer form appears.
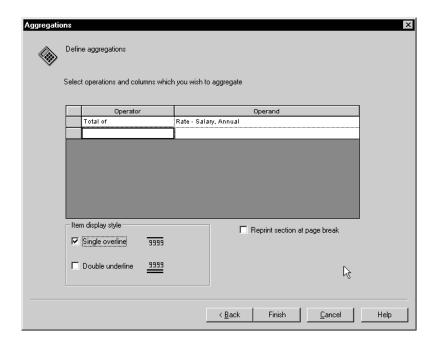
10. Because the columnar section is visible and the example lines up the salary totals with the salary columns, choose Group Section and click OK.

    The Level Break form appears.

11. Choose Business Unit – Home and click Next.

    Because the example does not display the words Home Business Unit in the footer by the totals, do not choose to display the column in the footer section.
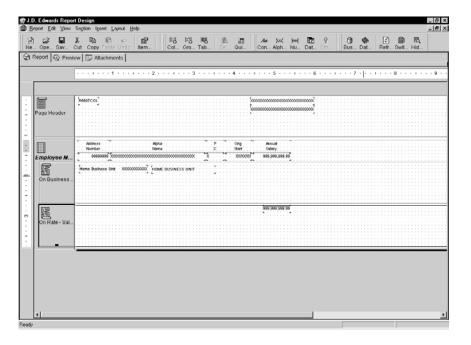
    The Aggregations form appears.

12. To sum the annual salaries for each business unit, set the Operator to Total of and set the Operand to Rate – Salary, Annual. Choose a single overline and click Finish.

    Report Design displays the footer section within the columnar section.

Note that the order of the header and footer sections within the columnar section have no bearing on how they appear in the printed report.

13. Click the Preview tab to see the report. It should look similar to the sample report illustration at the beginning of this section.

Joining Subsections

Suppose you need to create a report, and none of the business views available have all of the data fields required for the report. Must you immediately create your own business view to include all the required fields? Not necessarily. Rather, you can create two sections in your report with two different business views that share common fields. Then, you can join these two sections by using a process called a *subsection join*. A link is established between the two sections by using the common fields that exist between the business views. The two sections are referred to as the *parent* (generally a master table) and *child* (generally a secondary table) sections. The parent section regulates the processing of the report. After each field in the parent section is processed, all of the corresponding records in the child section are processed.

For example, you can create a report to join Accounts Payable Voucher (V0411V) information to General Ledger Distribution (V0911G) information. Because the A/P Voucher and G/L Ledger business views both include the Document Type and Document Number fields, you can establish the subsection join based on these fields.

Perform the following tasks:

- Creating a subsection join
- Modifying or severing a subsection join
- Joining two existing detail sections

Creating a Subsection Join

You can create a join between two sections that share common business view fields by using a process called a *subsection join*.

Before You Begin

❑ This documentation assumes that the detail section to be used as the parent section has already been created. If this detail section is not created, see *Creating Detail Sections* for information about creating the parent section.

▶ **To create a subsection join**

1. On Report Design, click the detail section to be used as the parent section.

2. From the Section menu, choose Create.

3. From Create, choose Sub-Section Join.

4. From Sub-Section Join, click one of the following options to create the child section:

   - Group
   - Columnar

   The Report Director appears to help you select a business view.

   Choose the business view for the child section in the same way as you would for any detail section. The business view you choose for the child section must have at least one field that is also in the business view for the parent section.

   See *Selecting a Business View* for more information about finding a business view.

   After you select a business view, the Section Layout form appears.
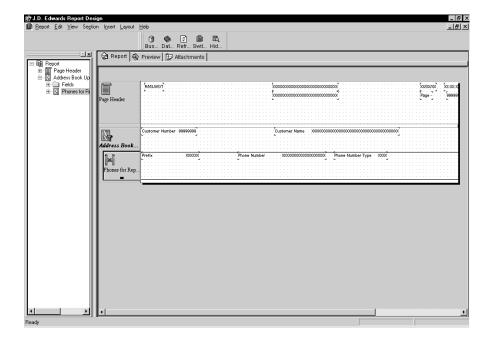
5. Choose the business view columns to include in the child section and click Next.

   The Sub Section Join form appears.

6. Under the Parent heading, click the following field and choose the parent section to which you want to join the subsection:

   - Join to

7. Choose business view columns from the list boxes in the Child columns that are common with the business view columns in the Parent columns.

8. Click the following option as necessary:

   - Join only at level breaks defined in the parent section

     This option processes the records in the child section only after all records for defined level breaks in the parent section have first been processed. This is critical when joining tables that have a many-to-many relationship, for example, a detail file joined to a transaction file.

9. After you have completed entering columns in the child section to join with the parent section, click Finish.

10. The child section has a chain-link icon indicating that it is now joined to and resides within the borders of the parent section.

11. If necessary, define data sequencing for the child section by performing the following:

   - Click the child section.

   - From the Section menu, choose Define Data Sequence.

   - From the Data Sequencing form, choose any data fields that you want to use to sequence your report.

   - Click OK.

12. Modify the fields in the child section, as necessary, to enhance the report's appearance.

Modifying or Severing a Subsection Join

After creating a subsection join, some modification might be required. For example, you might need to change the fields on which the sections are joined. You can also choose to sever the join between the two sections.

▶ **To modify or sever a subsection join**

1. On Report Design, to make modifications to the subsection join, double-click the child section, or, from the Section menu, choose Section Properties.

The Columnar Section or Group Section form appears depending on what section type you used to create the child section.

2. From the Sub Section Join tab, modify as necessary.

3. To sever a join, click the Sub Section Join tab, and click No Join.

4. Click OK. The child section is now separated from the parent section.

Joining Two Existing Detail Sections

If your report contains two detail sections that share common business view fields, you can create a subsection join between these two sections.

▶ To join two existing detail sections

1. On Report Design, click the detail section you want to join to another section in the report. This section will become the child section.

2. From the Section menu, choose Sub-Section Join.

   The Define Sub-Section Join form appears.

3. Under the Parent heading, click the following field and choose the parent section to which you want to join:

   - Join To

4. Choose columns from the list boxes in the Child columns (data fields from the business view of the child section) that are common with the columns in the Parent columns (data fields from the business view of the parent section).

5. Choose the following option as necessary:

   - Join only at level breaks defined in the parent section

     This option processes the records in the child section only after all records for defined level breaks in the parent section have first been processed. This is critical when joining tables that have a many-to-many relationship, for example, a detail file joined to a transaction file.

6. After you have completed entering columns in the child section to join with the parent section, click OK.

7. The child section has a chain-link icon indicating that it is now joined to and resides within the borders of the parent section.

To access English documentation updates, see
https://knowledge.jdedwards.com/JDEContent/documentationcbt/overview/about_documentation_updates.pdf

Working with Objects in Report Sections

Report sections can contain numerous report objects. These objects are data fields. A specialized type of data field is a column. This chapter discusses the functional properties of various report objects.

Complete the following tasks:

- Working with business view columns
- Understanding data fields
- Working with tabular sections

See Also

- *Modifying the Appearance of Report Objects* for information about changing a data field's size, font, color, and so forth

Working with Business View Columns

You can add business view columns to and remove them from any detail section that has a business view associated with it.

▶ To add or remove a business view column in a detail section

1. On Report Design, click the detail section with the business view attached that contains the columns you require.

2. From the View menu, choose Business View Columns Browser.

   The form that appears lists the columns in the business view associated with the section.

3. Drag one or more columns to your detail section.

4. To close the Business View Columns Browser, from the View menu, click Business View Columns Browser, or click the Close (X) button on the title bar of the form.

5. To move the column, drag it to the new location.

6. To remove a column, choose it (either the header or the body) and from the Edit menu, choose Delete.

Understanding Data Fields

Residing in report sections, data fields are individual data containers. Page numbers, dates, and the name of the report are all examples of data fields. You can add data fields to any type of report section, although not every data field type can be added to every report section type. You might have already added some data fields such as report name, date, and so forth to the report when you created it.

After creating the report, you can add and delete data fields, and you can modify how they function and how they appear by revising their properties.

The following describes the data fields that you can insert directly:

Constant Field	A static item used to display a string of text, such as a company name inserted in the page header. Constant fields may be inserted into any report section.
Alpha Variable	A field used to hold alphanumeric information defined by an event rule. Alpha variables can be inserted into any report section.
Numeric Variable	A field used to hold numbers, typically used in conjunction with calculation columns. Numeric variables can be inserted into any report section.
Date Variable	A field used to hold dates. Date variables can be inserted into any report section.
Report Date	A run-time field used for the date the report is run. Report dates can be inserted into any report section except columnar and tabular.
Report Time	A run-time field used for the time the report is run. Report times can be inserted into any report section except columnar and tabular.
Page Number	A run-time field used for the current report page number. Page numbers can be inserted into any report section except columnar and tabular.
Page n of Total	A run-time field used for the current report page number with the total number of pages in the report appended (such as "Page 4 of 10"). Page n of total can be inserted into page headers and footers only.

Company Title	A run-time field used for the name of the default company (company 00000). Company titles can be inserted into any report section except columnar and tabular.
Report Title	A run-time field used for the title of the report. A report title can be inserted into any report section except columnar and tabular.
Data Dictionary Field	A glossary from the data dictionary. Data dictionary fields can be be inserted into any report section.

Data fields inserted into columnar and tabular sections appear in columnar format. The heading is a constant and the body is a variable. The heading and body are linked so that if you move or delete one, Report Design moves or deletes the other.

In group sections, data fields are also made of a constant and a variable portion, although initially they appear side by side instead of in a columnar format. Unlike columnar and tabular sections, however, the two components can be moved independently of each other. Furthermore, by disconnecting the two, it is possible to separate the constant from the variable and to delete it without deleting the variable.

You can modify the appearance of a data field by changing its heading, moving it, changing its size, font, or color, or associating lines or a box with it. You can modify the behavior of a data field by associating an event rule with it.

This topic describes the following tasks:

- Adding or removing data fields in a report section
- Changing a data field's variable name
- Changing a column header's text
- Disconnecting constant text from its variable in a group section
- Changing decimal scaling
- Performing in-section totaling

See Also

- *Modifying the Appearance of Report Objects* for information about changing a data field's size, font, color, and so forth
- *Working with Event Rules* for information about creating event rules and associating them with a data field

► **To add or remove a data field in a report section**

1. On Report Design, click the report section you want to modify.

2. From the Insert menu, choose the field you want to add.

   Your data field choices vary based on the report section you selected.

   In columnar and tabular sections, the data field is automatically inserted to the *right* of any column on which you are focused. If you did not focus on a specific column, the field is inserted to the *left* of the first column.

   In group sections, you must click in the group section to place the data field after selecting it from the Insert menu.

3. To move the field or column, drag it to the new location.

4. To remove a data field, click it and choose Delete from the Edit menu.
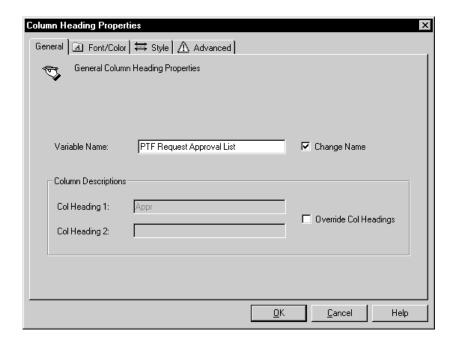
► **To change a data field's variable name**

A change in the variable name of a constant field in any section except columnar and tabular sections will be reflected on the report itself. All other variable name changes do not affect the data field's appearance directly. If you change a component's variable name, you should change it's partner's variable name as well to make managing the data field easier (especially if you will be attaching event rules to the data field).

1. On Report Design, double-click the data field you want to change.

   An appropriate Properties form appears.

2. If the data field is based on a business view column, you must override the business view column name by clicking Change Name or Override Name.

The Variable Name field is disabled until you click Change Name or Override Name.
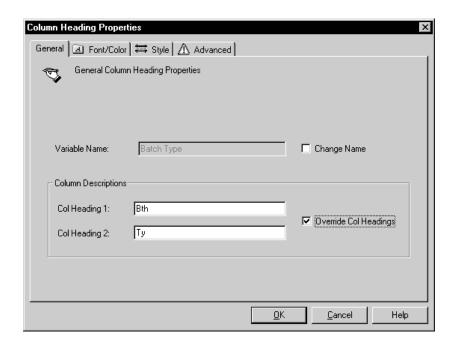
3. Change the text in the Variable Name field and click OK.

▶ **To change a column header's text**

You should to change a data field's variable name to match its column name if you change its column name to make managing the data field easier (especially if you will be attaching event rules to the data field).

1. On Report Design, double-click the column header you want to change.

The Column Heading Properties form appears.

2. If the column is based on a business view column, you must override the business view column names by clicking Override Col Headings.

   The Column Description fields are disabled until you click Override Col Headings.

3. Change the text in the Col Heading 1 and Col Heading 2 fields and click OK.

   Columns can have two-line headings. Col Heading 1 corresponds to the top line of the column heading, and Col Heading 2 to the bottom.

► **To disconnect constant text from its variable in a group section**

At times you might want to separate the text from the variable that it describes. For example, your report might contain a data field called Business Unit and another field called Description. Changing the constants of the two data fields to read Business Unit Number and Name might render the report easier to understand. By disconnecting the text from the variable, you can still retrieve the value for Business Unit from your OneWorld table; however, you can present the data to the reader with a more meaningful description.

Caution: After you disconnect constant text from its variable, the two cannot be reconnected on the report. If necessary, you can delete the disconnected text and variable and then place the business unit column on the report again. The new data field will appear as it did originally, a constant field linked to its variable.

1. Click the constant or its associated variable.

2. From the Edit menu, choose Disconnect.

3. You can now move, format, or delete the text and the variable independently.

Changing Decimal Scaling

Decimal scaling allows you to simplify the way in which a report displays large numbers. For example, if your report were scaled to 1000, the report would display the following amounts as follows:

Original Value	Displayed Value
100,000.42	100
10,041.62	10
1,021.75	1
1,512.69	1.5

Complete the following tasks:

- Changing decimal scaling for a field
- Changing decimal scaling for all fields in a report section
- Changing decimal scaling for all fields in a report

▶ **To change decimal scaling for a field**

1. Double-click the field you want to change.

   Depending on the section type, an appropriate Properties form appears.

2. Click the Decimal Scaling tab and select the level of decimal scaling you want.

   To return all the section's fields to their default decimal scaling settings, click Defaults.

3. When finished, click OK.

▶   **To change the decimal scaling for all fields in a report section**

1. On Report Design, double-click the report section you want to change, or click the section and choose Section Properties from the Section menu.

    Depending on the section type, an appropriate Section form appears.

2. Click the Decimal Scaling tab and select the level of decimal scaling you want.

    To return all the section's fields to their default decimal scaling settings, click Defaults.

    Changes you make on this form will affect all numbers in the section except for those fields that have been changed individually. To override individual settings and apply the changes to all fields in the section without exception, choose Apply settings to all Objects.

3. When finished, click OK.

▶   **To change decimal scaling for all fields in a report**

1. On Report Design, from the Report menu, choose Report Properties.

    The Properties form appears.

2. Click the Decimal Scaling tab and select the level of decimal scaling you want.

    To return all the report's fields to their default decimal scaling settings, click Defaults.

    Changes you make on this form will affect all numbers in the report except for those fields that have been changed individually. To override individual settings and apply the changes to all fields in the report without exception, choose Apply settings to all Objects.

3. When finished, click OK.

Note: Changes to properties on the report level are not reflected in the report's existing batch versions.

Performing In-Section Totaling

Most of the time, when you perform a calculation on a column, you want to format and display the total in a way that makes the report easy to read. In these cases, you typically perform the totalling in a level-break footer. Occasionally, you might not be concerned with how the calculation is displayed, however. For

example you might perform a calculation in one hidden section for use in another. When formatting is not an issue, you can perform calculations easily within a section. You can calculate a total, a grand total, or both.

▶   **To perform in-section totaling**

1. On Report Design, choose Report Properties from the Report menu.

2. On Properties, choose one or both of the following options, and then click OK:

    • Print Totals Only

    • Print Grand Totals

3. Double-click the variable portion of a numeric column for which you want to calculate a total.

4. On Column Variable Properties, click the Totaling tab.

5. Choose one or both of the following options:

    • Total

    • Grand Total

    These two options correspond to the two options you selected in step two. You must choose Print Totals Only on the Properties form for the Total function to work correctly. Likewise, you must choose Print Grand Totals on the Properties form for the Grand Total function to work correctly.

6. Choose an aggregate function, and then click OK.

    Depending on the options you selected, the system adds one or two lines to the bottom of each column before each section break. If you selected both Total and Grand Total, the Total line appears before the Grand Total line. The lines are not labeled; in fact, except for the column showing the total, information for each column is repeated in the total line.

Working with Tabular Sections

Tabular sections are a specialized type of columnar section that present report data in columns, rows, and cells. When you include data fields that display numeric values, tabular sections automatically total the values in the fields. For example, if you include an object that displays Open Amounts, tabular sections will calculate a grand total of all the Open Amounts in the section.

When you create a tabular section, observe the following guidelines for columns, rows, and cells:

Defining columns only	Define columns when you base the information for your report solely on the data contained in tables. When you define columns only, Report Design creates rows based on selection, sequence, and level break criteria that you provide.
Defining columns and rows	Row information is set up horizontally on your report. Define rows in addition to columns when you include details in your report such as underlines, spaces, and blank lines, as well as special calculations, such as interim totals. Tabular sections are the only detail section for which you can define rows.
Defining columns, rows, and cells	A cell is the intersection of a column and row. Define cells if you want to override information defined by columns and rows in individual cells.

This topic contains the following tasks:

- Working with columns in tabular sections
- Working with rows in tabular sections
- Overriding the properties of individual cells

Working with Columns in Tabular Sections

Although columnar and tabular sections both contain columnar data, tabular sections differ from columnar sections in that they offer a variety of special-purpose columns as well. These special column types are discussed in the following tasks:

- Creating smart field columns
- Defining calculation columns
- Understanding the Description Column

Creating Smart Field Columns

Smart fields are data dictionary items (glossary group K) designed to retrieve and manipulate specific OneWorld table data. For example, by adding the smart field FINRPTAB - Account Balance to your report, you create a column that calculates the account balance as of the specified financial period and fiscal year.

Smart fields call business functions or named event rules. Business functions are programs that use data structures to do the following:

- Request specific data from OneWorld tables

- Return the data to the established parameters in the data structure

- Perform some type of calculation or other manipulation on the data

- Send the desired information, such as column headings and complex calculations, to your report

A named event rule is a business function created using the event rules scripting language. This scripting language is platform independent and is stored in a database as a OneWorld object.

Because the smart fields have already been created for you, you can include complex logic in your report without having to do any programming.

When you choose to create a smart field from the Column menu, the smart field director leads you through a series of forms to help you set up the smart field parameters and values. The option to create smart field columns is grayed out if there are no smart fields associated with the attached business view.

▶ **To create or delete smart field columns**

1. On Report Design, click the tabular section you want to change.

2. From the Column menu, choose Create.

3. From Create, choose Smart Field.

   The Create New Smart Field form appears with a list of smart fields included in the template associated with the section.

4. Choose the smart field that you want to work with, and then click Next.

   See *Adding Smart Fields to an Application Report* for information about working with the smart field forms that appear.

5. Repeat steps 1–4 for each smart field column that you want to create.

6. To move the column, drag it to the new location.

7. To delete the column, click it and select Delete from the Edit menu.

Defining Calculation Columns

Calculation columns contain values that are the result of a mathematical calculation. You can perform a calculation involving any number of columns or no columns. The columns that the calculations are performed on can include

any columns in the business view, including columns that contain smart fields or other calculations.

Caution: Calculation columns are based on the amount signs as they appear in the report, not the actual value (debit or credit).
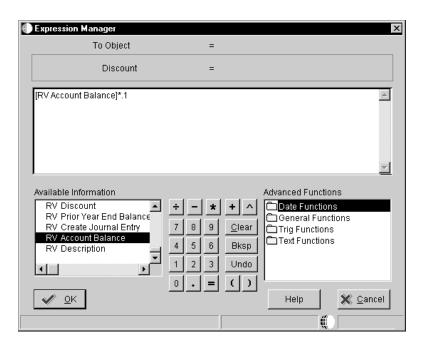
Perform the following tasks:

- Defining calculation columns
- Removing a column calculation

▶ **To define calculation columns**

1. On Report Design, insert a field (usually a data dictionary or numeric variable field) into the tabular section. This field will hold the calculated value.

2. To move the column, drag it to the new location.

3. Click the newly created column.

4. From the Column menu, choose Define Calculation.

   The Expression Manager form appears.

5. On Expression Manager, define your calculation by performing the following, then click OK:

- First, double-click fields from the Available Information list.
- Second, click the calculator functions to build your expression.
- Repeat until your calculation expression is complete.

▶ **To remove a column calculation**

1. On Report Design, click the Column variable that has a calculation attached.

2. From the Column menu, choose Remove Calculation.

   The Remove Calculation form appears asking if you want to delete the calculation for this column.

3. Click Yes.

See Also

- *Creating an Event Rule Assignment* for information about attaching a calculation to a column

Field	Explanation
Calculator Pad – Expression Manager	Inserts mathematical operators and numbers in the expression editing field and performs the following editing functions: clear, backspace and undo.
Advance Functions – Expression Manager	Displays a list of advanced function categories. click a category to drill down to a specific date, general, trigonometry, or text function.

Understanding the Description Column

When you create a report using a tabular section, the Description column is automatically included. When the report prints, the data in this column is based on fields designated as level-break fields. If the system cannot retrieve a description for the field (the field must have a data dictionary trigger), the key for the field is printed instead. For example, if the level-break field is company 00001, the description Financial Reporting Company will print if a trigger exists. Otherwise, the key 00001 will print.

Except as noted below, at the lowest level break of a tabular section, this column becomes the row description. At higher level breaks, the Description column becomes level-break header or footer text.

The Description column has a special functional capability for level breaks associated with the Subledger, Cost Object, and Object Subsidiary fields. When a

row of a tabular section prints due to a level break caused by a change in one of the following fields, the Description row automatically appears.

- Subledger and Subledger Type
- Cost Object and Cost Object Type
- Object Subsidiary and Object Subsidiary Type

To create a Description column manually, choose Create and then choose Row Description Column from the Column menu. To move the column, drag it to a new location.

Working with Rows in Tabular Sections

In a tabular section, a row consists of information that is set up horizontally. Typically rows contain data that is read from individual database records; however, you can add rows to include details in your report such as underlines, blank lines, and special calculations. Tabular sections are the only detail sections for which you can define rows. In all cases, after creating a row, you can move it by dragging it to the desired location, or you can delete it by clicking it and selecting Delete from the Edit menu.

Complete the following tasks:

- Adding a data row
- Adding a calculation row
- Adding a sum row
- Adding an underline row
- Adding a constant row
- Automatically generating rows
- Defining a percent calculation

Adding a Data Row

Data rows contain data from OneWorld tables. They represent groups of data fields that are associated with the columnar amounts. For example, you could have a data row that tells you the Revenue (Column) for a certain range of items. In addition, you might add a row that tells you the direct costs for another range of fields. You must define the rows and identify the data from the business view that goes into them.

▶ **To add a data row**

1. On Report Design, click your tabular section.
2. From the Row menu, choose Create and then choose data.

The Data Row Properties form appears.

3. Click the General tab and complete the following fields:

   - Name

     The Name appears in the Name field on the Tabular Section - Row List tab and on the Sum Row Properties form.

   - Description

     The Description appears on the report, in the Description field on the Tabular Section - Row List tab, and in the Description field on the Sum Row Properties form. This can be multiple lines to allow for as much description as needed. You must enter spaces in front of text to allow for indentation on the report.

4. Set other properties as desired and click OK.

   The Data Selection form appears.

5. On Data Selection, define the specific criteria you want applied to the data row, and then click Save.

   At any time in the future, you can modify the data selection by clicking this row and choosing Define Data Selection from the Row menu.

6. Add data rows as needed.

   To add rows directly beneath the last row you worked on, make certain that the last row is selected on your report section (indicated by a black box around the row).

See Also

- *Choosing Records to Include in the Tabular Section* for additional information about selecting data

Adding a Calculation Row

Calculation rows contain amounts calculated from other rows. For example, you could calculate the gross margin of the Revenue and Direct Costs rows.
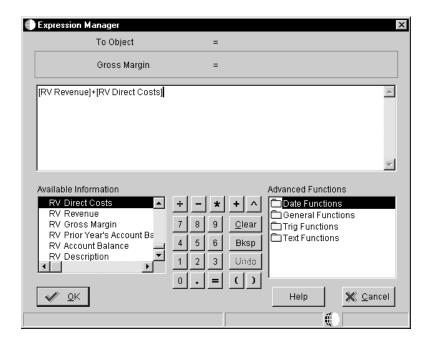
▶   **To add a calculation row**

1. On Report Design, click a tabular section.

2. From the Row menu, choose Create and then choose Calculation.

The Calculation Row Properties form appears.

3. Click the General tab and complete the following fields:

   - Name

   - Description

4. Set other properties as desired and click OK.

   The Expression Manager form appears.

5. On Expression Manager, define your calculation, and then click OK.

6. Add calculation rows as needed.

   To add rows directly beneath the last row you worked on, make certain that the last row is selected on your report section (indicated by a black box around the row).

See Also

   - *Creating an Event Rule Assignment* for information about attaching an expression to a calculation row
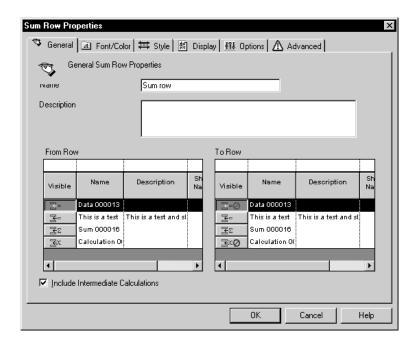
Adding a Sum Row

The sum row defines a special type of calculation. The calculation performs totaling for all numeric columns in a range of rows. The total will optionally include or exclude rows within the sum range that are themselves row calculations.

▶ **To add a sum row**

1. On Report Design, click your tabular section.

2. From the Row menu, choose Create and then choose Sum Row.

   The Sum Row Properties form appears.

3. Click the General tab and complete the following fields:

   - Name

   - Description

     The Description appears on the report. This can be multiple lines to allow for as much description as needed. You must enter spaces in front of text to allow for indentation on the report.

   - From Row

     From Row lists rows that can be used as the beginning row in a range of rows.

   - To Row

     To Row lists rows that can be used as the ending row in a range of rows.

- Include Intermediate Calculation

  Choose whether interim calculation rows should be included in the sum.

4. Set other properties as desired and click OK.

5. Add sum rows as needed.

   To add rows directly beneath the last row you worked on, make certain that the last row is selected on your report section (indicated by a black box around the row).

Adding an Underline Row

Underline rows let you create an underline to separate various rows in your report.

▶ **To add an underline row**

1. On Report Design, click your tabular section.

2. From the Row menu, choose Create and then choose Underline.

   The Underline Row Properties form appears.

3. Click the General tab and complete the following field:

   - Name

4. Set other properties as desired (click the Font/Color tab to modify the line's color; click the Options tab to modify the line's thickness and spacing).

5. Add underline rows as needed.

   To add rows directly beneath the last row you worked on, make certain that the last row is selected on your report section (indicated by a black box around the row).

6. Click OK.

Adding a Constant Row

Constant rows contain text only. They are used to describe or label information on your report, such as identification information for a group of rows.

▶ **To add a constant row**

1. On Report Design, click your tabular section.

2. From the Row menu, choose Create and then choose Constant.

The Constant Row Properties form appears.

3. Click the General tab and complete the following fields:

   - Name
   - Description

4. Set other properties as desired and click OK.

5. Add constant rows as needed.

To add rows directly beneath the last row you worked on, make certain that the row is selected on your report section (indicated by a black box around the row).
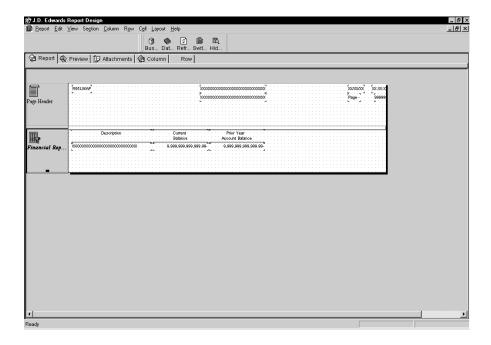
Automatically Generating Rows

In a tabular section, OneWorld can automatically generate rows that define a Chart of Accounts for a business unit or represent the merging of accounts from several business units. Additionally, you have the option to create rows that calculate account rollup totals at various levels of detail. For example, you might want OneWorld to automatically generate rows to create a balance sheet report based on a company's current month and its prior year account balance.

▶ **To automatically generate rows**
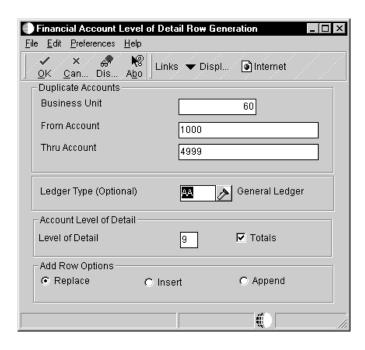
1. On Report Design, click a tabular section.

This example illustrates a financial report with two smart field columns based on the FINRPTAB - Account Balance and FINRPTPC - Prior Year's Account Balance.

2. From the Row menu, choose Automatic Row Generation.

    The Financial Account Level of Detail Row Generation form appears.

3. Complete the following fields, and then click OK. Depending on how the section is designed, some fields might not appear on the form.

- Business Unit

  You can enter a business unit and an account range. Based on the Chart of Accounts defined for the business unit, the program generates all row specifications within that account range.

- From Account

  If you leave the From Account and Thru Account fields blank, no accounts are generated.

- Thru Account

  If you leave the From Account and Thru Account fields blank, no accounts are generated.

- Ledger Type (Optional)

  If a ledger type is specified, the ledger type is included in the data selection for that row.

- Account Level of Detail

  Optional account level of detail rows can be generated at level of detail breaks. The default is to generate total rows. The row amounts are based on account ranges specified through selection criteria.

- Totals
- Add Row Options

  The range of rows generated are either appended to the bottom of existing rows or inserted after a selected row, or all previously defined rows are replaced. The default is to replace any existing rows. However, the append and insert options are useful for building hybrid account structures from several different business units.

Field	Explanation
From Account	Identifies the beginning object account in a range of accounts. Only amounts posted to accounts in this range are allocated.
Thru Account	Identifies the ending object account in a range of accounts. Only amounts posted to accounts in this range are allocated.

Field	Explanation
Ledger Type (Optional)	A user defined code (09/LT) that specifies the type of ledger, such as AA (Actual Amounts), BA (Budget Amount), or AU (Actual Units). You can set up multiple, concurrent accounting ledgers within the general ledger to establish an audit trail for all transactions.
Level of Detail	A number that summarizes and classifies accounts in the general ledger. You can have up to 9 levels of detail. Level 9 is the most detailed and Level 1 is the least detailed. Levels 1 and 2 are reserved for company and business unit totals. When you are using the Job Cost system, Levels 8 and 9 are reserved for job cost posting accounts. Example:

3	Assets, Liabilities, Revenues, Expenses
4	Current Assets, Fixed Assets, Current Liabilities, and so on
5	Cash, Accounts Receivable, Inventories, Salaries, and so on
6	Petty Cash, Cash in Banks, Trade Accounts Receivable, and so on
7	Petty Cash – Dallas, Petty Cash – Houston, and so on
8	More Detail
9	More Detail

Do not skip levels of detail when you assign a level of detail to an account. Nonsequential levels of detail cause rollup errors in financial reports that are run at a skipped level.

Defining a Percent Calculation

It is often necessary in reporting to present numbers in one column as a percent of their total in another column. This is used in all reporting types, but most often in standard income statements. When used in income statements, the percent calculation is referred to as the percent of revenue.
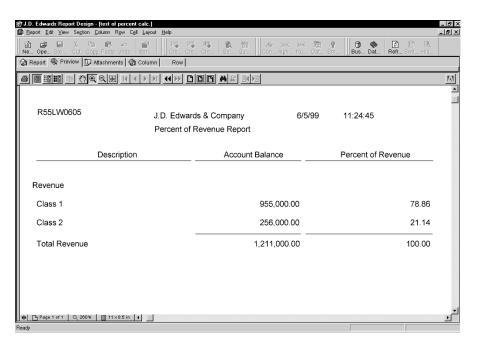
Before You Begin

❑ Do one of the following:

- Create a percent calculation column in the Director. For example, if you are creating a financial report based on Account Balances, create a column called Percent of Revenue. See *Working with Columns in Tabular Sections* for information about creating the column.

- Create a numeric variable column from Report Design. See *Understanding Data Fields* for additional information.

❑ Add rows to your report. This is necessary to create the 100% cell to be used in the denominator. For example, add data rows to hold the revenue sales and a calculation row to hold the total revenue.

The following illustrates how the rows and the Percent of Revenue column might appear on a report:

▶ **To define a percent calculation**

1. From Report Design, after adding the appropriate rows to your tabular section, click the column you created for the percent calculation. In this example, it would be the Percent of Revenue column.

2. From the Column menu, choose Define Calculation.
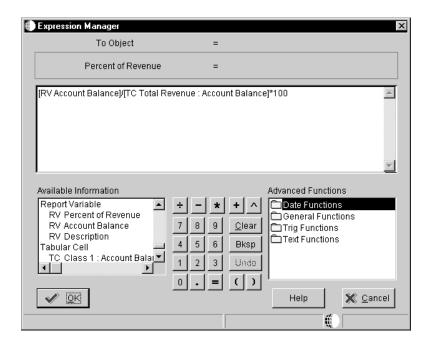
   The Expression Manager form appears.

3. Define the percent calculation.

   For example, to get the Account Balance percent of each revenue class, you would divide the report variable (RV) Account Balance by the tabular cell [tabular cell (TC) Total Revenue: Account Balance * 100].

   The following illustrates the calculation:

4.   Click OK.

Overriding the Properties of Individual Cells

A cell contains the information located at the intersection of a column and row. You can define cell overrides to override the information in the cell that is the result of the column and row specifications for the cell. For example, if you want to emphasize the data in a specific cell, you can override its properties and increase the size of the font and make it bold.

In Report Design, cells with cell overrides enabled are surrounded by a box with dashed lines.

Complete the following tasks:

- Overriding a data row variable

- Overriding a calculation row variable

- Overriding a constant row variable

- Overriding an underline row variable

▶   **To override a data row variable**

1.   On Report Design, click a tabular section.

2.   From the Cell menu, choose Cell Mode.

When Cell Mode is turned on, clicking on a variable encloses the cell in a solid black box. If Cell Mode is not turned on, clicking on a variable encloses the entire row in a solid black box.

3. Click the cell that contains the data row variable that you want to override.

4. From the Cell menu, choose Create Override and then choose Data.

    The Cell Properties form appears.

5. Click the General tab and complete the following fields:

    *   Name
    *   Description

6. Set other properties as desired and click OK.

    The Data Selection form appears.

7. On Data Selection, define the criteria you want applied to the cell override.

    See *Defining Section Data Selection* for additional information.

8. Click Save to update the row in the tabular section.

    A dashed border around the cell indicates an override.
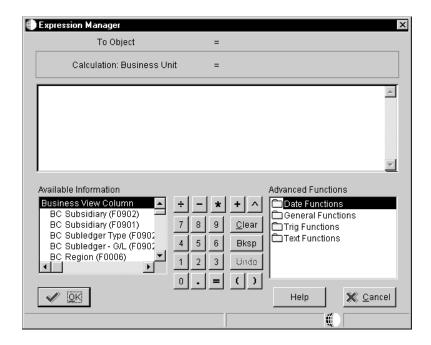
▶   **To override a calculation row variable**

1. On Report Design, click a tabular section.

2. From the Cell menu, choose Cell Mode.

3. Click the cell that contains the calculation row variable that you want to override.

4. From the Cell menu, choose Create Override and then choose Calculation.

    The Cell Properties form appears.

5. Click the General tab and complete the following fields:

    *   Name
    *   Description

6. Set other properties as desired and click OK.

    The Expression Manager form appears.

7. On Expression Manager, define your calculation by performing the following, and then click OK:

    - First, double-click fields from the Available Information list.

    - Second, click the calculator functions to build your expression.

    - Repeat until your calculation expression is complete.

▶ To override a constant row variable

1. On Report Design, click a tabular section.

2. From the Cell menu, choose Cell Mode.

3. Click the cell that contains the constant row variable that you want to override.

4. From the Cell menu, choose Create Override and then choose Constant.

    The Cell Properties form appears.

5. Click the General tab and complete the following fields:

    - Name

    - Description

6. Set other properties as desired and click OK.

▶ To override an underline row variable

1. On Report Design, click a tabular section.

2. From the Cell menu, choose Cell Mode.

3. Click the cell that contains the underline row variable that you want to override.

4. From the Cell menu, choose Create Override and then choose Underline.

    The Cell Properties form appears.

5. Click the General tab and complete the following fields:

    *   Name

    *   Description

6. Set other properties as desired and click OK.

Modifying the Appearance of Report Objects

Every object in a report, such as a section, column heading, column variable, run-time field, or constant has its own properties. To modify how an object looks or behaves, you change those properties. For example, you can change the font size of a column heading or change the text to reflect company jargon. You can also modify the format of your report by changing column and row spacing and object alignment.

Perform the following:

❏ Changing detail section descriptions

❏ Hiding report sections

❏ Aligning fields or columns within or across report sections

❏ Changing field length and column width

❏ Changing column spacing

❏ Changing row spacing

❏ Changing font properties

❏ Changing text justification

❏ Changing numerical formatting

❏ Associating lines and boxes

❏ Inserting page breaks

Changing Detail Section Descriptions

You can change the name of a detail section as it appears on the Report tab of Report Design.

▶ **To change a detail section's description**

1. On Report Design, double−click the detail section you want to change.

Depending on the section type, an appropriate Section form appears.

2. Click the General tab and enter a new name in the Description field, then click OK.

Hiding Report Sections
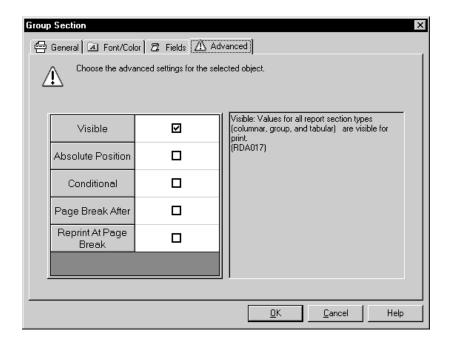
You can hide or display an entire report section outright, or you can set a detail section to appear or not based on certain criteria. To toggle displaying hidden report sections in Report Design (but not in the printed report), from the View menu, select Hide/Show Invisible Sections.

This topic covers the following:

- Hiding or displaying a report section unconditionally
- Displaying a detail section conditionally

▶ To hide or display a report section unconditionally

1. On Report Design, double–click the report section you want to change.

   Depending on the section type, an appropriate Section form appears.

2. Click the Advanced tab.

3. Select Visible to display the report section; deselect Visible to hide the report section.

4. When finished, click OK.

► **To display a detail section conditionally**

1. On Report Design, click the section you want to change and select Event Rules from the Edit menu.

   The Event Rules Design form appears.

2. Create a Do Custom Section event rule to define the criteria for displaying the section, then save the event rule.

3. On Report Design, double-click the report section you want to change.

   Depending on the section type, an appropriate Section form appears.

4. Click the Advanced tab.

5. Select Conditional and click OK.

   The section will not print unless the conditions you specified in the Do Custom Section event rule are met.

See Also

- *Working with Event Rules* for more information on creating event rules

Aligning Fields or Columns within or across Report Sections

When you create report sections, data fields or columns might not line up properly. Report Design provides alignment options to let you precisely adjust the appearance of your report output.

When you align data fields, use the following guidelines:

- You designate one object to act as an anchor to which other objects are aligned. The anchor is indicated by a black border; the objects to align with it are indicated by a gray border.

- The black border indicates the currently selected data field.

- The entire object must be selected for alignment, not just the constant text or its variable.

- The anchor can be a disconnected constant or variable object.

- The objects selected can be within the same or across sections.

- The fields themselves are aligned, not the text within the fields. This is especially noteworthy when you center–align fields, since the objects are

centered based on field length and not on the length of the text within the fields.

- The alignment process cannot be used on tabular rows.

When you align columns with other columns or with data fields, use the following guidelines:

- To align tabular and columnar section columns with group section objects, the column in the tabular or columnar section must be the anchor for the alignment.

- To align tabular and columnar columns with columns in other columnar or tabular sections, you can only select one column in each tabular or columnar section to align.

See Also

- *Changing Text Justification* for information on aligning the text within data fields

▶ **To align fields or columns within or across sections**

1. On Report Design, hold down the Ctrl key, then click the objects you want to align to each other.

   As you select objects, they appear with a gray or black border. The object with the black border is the anchor. The *last* object you click is always the anchor.

2. From the Layout menu, choose Align.

   The Align Objects form appears.

3. From Align Objects, click one of the following options, then click Apply. Your changes appear immediately.
   - Left to Right
     - Left Edges
     - Center
     - Right Edges
     - No Changes
   - Top to Bottom

     Note: These options are available only when you choose to apply changes to the current section.

- Top Edges
- Middle
- Bottom Edges
- No Changes
- Apply to
  - Current Section
  - All Sections

4. With Align Objects still open, click different options and click Apply until you are satisfied with how the objects are aligned.

5. When the objects are aligned the way you want, click OK.

Changing Field Length and Column Width

You can change the length of most of the variable and system fields in your report. You can also change the width of column headers and their associated variables. In all cases, the system defaults to *text wrapping;* that is, if a field is too short to display its text, as much text as possible is placed in the space allowed and then is continued on succeeding lines. It is possible to turn this feature off and to display all of a field's text on a single line, despite the field length.

Note that changing a field's length and changing a column's width are not the same. To change a field's length is to change the number of characters the batch engine places in the field. To change a column's width is to change the amount of space allotted for display. If a field's length is 30 and the column's width is very small, you may only see five or six characters, but the batch engine has filled all 30 characters. Conversely, if a field's length is 5 and the column's width is very large, you will see only five characters followed by a large amount of white space.

Complete the following:

- Changing a field's length
- Changing the width of a column
- Turning text wrapping on and off (Absolute Position)

▶ **To change a field's length**

1. Double–click the field you wish to change.

   Depending on the field type, the appropriate Properties form appears.

2. Click the Display tab.

If the Properties form does not have a Display tab, then you cannot change the field's length.

3. Enter a new length in the Display Length field, or use the arrow buttons to increase or decrease the length.

4. When finished, click OK.

▶ **To change the width of a column**

1. Click the column head.

    Note the small black box inside the selection box to the right. This indicates that you can manually resize the object.
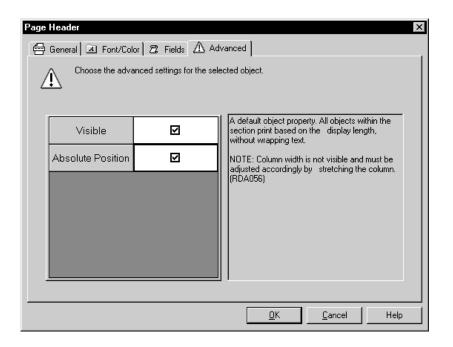
2. Place your cursor over the small black box until the cursor changes to a horizontal line with an arrow on both ends.

3. Click and drag the black box until the column is the size you wish, then release the mouse button.

▶ **To turn text wrapping on and off (Absolute Position)**

Note: You cannot toggle text wrapping for individual fields; instead, you must apply text wrapping to an entire report section. Furthermore, you cannot apply text wrapping to a column.

1. Double-click the section for which you wish to toggle text wrapping.

    Depending on the section type, an appropriate Section form appears.

2. Click the Advanced tab.

3. Select Absolute Position to turn text wrapping off. Deselect Absolute Position to turn text wrapping on.

   If the Advanced tab does not have Absolute Position, then you cannot turn text wrapping off for the section.

Changing Column Spacing

Column spacing (the space between columns) can be changed to create a larger or smaller spacing between all columns or to create a visible gap between individual columns (logical groups of data).

▶ **To change column spacing**

1. On Report Design, click anywhere within the columnar or tabular section in which you want to modify column properties.

2. From the Layout menu, select Spacing.

   Depending on the section you chose, an appropriate Section Spacing form appears.

3. Click the Column Spacing tab and perform one of the following to apply the spacing to columns:

- Click the Select All Columns button to apply the spacing to all columns in the section

- Choose specific columns from the grid that you want to apply the spacing to

4. In the "Space before selected columns" field, set the number of spaces you want to appear before the columns. The default is set at 5 spaces.

5. Click OK.

Changing Row Spacing

Perform the following tasks:

- Changing row spacing for a columnar section

- Changing row spacing for a tabular section with added rows

▶   **To change row spacing for a columnar section**

1. On Report Design, select the columnar section you want to change.

2. From the Layout menu, choose Spacing.

   The Columnar Section Spacing form appears.

3. Click the Row Spacing tab, then click a Header to Detail and Detail to Detail option:

    - Header to Detail

        - Single

        - Single + Half

        - Double

      Note: Only Single spacing is supported for Comma Separated Values (CSV) files. Only Single and Double spacing is supported for line printers. See *Submitting and Printing a Report* for more information about CSV files and printing to line printers.

    - Detail to Detail

        - Single

        - Single + Half

        - Double

4. Click Apply, then click OK.

▶ **To change row spacing for a tabular section with added rows**

1. On Report Design, double-click on the row in your tabular section that you want to create a space above.

   The Row Properties form appears. This form varies depending on the type of row.

2. Click the Options tab.

3. Enter a value in the Space Before field.

4. Click OK.

Changing Font Properties

A font is a set of print characters. Examples of font sets include Courier New and Arial. Typically, a font set includes variations such as bold and italic; properties such as alignment and spacing are not considered font variations and may be applied separately to any text in your report. You can use multiple fonts in a single report. Some fonts may be converted to PDF, PostScript, or PCL files; line printers are fairly limited in the types of fonts they can print.

Fonts can broadly be classified in two ways:

- Proportional Fonts

- Non-Proportional Fonts

A proportional font is one in which different characters have different *pitches* (widths). In a proportionally spaced font, the letter *I* is narrower than the letter *q* and the letter *m* wider. Examples of fonts with proportional spacing are Arial and Times New Roman. While proportionally spaced fonts generally create a more visually pleasing document, it can be difficult to perform certain kinds of alignment because of the varying widths of data.

Non-Proportional fonts refer to fonts in which every character has the same width. Most typewriters and line printers use fixed-pitch fonts. An example of a non-proportional font is Courier New and MS Gothic.

windows

Proportional Pitch

w i n d o w s

Fixed Pitch (Monospacing)

The PDF generation, PostScript and PCL conversion can support any font size. For Line Printer, it is recommended to generate the PDF file with non-proportional fonts and font size of 10.

The base 14 fonts Report Design supports are shown in the following table where X is supported and blank is not supported:

Font Faces	Postscript	PCL	Line	PDF
Courier New	X		X	X
Courier New – Bold	X			X
Courier New – Italic				
Courier New – Bold Italic				
Arial	X	X		X
Arial - Bold	X			X
Arial - Italic				
Arial - Bold Italic				
Symbol				X
Times New Roman	X	X		X
Times New Roman – Bold	X			X
Times New Roman – Italic				
Times New Roman – Bold Italic				
ZapfDingbats				X

Double Byte fonts

In a double byte environment, fonts receive special treatment within UBE (Universal Batch Engine) and Output Management. In Report Design, you can select any font available to the system and assign it to the report, section, or object level. PDF will support one type of font with multiple font sizes in Simplified Chinese, Traditional Chinese, and Korean. However, in a double byte environment, only the following fonts are supported when the PDF(Portable Document Format) file is generated:

Language	Font Name
Simplified Chinese	STSong–Light–Acro
Traditional Chinese	Mhei–Medium–Acro
Korean	HYGothic–Medium–Acro
Japanese	HeiseiMin–W3–Acro, MS Gothic (true type font)

PCL is not supported for the CJK languages (Japanese, Simplified Chinese, Traditional Chinese and Korean). Refer to the section Doubly Byte Issues for more information.

Bar code fonts

Report Design supports Code 39 fonts for both PCL and PostScript conversion. The true type font name is **BC C39 3 to 1 Medium**. The barcode fonts can be seen in Report Design, pre-viewed, and then printed. Since font vendors do not sell PCL fonts that can be scaled, only fixed-point size is supported for PCL.

The recommended point sizes that can be used for PostScript are between 8 and 24 points.

Color

Although you can choose any color from the Font dialog to display, for printing only 8 colors for PCL, 16 colors for PostScript and black for line printers are supported. Both PostScript and PDF generation use the *RGB model* for color and PCL uses the *Simple Color RGB model* that provides 8 colors only.

Refer to the Color Support Table below, where X is supported and blank is not supported.

Font Colors	PostScript	PCL	Line	PDF
Black	X	X	X	X
Blue	X	X		X
Cyan	X	X		X
Dark Blue	X			X
Dark Cyan	X			X
Dark Green	X			X
Dark Grey	X			X
Dark Magenta	X			X
Dark Red	X			X
Green	X	X		X
Light Grey	X			X
Magenta	X	X		X
Olive Green	X			X
Red	X	X		X
Yellow	X	X		X
White	X	X		X

Perform the following:

- Changing the font properties for a field
- Changing the font properties for all fields in a section
- Changing the font properties for all fields in a report

► **To change the font properties for a field**

1. Double-click the field you want to change and select Properties from the resulting pop-up menu.

   Depending on the field type, an appropriate Properties form appears.

2. Click the Font/Color tab and complete the following fields:

   - Font
   - Font Style
   - Size
   - Color

   To return all the section's fields to their default font settings, click Defaults.

3. When finished, click OK.

► **To change the font properties for all fields in a report section**

1. On Report Design, double-click the report section you want to change, or click the section and choose Section Properties from the Section menu.

   Depending on the section type, an appropriate Section form appears.

2. Click the Font/Color tab and complete the following fields:

   - Font
   - Font Style
   - Size
   - Color

   To return all the section's fields to their default font settings, click Defaults.

   Changes you make on this form will affect all text in the section except for those fields that have been changed individually. To override individual settings and apply the changes to all fields in the section without exception, choose Apply settings to all Objects.

3. When finished, click OK.

► **To change the font properties for all fields in a report**

1. On Report Design, from the Report menu, select Report Properties.

The Properties form appears.

2. Click the Font/Color tab and complete the following fields:

    •   Font

    •   Font Style

    •   Size

    •   Color

    To return all the report's fields to their default font settings, click Defaults.

    Changes you make on this form will affect all text in the report except for those fields that have been changed individually. To override individual settings and apply the changes to all fields in the report without exception, choose Apply settings to all Objects.

3. When finished, click OK.

Changing Text Justification

Justification refers to how lines of text line up vertically in reference to each other. You can affect the alignment of text in columns and in most variables. You cannot set text justification for constants, however. In Report Design, you can align text in one of three ways:

•   Right alignment

•   Left alignment

•   Center alignment

Justification is relative to the object's frame. For example, if you center align text, the text is centered within it's frame instead of being centered on the page. The Batch Engine supports left and center alignment for all fonts and languages.

Double byte fonts

Out of the CJK (Chinese, Japanese, Korean) languages, right alignment is fully supported only for Japanese 7, 8 and 9 point size MS Gothic fonts. In the case of Chinese and Korean fonts, right alignment is not supported.

Bar code fonts

Bar codes must be left aligned in Report Design.

See Also

Aligning Fields or Columns within or across Report Sections for information on aligning the report objects themselves

► **To change text justification for a report object**

1. Double-click the field for which you want to specify its text justification.

   Depending on the field type, an appropriate Properties form appears.

2. Click the Display tab.

3. Select the justification style you wish, or click Defaults to return the object to its default justification style, then click OK.

Changing Numerical Formatting

In Report Design, you can control the number of decimal places to be displayed. Through edit codes, you can control whether to use commas, how to display positive and negative values, and how to display monetary values.

See Also

- *Changing Decimal Scaling* for information about changing decimal scaling

► **To change how a numbers are displayed**

1. Double-click the field for which you want to change the numerical formatting.

   Depending on the field type, an appropriate Properties form appears.

2. Click the Display tab.

3. Enter the number of decimal places you wish to display in the Display Decimal field, or use the arrow buttons to increase or decrease the number of decimal places.

   Note: Setting display decimals is ineffective if currency has been enabled for the system.

4. If available, select the Edit Code field and use the Visual Assist to select a formatting style you want.

   See *Appendix A: Edit Code Table* for a description of the edit code fields.

5. Click Defaults to return the object to its default style.

6. When finished, click OK.

Associating Lines and Boxes

You can enclose most fields in a box. Additionally, you can include single and double lines above or below most fields as well. You cannot affect columns or entire report sections in this way, however.

▶ **To associate lines and boxes**

1. Double-click the field you want to enclose in a box or attach lines to.

   Depending on the field type, an appropriate Properties form appears.

2. Click the Style tab.

3. Deselect No Lines to activate the other options on the form. To enclose the field in a box, select Single Rectangle. Otherwise, select the line style you desire.

   The sample box on the form illustrates your selection.

4. When finished, click OK.

Inserting Page Breaks

In columnar and group sections, you can cause the last line printed on a page to be reprinted on the following page.

You can insert a manual page break (that is, cause the report to stop printing on the current page and start printing on the next) after detail sections and report headers. You cannot use these two features simultaneously, however.
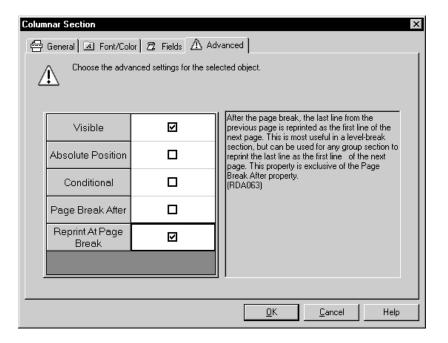
Complete the following:

- Printing the last line on a page as the first on the succeeding page
- Inserting a manual page break

▶ **To print the last line on a page as the first on the succeeding page**

1. Double-click the group or columnar section you want to affect.
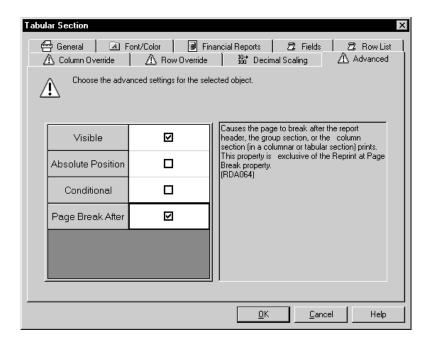
   Depending on the section type, an appropriate Section form appears.

2. Click the Advanced tab.

3. Select Reprint At Page Break and click OK.

▶ **To insert a manual page break**

1. Double-click the detail or report header section you want to affect.

2. Click the Advanced tab.

3. Select Page Break After and click OK.

Advanced Report Enhancements

In addition to the basic functional capabilities of Report Design, you can also use advanced features to create reports with greater depth of information and functions. Following is a list of the available advanced features:

Event Rules	Event rules enable you to perform logical operations such as:

- Processing conditional logic
- Moving values into or between objects
- Performing calculations and complex expressions
- Attaching existing business functions or system functions

Date Titles	For financial reports, a date title in the page header makes the report more meaningful. OneWorld includes commonly used date titles. The date title business function lets you choose the type of date title you want to display on your report.
Drill Down	The drill down feature creates a link to an interactive application. When you view a report using Adobe Acrobat Reader software, you can click a value in the report viewer to directly access the data in the report.
Favorites	A favorite is a simplified method that you can use to access information. In Report Design, favorites allow you to create a directory that contains only the business views that you require for your reporting needs.
Processing Options Templates	Processing options control how a report or other batch application processes data. They are version driven; therefore, different processing options can be specified for different versions of the same report.
Director Templates	The Director uses director templates to help you create application reports. These templates, included with OneWorld, contain default criteria. You can modify the OneWorld templates and create your own.

Text Attachments   You can add text attachments to records from the OneWorld interactive applications. In addition, you can design a report to include any text attachments that exist for a record.

Report Properties   Report Design lets you modify your report and version output by changing report properties.

Advanced report enhancement describes the following tasks:

❏ Working with event rules

❏ Working with the date title for financial reports

❏ Working with the drill down feature

❏ Setting up business views as favorites

❏ Working with processing options templates

❏ Working with director templates

❏ Printing text attachments on a report

❏ Working with bar codes

❏ Working with report properties

See Also

- *Appendix E: Smart Fields*
- The *OneWorld Development Tools* guide for the following topics:
    - *Changing Report Data Structures*
    - *Working with Business Functions*
    - *Creating a Table I/O Event Rule*
    - *Creating Report Interconnections*

Working with Event Rules

As a report is processed, the run-time engine pauses certain points to process logic that has been attached. These points are called *events*, and you can use these events to insert custom logic for processing. Event rules are logic statements that you create and attach to an event without the difficult syntax that comes with most programming languages. Event rules process when an event, such as a page break, occurs. Events are attached to controls, such as a variable, a constant, a section, or a report.

The event to which you attach your event rule varies depending on the purpose of the event rule and the type of section in which the event occurs. For example, if you are adding an event rule to a columnar or group section, you might attach the event rule to the Do Section event. In a tabular section you might attach an event rule to the Do Tabular Break, Do Balance Auditor, or Column Inclusion events. Smart fields are automatically attached to the Column Inclusion event rule. If you are attaching an event rule to a variable, you might choose the Do Variable event.

See Also

- *Understanding Event Rules* in the *OneWorld Development Tools* guide for information on predefined events
- *Event Rules Design* in the *OneWorld Development Tools* guide for information about designing event rules and working with the event rule buttons
- *Appendix B: Events* for information about which event rules are available for which sections
- *Creating Report Interconnections* in the *OneWorld Development Tools* guide for information about using event rules to use a report to launch other reports

Working with event rules contains the following tasks:

- Creating an If/While statement in an event rule
- Creating an event rule assignment
- Adding and attaching text variables
- Attaching a system function to an event
- Creating an event rule variable
- Using the Column Inclusion event rule

● Creating custom sections

Creating an If/While Statement in an Event Rule
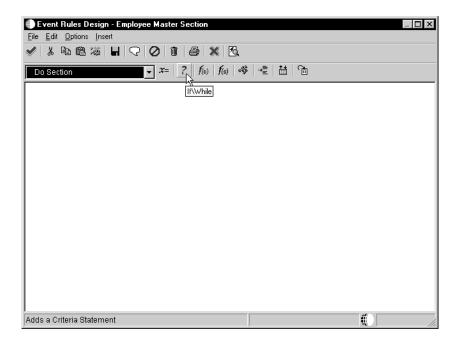
Before you create an If/While statement, you might need to insert a field on your report to hold the result of the event rule. If the event rule will return text, you will most likely use an alpha variable. If your event rule is a calculation, you will need to decide between a numeric variable and a data dictionary item.

Use the If/While button to build conditional statements to be executed when an event rule is called.

▶ **To create an If/While statement in an event rule**

1. On Report Design, click a section or the variable portion of a data field, and then perform one of the following:

   ● From the Edit menu, choose Event Rules.

   ● Click the right mouse button, and then choose Event Rules.

   The Event Rules Design form appears.
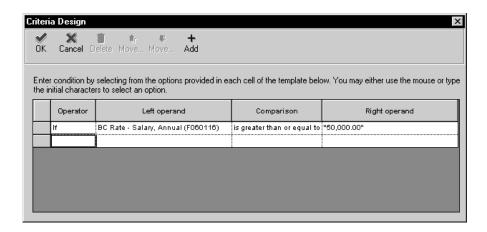
2. Click the down arrow to display the Events list.

3. Choose an event from the Events list.

   For example, choose the Do Section event. This event is illustrated because it is the most commonly used event in group or columnar

sections. When an event rule is written in the Do Section for a columnar or group section, multiple If statements with attached assignments or expressions can be written for multiple fields in that section.

4. Click the If/While button.

    The Criteria Design form appears.
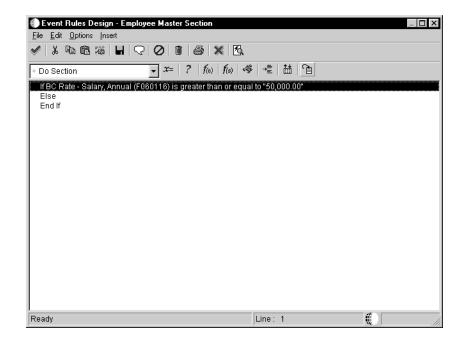
5. Define the specific criteria you want applied to this event rule.

    See *Defining Data Selection* for information about using the Criteria Design form for data selection.

6. Click OK on Criteria Design to save the If statement and return to Event Rules Design.

    The If statement appears on the Event Rules Design form.

After creating the If statement, you can attach an event rule assignment to the If statement.

You can move an event rule line to a new location by selecting it and then dragging it to the desired position.
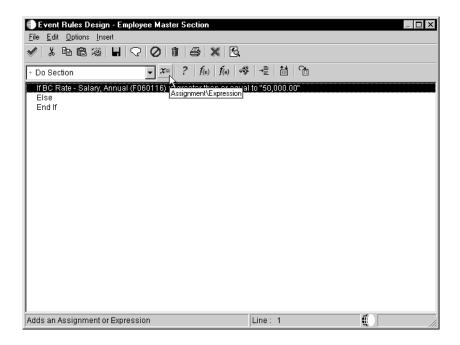
Note: Changing the sequence of event rule statements can result in improper syntax. If you detect syntax errors, you can either disable the event rule and continue, or edit the event rule to eliminate the errors.

Creating an Event Rule Assignment

You use event rule assignments to move values into or between available objects, or to create mathematical expressions with results assigned to an available object.
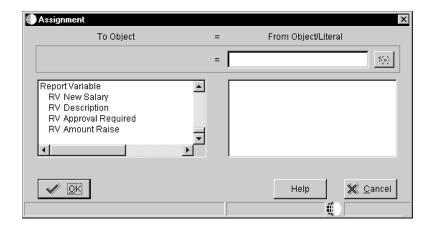
▶   **To create an event rule assignment**

1. On Event Rules Design, click an If, Else, or End If statement, and then click the Assignment/Expression button.

So that the conditions set up in the assignment appear immediately after the If, Else, or End If statement, you must click on the statement that you want the conditions of the assignment to follow.

The Assignment form appears.

2. On Assignment, select the To Object by clicking on an available field from the list below the To Object heading. For example, the To Object might be the report variable (RV) from a column you inserted into the report to hold this value.
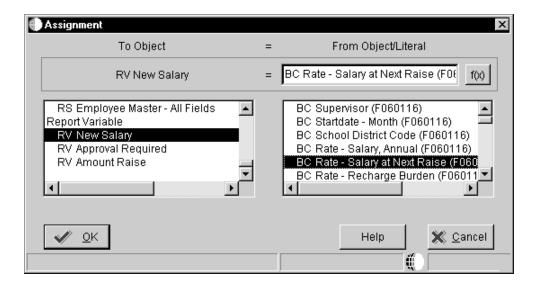
An available field is represented by a two-character, alphabetical code that characterizes the source of data and determines how the field data is used in an application at run time. The available fields could have the following prefixes:

BC   A column in the business view. These columns are filled with values from the database when a fetch is performed and are the values saved to the database on an add or update.

PO   A value passed from a processing option.

VA   Event rules variables. These objects represent any variables set up in the event rule. They are not manipulated by the system.

RC   Report Constant.

RV   Report Variable.

RS   Report Sections. These values may not be used when creating an event rule assignment.
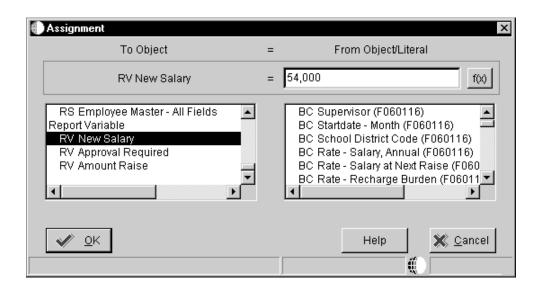
The selected field appears in the gray area below the To Object heading. This field is the recipient of your assigned value.

3. To create a logical statement, choose an object from the From Object/Literal list on the right.

4. To assign a literal statement for an alpha variable, enter a literal expression (such as a number or text) in the From Object/Literal.

5. To create an expression or mathematical function for a numeric variable, click the *f(x)* button.

   The Expression Manager form appears.
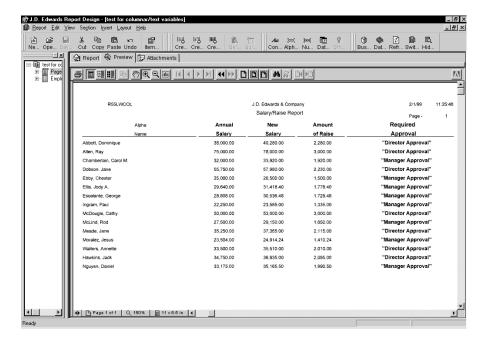
6. On Event Rules Design, click the check mark to save and return to Report Design.

Field	Explanation

From Object/Literal – Assignment	Displays the FROM value using one of the following options:
	• Select a From Object in the right column to create a logical statement:
	   left-hand column = right-hand column
	• Type a literal expression, such as a number or text, in the text entry box to assign a literal statement:
	   left-hand column = literal value
	• Click the Expression or f(x) button to create a complex expression or advanced mathematical function using the Expression Manager

Expression – Assignment button	Click the Expression or f(x) button to create a complex expression or advanced mathematical function using the Expression Manager.
Save	Saves all rules for all events associated with the selected control. Note: The OK button also performs a save before exiting.
Comment – Event Rules Design	Inserts a comment into the event rule. Comments do not affect logic. Use comments to document the business rules.
Enable/Disable – Event Rules Design	Enables or disables a single line of the event rule. Disabled event rule lines are marked with a red exclamation (!).
Delete	Destroys an object or record. On Event Rules Design, the Delete button removes a selected line, one at a time. When an IF/WHILE statement is deleted, the associated ELSE and END clauses are also deleted, but the Rules inside those statements are not deleted.
Print	Prints the file information for the selected object.
Events list box	Choose an event from the Events list box to which you want to attach logic. Only those events that are applicable to selected control are displayed. Access help to display information for individual events.

Adding and Attaching Text Variables

Using text variables, you can create text to print on your report. Text variables are stored as strings and attached to your report through an event rule. They are used as an alternative to hard coding text strings in assignments. Because text variables are not hard-coded, they provide easier maintenance of event rules. Instead of changing each event rule where the text resides, you can simply change the text variable.

The following illustrates how text variables might appear on your report. The text string for the Required Approval column is a text variable. Based on the value in the Amount of Raise column, the report populates the column with the appropriate value, either "Director Approval" or "Manager Approval."
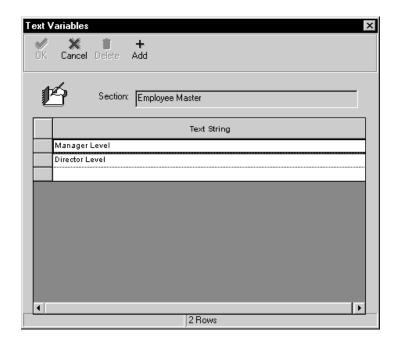
Perform the following tasks:

- Adding text variables

- Attaching text variables to an event rule

▶ To add text variables

1. On Report Design, click the detail section to which you want to add text variables.

2. From the Section menu, choose Text Variables.

   The Text Variables form appears.

3. Under the title Text String, type the text that you want to appear on your report.

4. Press Enter or click Add.

   You must press Enter after each entry for the Report Design tool to recognize your entry. When you press Enter, another blank line appears.

5. Repeat Steps 3 and 4 for all text strings required on your report.

6. Click OK to return to Report Design.
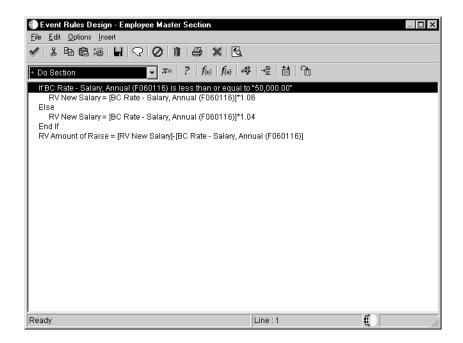
▶ **To attach text variables to an event rule**

1. On Report Design, click the detail section to which you added the text variables.

2. Do one of the following:

   • From the Edit menu, choose Event Rules

   • Click the right mouse button, and then choose Event Rules

   The Event Rules Design form appears.

3. From the events list, choose the event to which you want to attach the text variables.
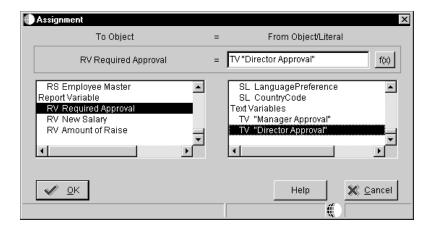
   This example uses the Do Section event.

Events with associated event rules display a green plus sign (+).
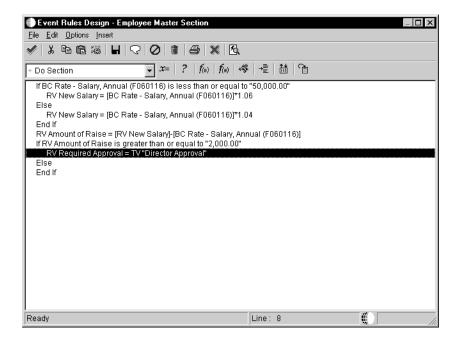
4. Click the If, Else, or End If statement to which you want the conditions of the text variables to apply, and then click the *x*= button.

    The Assignment form appears.

5. On Assignment, choose the To Object field (recipient of your text variable) by clicking on a field from the list below the To Object heading. For example, RV Required Approval.

6. Choose the From Object/Literal field by clicking a field with a TV (text variable) prefix from the list below the From Object/Literal heading. For example, TV "Director Approval".

7. Click OK.

The Event Rules Design form appears with the If statement that now includes the text variable condition.

```
Event Rules Design - Employee Master Section                    _ □ ×
File  Edit  Options  Insert

✔  ✄ ▣ ▦ ▨ | ⊟ | ♡ ⊘ | ⬚ | ⊜ | ✖ | ⬚

⊹ Do Section                    ▼   x=  |  ?  |  f(s) |  f(s) |  ♣  |  ⊸≣ | ⬚ | ⬚

If BC Rate - Salary, Annual (F060116) is less than or equal to "50,000.00"
    RV New Salary = [BC Rate - Salary, Annual (F060116)]*1.06
Else
    RV New Salary = [BC Rate - Salary, Annual (F060116)]*1.04
End If
RV Amount of Raise = [RV New Salary]-[BC Rate - Salary, Annual (F060116)]
If RV Amount of Raise is greater than or equal to "2,000.00"
    RV Required Approval = TV "Director Approval"
Else
End If




Ready                              Line : 8          ⬚
```

8. Repeat Steps 4–7 to add more text variables to the event rule.

9. On Event Rules Design, click the check mark to save and return to Report Design.
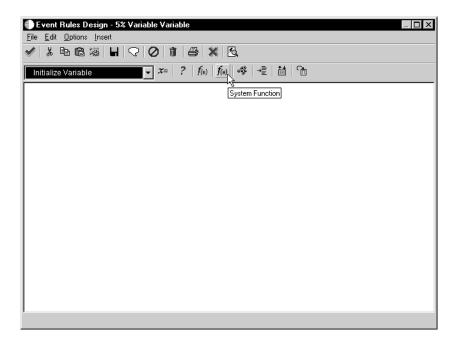
Attaching a System Function to an Event

Use the *f(s)* button to attach predefined J.D. Edwards system functions to an event. For example, you might need to hide one column heading on your report. You can do this by attaching a system function to an event rule to hide this object.

▶ **To attach a system function to an event**
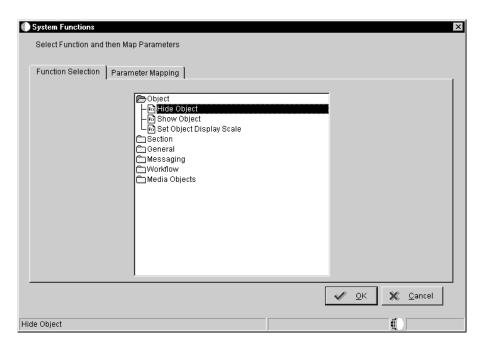
1. On Report Design, click a section or the variable portion of a data field, and then do one of the following:

   - From the Edit menu, choose Event Rules.

   - Click the right mouse button, and then choose Event Rules.

   The Event Rules Design form appears.

2. On Event Rules Design, click the down arrow to display the Events list.
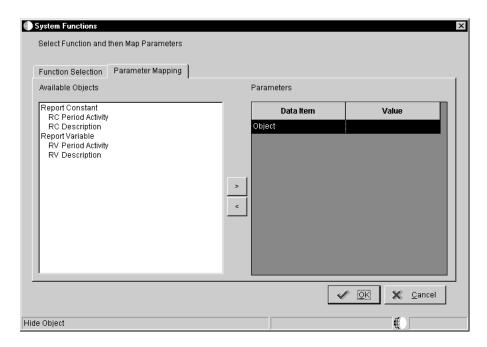
3. Choose an event from the Events list.

4. Click the *f(s)* button.

   The System Functions form appears.

5. On Function Selection tab, double-click the folder icon next to the system function to see all available functions within that category, and then choose a system function.

6. Click the Parameter Mapping tab to define the parameters. For example, if you want to hide an object, you can open the Object folder and choose the Hide Object system function.

7. On the Parameter Mapping tab, choose a field from the Available Objects list, and then click the right arrow to move this value to the Parameters Value column. In this example, you would choose the column you want to hide.

8. Click OK to return to Event Rules Design.

9. On Event Rules Design, click the check mark to save and return to Report Design.
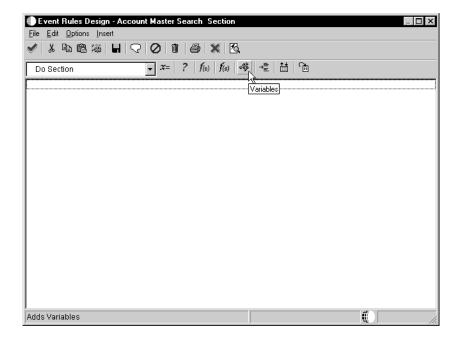
Creating an Event Rule Variable

An event rule variable (prefix VA) is a user-created object that inherits the characteristics of a selected data dictionary field. The variable is not, however, stored in the data dictionary. Rather, each variable exists only within the report where it was created. You determine whether the variable can be used for a specific event, for the section, or for the entire report. After you create a variable, it is added to the list of available fields used to create event rules.

▶ **To create an event rule variable**

1. On Report Design, click the section to which you want to attach the event rule variable, and then do one of the following:

   - From the Edit menu, choose Event Rules.

   - Click the right mouse button, and then choose Event Rules.

   The Event Rules Design form appears.

2. On Event Rules Design, click the down arrow to display the Events list.

3. Choose an event from the Events list.

4. Click the Variables button.

   The Event Rules Variables form appears.

5. Click Add.
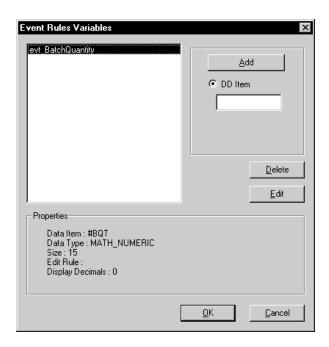
   The Variable Item Selection form appears.

6. On this form, do one of the following:

   - Click Find to display the valid data dictionary fields.

   - Use the QBE line to limit your search, and then click Find.

7. Choose the data item whose characteristics you want the variable to inherit, and then click Next.

The Variable Options Selection form appears.

8. Click one of the following Scope options, depending on the purpose for which the variable is being created. For example, you can reference a report variable globally in the report, a section variable within the section, or an event variable only within the event where it was created.

- Section

- Report

- Event

9. Type a meaningful name in the field provided, and then click Finish.

The Event Rules Variables form reappears displaying the event rule variable you just created.

The variable is assigned one of the following prefixes based on the scope you specified.

- evt_ (Event)

- rpt_ (Report)

- sec_ (Section)

An event rule variable cannot be modified after it is added. However, you can delete it and create a new event rule variable.

10. Click OK to return to Event Rules Design.

11. On Event Rules Design, click the check mark to save and return to Report Design.

Using the Column Inclusion Event Rule

The most common event rule used for a tabular section is the Column Inclusion event rule. In a group or columnar section, the Do Section event is the most common. When a group or columnar section is processing data, the Do Section event occurs after each record is fetched. Because of the automatic totaling on a level break, tabular sections are processed differently. In a tabular section, the Do Section event is processed only at each level break. Therefore, the Column Inclusion event is used in a tabular section to process the data after each record is fetched, rather than waiting until the level break.

No matter the section type, do not use a Column Inclusion event rule when you are performing a calculation between columns (such as when calculating variance) or between variables within a column. For these situations, use a Do Section event.
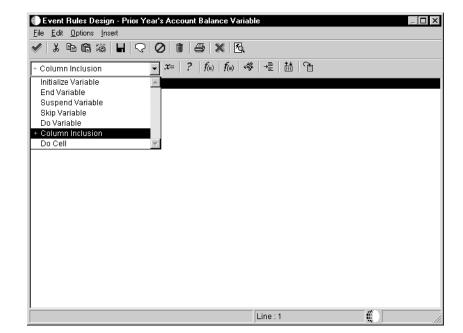
When using the Column Inclusion event rule, you must attach individual event rules for each column in the section to which you want to attach logic.

See Also

❑ *Creating Calculation Columns*

▶ **To use the Column Inclusion Event Rule**

1. On Report Design, click the column in the tabular section to which you want to add the event rule. Ensure that you click the column itself and not its header.

2. From the Column menu, choose Column Inclusion Event Rule.

The Event Rules Design form appears.

3. Click the down arrow to display the Events list.

4. Choose Column Inclusion. If you are working with a smart field column, this event could have a green + next to it. This indicates that an event rule already exists for this column.

5. The type of event rule you want to create determines which button you choose. For example, if you want to create an If/while statement, you would click the If/While button.

6. Perform Steps 1–5 for each column to which you want to add an event.

Creating Custom Sections

Custom sections allow you to control, through event rules, the information that prints on a report. You can use custom sections to force a page break by creating a custom section with no objects, then activate Page Break After Print in that section's Section Properties. You can also use custom sections to print variable text, or for sections that present the same information, but are formatted differently. For example, you might use a custom section in a report that exists in two different modules, but depending on a user's needs, calls a different section that displays information specific to that particular module.

Another example of using a custom section is when you want to print additional information depending on certain criteria. For example, you might have an accounts receivable report that shows a customer's payment history, but you want the batch engine to print additional information if a customer is delinquent in his payments. In this case, you can create a custom section to display if the customer is 30, 60, or 90 days overdue, then attach a processing option that calls

that custom section. When the processing option is activated, and when the batch engine encounters a record that contains overdue information, the custom section prints; if no overdue information exists, the custom section does not print.

You can use the DO_CUSTOM_SECTION system function in columnar, group, or tabular sections to call the custom section. The number of custom sections you can use in a report is unlimited. Custom sections are allocated and treated like any other level-two section.

Custom sections can contain business view fields, variables, or data dictionary fields. Your report processes the same way regardless of the objects contained within it.

Creating custom sections describes the following tasks:

- Attaching logic for a custom section
- Using a custom section

Attaching Logic for a Custom Section

Custom sections are launched using a system function in Event Rules. You attach the logic for a custom section to the section preceding the custom section. For example, if you want a custom section to process before a columnar section, you call the custom section using the system function DO_CUSTOM_SECTION from the columnar section's DO_SECTION event. Likewise, if you want a custom section to process before a level-break footer, you call the custom section using the system function DO_CUSTOM_SECTION from the INIT_LEVEL_BRK_FOOTER event.

You can call a custom section event from any section. Furthermore, you can use any event rule logic along with a custom section, such as If and While statements, business functions, table I/O, and so on.
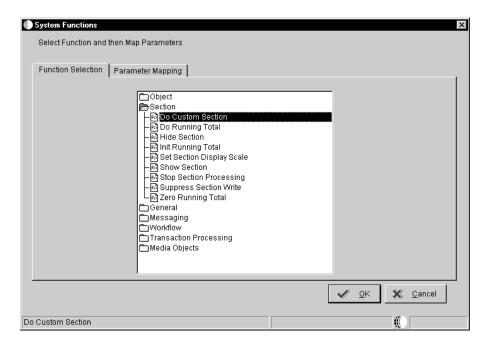
You can call a custom section from any event rule except INIT_Section. If you try to call a custom section using INIT_Section, your report will not process.

Using a Custom Section

When you use a custom section, you specify the section as Conditional in Section Properties, then attach the system function event rule DO_CUSTOM_SECTION to the section preceding the custom section.

▶ **To use a custom section**
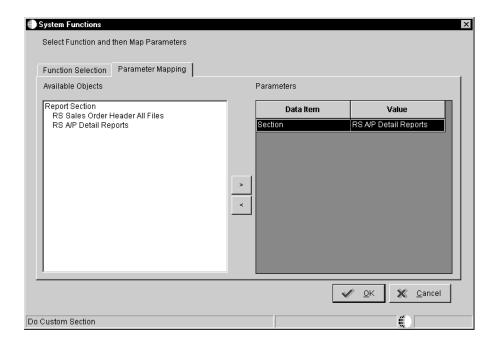
1. On Report Design, on the section from which you want to call the custom section, choose Event Rules from the Edit menu.

2. Choose the event at which you want to process the custom section.

3. Click the System Function button.

4. On System Functions, choose Section from the System Functions tree view, and then choose Do Custom Section.

The system populates the Available Objects window with the sections in your report.

All sections in your report appear in the Available Objects window, not just the ones that you have specified as conditional.

5. Click the Parameter Mapping tab, choose the conditional section you want to define as a custom section, and then click the right arrow to move it to the Parameters window.

6. Click OK.

Working with the Date Title for Financial Reports

For reports showing financial data, a date title in the page header makes the report more meaningful. OneWorld includes commonly used date titles. While a predefined date title lets you add a date title quickly, it might not be specific to your company's reporting needs. Therefore, you can add your own company-specific date title. By calling the User Defined Date Title business function (B8300007), you can add a OneWorld date title to your report or create a date title specific to your reporting needs.

Perform the following tasks:

- Adding a date title to a financial report
- Customizing the date title
- Assigning your accounting periods to the column headings

Before You Begin

- See *Creating an Application Report with the Director* for information about using the Financial Reports template to create a financial report to which you can add a date title

Adding a Date Title to a Financial Report

The following date titles are included with OneWorld:

A (As of)	"As of 03/31/05"
B (Balance sheet)	"As of March 31, 2005"
P (Profit and Loss)	"For the Three Months Ending March 31, 2005"
S (Single period)	"For the Month Ending March 31, 2005"

The User Defined Date Title business function (B8300007) uses the company number to determine the fiscal year. The company number is also used to determine the default reporting period if the processing option values for reporting month and year are blank.

▶ **To add a date title to a financial report**

1. On Report Design, click the Page Header section.

2. From the Insert menu, choose Alpha Variable.

3. Click to insert the field in the Page Header.

4. Double-click the alpha variable field you just inserted.

   The Variable Properties form appears.

5. Click the Description tab and complete the following field:

   - Variable Name

     Label the variable so that you can identify it easily with a name such as DateTitle.

6. Click the Display tab and modify the following:

   - Justification

     Click Center.

   - Display Length

     Type 100. If the date title is over 100 characters, the date title will be truncated to fit the available space.

7. Click the Advanced tab and turn on the following option:

   - Global Variable

     Turning on this option makes the variable available in the Available Objects list (on the Business Functions form) for sections other than the one in which it is defined.

8. Click OK.

9. Align the object with the other objects in the section.

   See *Aligning Fields or Columns within or across Report Sections* for information about aligning objects within a section.

10. Click the detail section of your report (do not click the page header section), and then do one of the following:

    - From the Edit menu, choose Event Rules.

    - Click your right mouse button, and then choose Event Rules.
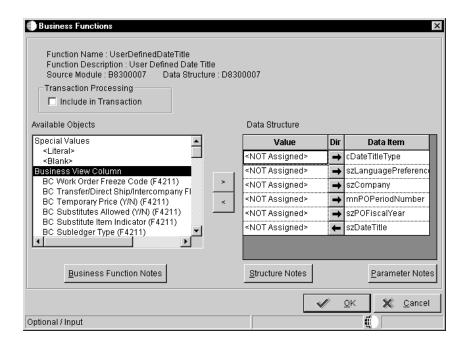
    The Event Rules Design form appears.

11. On Event Rules Design, click the down arrow to display the Events list.

12. Choose the *Before Level Break* event, and then click the *f(b)* (Business Function) button.

    The Business Function Search form appears.

13. On Business Function Search, enter B8300007 in the Source Module field of the QBE line, then press Enter or click Find.

14. Click Select.

    The Business Functions form appears. You must assign values to each data item in the data structure. The remaining steps in this procedure show you how to assign these values. Refer to the illustration at the end of this procedure to see a complete data structure for the User Defined Date Title.

15. Click in the Value column next to the data item cDateTitleType, and then double-click <Literal> in the Available Objects list.

    The Single value form appears.

16. On Single value, click the visual assist button.

    The Date Title Search form appears.

17. Click Find to bring up a list of valid date titles.

18. Choose a value, and then click Select.

19. On Single value, click Save. The value you selected appears in the Value list.

The Directional arrow is set automatically.

20. Click in the Value column next to the data item szLanguagePreference.

21. To have the date title print in the language of the user running the report, double-click SL LanguagePreference (system value for language preference in user profile) from the Available Objects list. If you do not have a language preference, skip to step 24.

22. To have the date title print in a specific language, regardless of the user preference of the user running the report, use the system value "SL Language Preference" variable.

23. On Single value, click OK. The value you selected appears in the Value list.

     The Directional arrow is set automatically.

24. Click in the Value column next to the data item szCompany, and then double-click <Literal> in the Available Objects list.

     The Single Value form appears.

25. On Single value, enter the company number, or click the visual assist button to search for a company number to enter.

26. On Single value, click OK.

     The company number you entered appears in the Value column and determines the fiscal date pattern.

     The Directional arrow is set automatically.

27. Click in the Value column next to the data item mnPOPeriodNumber, and then double-click PO PeriodNoGeneralLedger in the Available Objects list to copy the object to the Value column.

     This is the period number designated in the Financial Reports processing options (T83PO). This processing option will appear automatically at runtime to prompt the user for a value.

     The Directional arrow is set automatically.

28. Click in the Value column next to the data item szPOFiscalYear, and then double-click PO szFiscalYear in the Available Objects list to copy the object to the Value column.
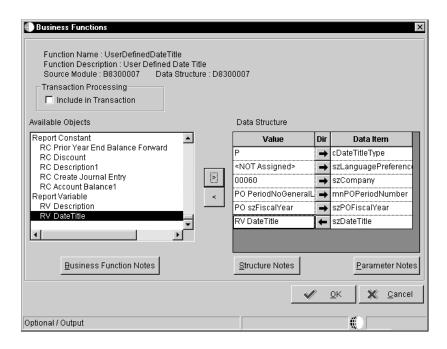
     This is the fiscal year from the Financial Reports processing options (T83PO). This processing option will appear automatically at runtime to prompt the user for a value.

     The Directional arrow is set automatically.

29. Click in the Value column next to the data item szDateTitle, and then double-click the report variable (RV) name (this is the name you assigned to the alpha variable inserted in the Page Header) in the Available Objects list to copy the object to the Value column.

The Directional arrow is set automatically.

After completing the szDateTitle parameter, the Business Functions form is complete with the following parameters in the Value and Data Item lists:
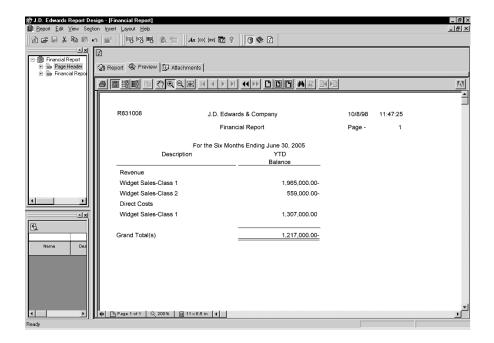
30. On Business Functions, click OK.
31. On Event Rules Design, click the check mark to save the User Defined Date Title event rule and return to Report Design.
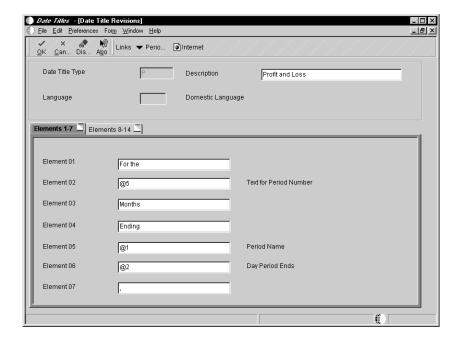
Customizing the Date Title

The task *Adding a Date Title to a Financial Report* describes how to attach a predefined date title to your report.

The following illustrates how this date title appears on your report:

The following illustration shows how this predefined date title was set up on the Date Title Revisions form:

While a predefined date title is helpful, a company-specific date title could be more informative for users. Therefore, you can customize the date title by defining your own parameters to better suit your reporting needs. In addition, you can create the same date title in multiple languages. The date title parameters are stored in the F83100 table.

To customize the date title, perform the following tasks:

- Setting up a custom date title

- Previewing a custom date title

▶ **To set up a custom date title**

1. From the Advanced Report Setup menu (GH9141), choose Date Titles.

   The Work With Date Titles form appears.

2. Click Add.

   The Date Title Revisions form appears.

3. On Date Title Revisions, complete the following fields:
   - Date Title Type

   - Description

   - Language

4. Complete the Elements fields.

   The maximum length of a date title is 100 characters.

   The maximum number of elements is 14, and each of these elements can be a literal text string or a text substitution parameter. The following lists the available text substitution parameters (stored in user defined code list 83/TS). These parameters are filled in at run time.

   - @1: Period Name

     This value is assigned by defining the name of the period for a fiscal date pattern. This is generally the name of the month associated with the period. The information is stored in the F83110 table. See *Assigning Your Accounting Periods to the Column Headings* for more information about defining the period names.

   - @2: Day Period Ends

     This value is read from the F0008 table. For example, this parameter would return 31 for a period that ends on the 31st of the month.

- @3: Century and Year

  For example, you might enter 2005 (the year the report is based upon).

- @4: Year

  For example, you might enter 05 (the year the report is based upon).

- @5: Period Text

  These values are stored in and read from user defined code list 83/PT. This UDC holds text for the number of periods through the current period. For example, period 2 would retrieve two.

- @6: Date (06/30/05)

5. To revise the Period Text (@5) values, from the Form menu on Date Title Revisions, click Period Text.

6. Click OK.

Field	Explanation
Language	A user defined code (01/LP) that specifies a language to use in forms and printed reports.
	Before specifying a language, a language code must exist at either the system level or in your user preferences.

▶ **To preview a custom date title**

1. From the Advanced Report Setup (GH9141) menu, choose Date Titles.

   The Work With Date Titles form appears.

2. On Work With Date Titles, click Find to bring up a list of valid date title types.

3. Choose the Date Title you want to preview, and then from the Row menu, click Preview.

   The Date Title Preview form appears.

4. On Date Title Preview, change or complete the following fields, and then click OK:

   - Fiscal Year

To access English documentation updates, see
https://knowledge.jdedwards.com/JDEContent/documentationcbt/overview/about_documentation_updates.pdf

If you leave this field blank, the value is retrieved from the Financial Reporting Date in the Company's application.

- Period Number – General Ledger

    If you leave this field blank, the value is retrieved from the Financial Reporting Date in the Company's application.

- Document Company

- Language

- Date Title Type

5. After completing the fields, from the Form menu, choose Run Preview.

    The date title appears on the form in the same format that it would appear in the report.

    If the date title is over 100 characters, you will receive an error message, and the date title will be truncated to fit the available space.

    If language-specific versions of the date title are not found, the date title appears in the default language.

Field	Explanation
Language	A user defined code (01/LP) that specifies a language to use in forms and printed reports.
	Before specifying a language, a language code must exist at either the system level or in your user preferences.
Document Company	A number that, with the document number, document type and G/L date, uniquely identifies an original document, such as invoice, voucher, or journal entry.
	If you use the Next Numbers by Company/Fiscal Year feature, the Automatic Next Numbers program (X0010) uses the document company to retrieve the correct next number for that company.
	If two or more original documents have the same document number and document type, you can use the document company to locate the desired document.

Field	Explanation
Period Number – General Ledger	A number indicating the current accounting period. This number, used in conjunction with the Company Constants file (F0010) and the General Accounting Constants (F0009), allows the user to define up to 14 accounting periods. See General Ledger Date. The current period number is used to determine posted before and posted after cut off warning messages. It is also used as the default accounting period in the preparation of financial reports.
Fiscal Year	A two-digit number that identifies the fiscal year. You can enter a number in this field or leave the field blank to indicate the current fiscal year (as defined on the Company Numbers & Names form).
	Specify the year at the end of the first period rather than the year at the end of the fiscal period. For example, a fiscal year begins October 1, 2005, and ends September 30, 2006. The end of the first period is October 31, 2005. Specify the year 05 rather than 06.

Assigning Your Accounting Periods to the Column Headings

Each fiscal date pattern type is assigned a name for each period, for example, Period One is equal to June. The name assigned to a period is used in the Date Title and in the Smart Column Headings associated with smart fields. Each Fiscal Date Pattern type can have its own period names to accommodate company-specific fiscal date patterns. For example, a fiscal date pattern that begins in October might have column heading October for Period 1, whereas a regular fiscal date pattern might have column heading January for Period 1.

See Also

- *Appendix E: Smart Fields* for additional information on Smart Column Headings.

▶ **To assign your accounting periods to the column headings**

1. From the Advanced Report Setup menu (GH9141), choose Column Headings.

   The Work With Column Headings form appears.

2. From Work With Column Headings, click Add.

The Column Headings Revisions form appears.

3. Complete the following fields to set up a fiscal date pattern type, and then click OK:

- Fiscal Date Pattern

- Language

- Period 1 - 14

Field	Explanation
Fiscal Date Pattern	A code that identifies date patterns. You can use one of 15 codes. You must set up special codes (letters A through N) for 4-4-5, 13-period accounting, or any other date pattern unique to your environment. An R, the default, identifies a regular calendar pattern.
Language	A user defined code (01/LP) that specifies a language to use in forms and printed reports. Before specifying a language, a language code must exist at either the system level or in your user preferences.

Working with the Drill Down Feature

In reports that show summary information, particularly financial reports, the report reader often needs to research beyond the summary information and into the detail from which the information was derived. For example, in a report that shows unpaid balances for customers, you might want to review each unpaid invoice that contributes to the total unpaid balance. You can design a report that uses the drill down feature to associate data on a report with a OneWorld interactive application. When reading an online report, a user can click data in the report which automatically launches the OneWorld application.

When the OneWorld application opens, an audit trail is created that shows detail about the data on the report. The audit trail records are static. Therefore, the information in the audit trail might differ from the information in the records you are auditing. For example, if someone posts a transaction after you run a report and generate new audit trail data, that change is immediately reflected in the table, but it is not reflected in the audit trail. You cannot create an audit trail for tabular reports containing row or cell specifications or calculation fields.

Caution: Because the drill down feature requires significant system resources, activate it only when necessary. In addition, the Audit Trail work file (F83UI001) does not automatically purge itself; therefore, you need to purge this work file periodically to improve processing time. The Balance Auditor Table Purge (P83001) is on menu GH9141.

Complete the following tasks:

- Activating the drill down feature
- Reviewing an audit trail
- Purging drill down work files

Activating the Drill Down Feature

You can activate the drill down feature during the following activities:

- When you edit or revise the report using Report Design. This method will be described in the following task.

- When you create the report using the Report Design Director. See *Defining Additional Properties for an Application Report*.

- When you are modifying or creating a report director template. See *Adding or Modifying Director Templates* for information about activating the drill down feature.

Before You Begin

❑ When enabling drill down in a batch version, override the specifications for the section properties and the event rules first. From the Section Menu, choose override Version Specifications and click Section Layout and Section Event rules on the resulting form.

▶ **To activate the drill down feature**

1. On Report Design, focus on the tabular report section for which you want to activate the drill down feature.

2. Do one of the following:
   - Double-click the report section.
   - From the Section menu, choose Section Properties.

   The Tabular Section form appears.

3. Click the Financial tab or the tab that relates to the director template, for example, Financial Reports.

4. Click the following, and then click Define:
   - Drill Down

   The Work With Applications form appears.

5. On Work With Applications, click Find.

   This form displays a list of all available applications. You can limit your search by entering search criteria in the QBE line.

6. Choose an application, and then click Select.

   Choose an application to be called from the report. This is the application that you want to *drill* into to investigate balances.

The Work With Forms form appears.

7. On Work With Forms, choose a form, and then click Select.
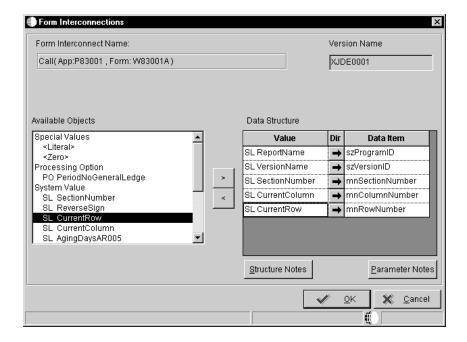
    Many OneWorld applications consist of multiple forms. Choose the form to open when you drill into the application.

    If more than one version exists for a given form and application, the Work With Versions form appears.

8. On Work With Versions, do one of the following:

    *   Choose a version, and then click Select.

    *   Click Close to avoid choosing a specific version.

    If the report has attached processing options, you will be prompted to provide the parameters.

    The Form Interconnections form appears.

9. On Form Interconnections, from the Available Objects column, double-click the object in the Available Objects list that you want to pass to the Value column. Data items come from the application you just specified.

10. Click the Directional arrow in the Dir column until it toggles to the right arrow icon (indicating that the data flows from the source to the target).

11. Continue defining parameters for available objects. Make sure to move your cursor down to the next field in the data structure before choosing the next available object.

> **Note:** Available objects will vary depending on the field type.

12. After you have finished defining the form interconnection parameters, click OK.

13. From Tabular Section, click OK to return to the Report Design form. Proceed with the task of *Reviewing an Audit Trail*.

Field	Explanation
Available Objects	Choose an object for which to: • assign a value • pass data in a business function • pass data through a report or form interconnection To pass data for an object from one report or form to another, the same object must be included in the data structure of both reports or forms. For example, if you want to pass address number from a find/browse form to a fix/inspect form, then address number must be included in the data structure of each form. If the data structure for a report or form does not include a particular object, modify the data structure using the Object Management Workbench.
Movement Buttons	To move an item, make your selection and click the single arrow button. For multiple items, hold down the Shift key as you click on your selections. Where applicable, the double-arrow buttons move all items displayed in the grid.
Data Flow Arrows	Indicates the direction of data flow between the Value and Data Item data structure columns. As you click the direction arrow, it toggles through the following four options: • From the source form to the target form • From the target form to the source form • From the source form to the target form; upon exiting target form, data flows back to the source form • No data flow; connect to another form without passing data

Reviewing an Audit Trail

If you are viewing online a report that uses the drill down feature, you can click data in the report and automatically launch the OneWorld application. This establishes an audit trail whereby you can see detail about the data on the report.

Before You Begin
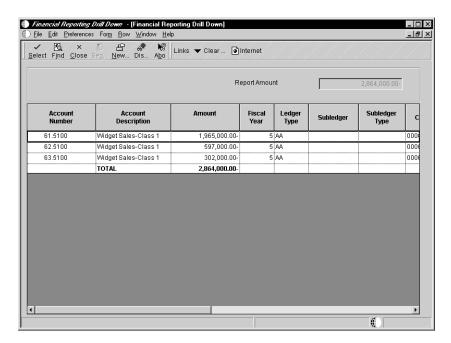
❏ Run the report and view it online.

▶ **To review an audit trail**
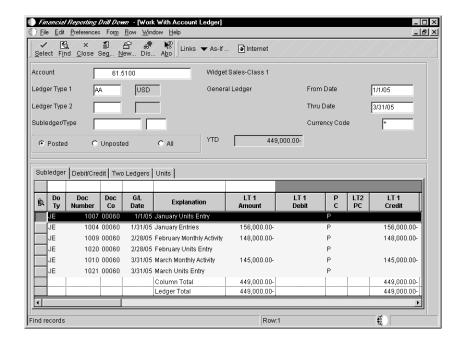
1. While viewing your report online, hover your cursor over the record you want to research until the cursor becomes a pointing index finger, Then click.

   The Acrobat Reader displays a message asking if you want to launch the application.

2. On Acrobat Reader, click Yes to open the application form you want to research. The form associated with this report appears for that record.

3. Choose the record for which you want to display details, and then click Select.

4. The form associated with this report appears with details about the record you are investigating.

5. When you are finished with your evaluation of the form, click Close.

6. When you are completely finished with your evaluation of the records, on Tabular Section - Financial tab, turn the Drill Down option off.

    If you are creating an application report, the tab is named the same as the director template. For example, if you chose the Financial Reports template in the Director, the tab is named Financial Reports.

Purging Drill Down Work Files

Each time you activate the drill down feature in a report to review an audit trail, the system creates a work file which remains in the system until purged. Typically, a system administrator will be responsible for purging drill down work files.

▶   **To purge drill down work files**

1. From the Advanced Report Setup menu (GH9141), launch Balance Auditor Table Purge (P83001).

2. Click Find.

    A list of all existing drill down work files appears in the grid.

3. Choose a file, and then click Delete.

Setting Up Business Views as Favorites

A *favorite* is a simplified method to access information. In Report Design, favorites allow you to create folders that contain only the business views that you require for your reporting needs. You can organize these business views in any logical grouping to simplify the selection process. For example, set up a group by reporting system, common functionality, or frequency of use.

During the report creation process, the Director allows you to choose business views from the favorites directory, but the Director interface is read-only. To modify the favorites, you must use the Favorites program, which you can access for the Advanced Report Setup menu (GH9141).

When setting up your favorites, you create a tree structure. The tree structure comprises folders and subfolders that allow you to logically categorize the business views that you designate as favorites. The tree structure appears in the left portion of the form, and any notes attached to the favorites appear in the right portion of the form. You can place subfolders directly into a predefined folder upon creation. The Work with Favorites form displays the information for favorites lists based on the user ID of the creator of the list.

You can also choose the language in which the notes text appears for your favorites.

Setting up business views as favorites contains the following tasks:

- Creating a favorites folder or subfolder

- Adding business views to a favorites folder or subfolder

- Using notes with a favorite, a folder, or a subfolder

- Translating descriptions of favorites

Creating a Favorites Folder or Subfolder

The folder is the top level of your favorites list. In the tree structure, your folders appear beneath the Favorites heading. You can place favorites directly into a folder, and then create a subfolder to further categorize your favorites within that folder.

Complete the following tasks:

- Creating a favorites folder

- Creating a favorites subfolder

▶ **To create a favorites folder**

1. From the Advanced Report Setup menu (GH9141), choose Favorites.

   The Work With Favorites form appears.

2. On the toolbar, click Add.

   The Object Folder Revisions form appears.

3. On Object Folder Revisions, complete the following fields and click OK:
   - Folder
   - Description
   - Folder Owner
   - Category Code 1–6

Field	Explanation
Folder Owner	The address book number of the individual that the folder of favorites belongs to.
Description	A folder that contains objects from the system that you consider to be favorites.
Category Code 1	A code to be used to categorize a Favorites folder.

▶ **To create a favorites subfolder**
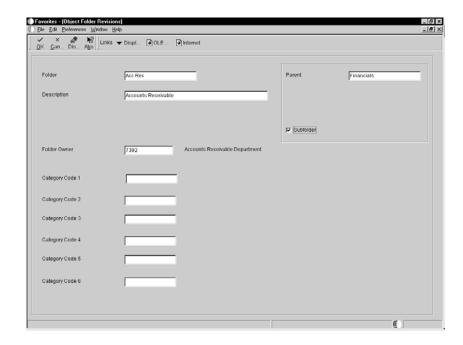
Because subfolders reside in folders, the folder in which you want to specify subfolders must already exist before you can add subfolders to it.

1. From the Advanced Report Setup menu (GH9141), choose Favorites.

   The Work With Favorites form appears.

2. Click the folder to which you want to add a subfolder and from the Row menu, choose Add Subfolders.

   The Object Folder Revisions form appears.

3. On Object Folder Revisions, complete the following fields:

- Folder

- Description

- Folder Owner

- Category Code 1 – 6

4. Ensure that the Subfolder box has been selected and then click OK.

Field	Explanation
Description	A folder that contains objects from the system that you consider to be favorites.
Folder Owner	The address book number of the individual that the folder of favorites belongs to.
Category Code 1	A code to be used to categorize a Favorites folder.
Parent	An object folder contains objects from the system that the user condsiders to be favorites.

Adding Business Views to a Favorites Folder or Subfolder

After you add folders to a favorites list, you can add business views to the favorites folder. If you set up subfolders beneath your folders in your favorites list, you can also add business views to these subfolders.

▶ **To add business views to a favorites folder or subfolder**

1. From the Advanced Report Setup menu (GH9141), choose Favorites.

   The Work with Favorites form appears.

2. On Work with Favorites, choose a folder or a subfolder.

3. From the Row menu, choose Revise Favorites.

   The Favorites Revisions form appears.

4. Click in the Object Name field, and then click the visual assist icon.

   The Object Search form appears.

5. On Object Search, press Enter or click Find to display a list of available business views.

   You can refine your search by entering search criteria in the QBE line.

6. Choose a business view in the detail area, and then click Select.

7. Repeat Steps 4–6 until you have added all the required business views to the folder or subfolder, and then click OK.

Using Notes with a Favorite, a Folder, or a Subfolder

You can add notes to a favorite or a folder to describe its use or its contents. For example, you might include text that describes when to use a particular business view.
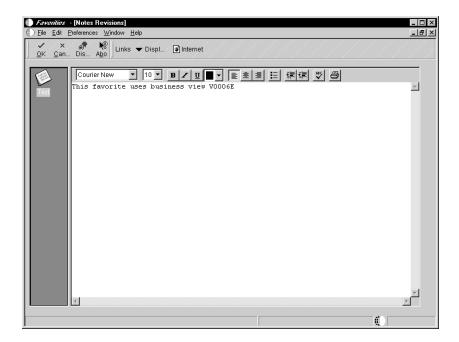
Complete the following tasks:

- Adding notes to a favorite, a folder, or a subfolder
- Deleting notes from a favorite, a folder, or a subfolder

▶ **To add notes to a favorite, a folder, or a subfolder**
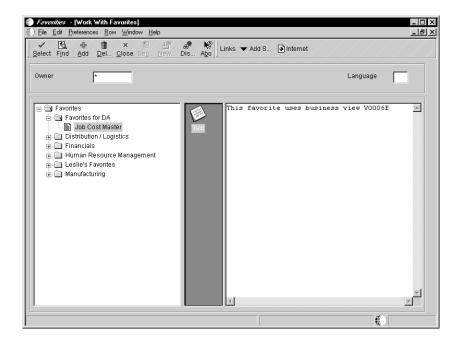
1. From the Advanced Report Setup (GH9141) menu, choose Favorites.

   The Work with Favorites form appears.

2. On Work With Favorites, choose a favorite, folder, or subfolder.

3. From the Row menu, choose Note Revisions.

   The Notes Revisions form appears.

4. On Notes Revisions, type your note, and then click OK.

   The Work With Favorites form appears.

5. When you choose the appropriate item, your note appears in the right portion of the form.

▶ **To delete notes from a favorite, a folder, or a subfolder**

1. From the Advanced Report Setup menu (GH9141), choose Favorites.

2. On Work With Favorites, choose a favorite, a folder, or a subfolder.

3. From the Row menu, choose Note Revisions.

4. Delete the text, and then click OK.

Translating Descriptions of Favorites

If you need to set up your system to handle multiple languages, you can enter alternate descriptions for your favorites to support the available languages. You can use the Favorites Description Translation application (P91100) to include translations of items that appear in your favorites lists.

Complete the following tasks:

- Setting up favorites description translations
- Viewing a favorites list with alternative descriptions
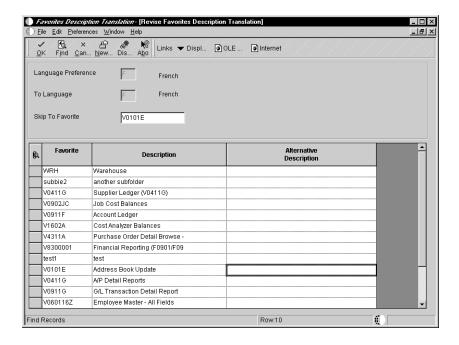
▶ **To set up favorites description translations**

1. From the Advanced Report Setup (GH9141) menu, choose Favorites Description Translation.

   The Work With Favorites Description Translation form appears.

2. From the grid, choose the language that you want to translate into, and then click Select.

   The Revise Favorites Description Translation form appears.

3. Complete the following field, and then click Find:

   - Skip To Favorite

4. Focus on the Alternative Description field in the detail area for the favorite you would like to translate.

5. Type the alternative description, and then click OK.

▶ **To view a favorites list with alternative descriptions**

1. From the Advanced Report Setup menu (GH9141), choose Favorites.

   The Favorites – Work With Favorites form appears.

2. Complete the following field, and then click Find:

   - Language

If a favorites list exists for the specified language, the favorites list appears; otherwise, the favorites list for the domestic language appears.

Notice that the notes are blank to allow for notes to be entered in the translated language.

Field	Explanation
Language	A user defined code (01/LP) that specifies a language to use in forms and printed reports.
	Before specifying a language, a language code must exist at either the system level or in your user preferences.

Working with Processing Options Templates

Processing options control how a report or batch application processes data. They are version-driven; therefore, unique processing option values can be attached to different versions of the same report. Processing options for a report can be set to appear automatically at runtime to prompt the user for specific values. You can use processing options to:

- Control how a report processes data
- Set up default values
- Customize an application for different companies or even different users
- Control the format of reports
- Control page breaks for reports
- Control totaling for reports

Working with processing options templates describes the following tasks:

- Understanding processing options templates
- Designing processing options templates
- Attaching a processing options template to a report

Understanding Processing Options Templates

A processing options template contains one or more processing options. Each processing option appears on a row within the template and is defined by its title, which includes its valid values if they exist.

The following list outlines the process to create and use processing options templates:

1. Create processing options by building a list of parameters called a *template.*
2. Attach this template to a report and create event rules for the report to make use of these values.
3. Create versions of the report.
4. Specify how the processing options will be handled at run time by specifying different processing option values for different versions.

5. At run time, a processing option template displays a set of tabs within an area called a *page*. Each tab represents a category of processing options. When you click the tab, the page changes to show the set of processing options for that category. At run time, depending on how you set up the report, one of the following occurs:

   - The processing options appear, allowing the user to supply values.

   - A versions list appears, with each version holding a preselected set of processing option values.

   - The report runs with a preselected set of options, such as data selection and data sequencing, and with preselected processing option values.

Designing Processing Options Templates
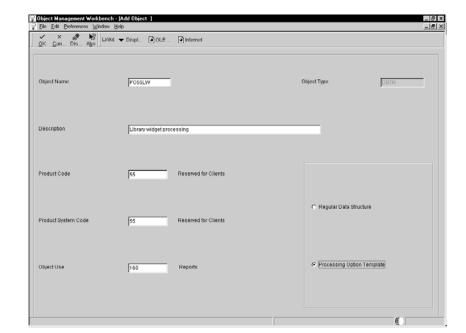
You can create a processing options template that lists the values for data items passed to the report at run time.

Complete the following tasks:

- Creating a processing options template
- Adding a tab to a processing options template

▶ **To create a processing options template**

1. Click the Object folder in your project and then click Add on the toolbar.

   The Add OneWorld Object to the Project form appears.

2. Choose Data Structure and click OK.

The Add Object form appears.

3. On Add Object, complete the following fields:

    *   Object Name

    *   Description

    *   Product Code

    *   Product System Code

    *   Object Use

        Object Use should reflect the object being created. You can create your own valid value for Object Use. To do so, click the visual assist; then from the Form menu choose Revisions. On Work With User Defined Codes, click Add. On User Defined Codes, scroll to the bottom of the list to a blank row in the grid and enter a new code and description.

4. Choose Processing Option Template and click OK.

    The Object Librarian Processing Option Design form appears.
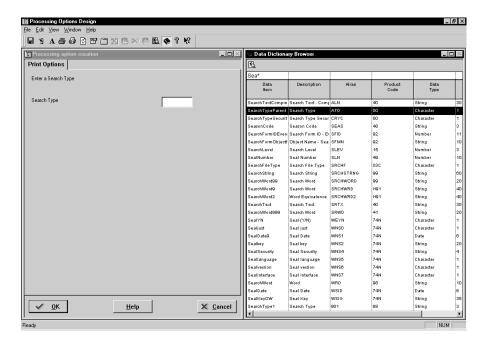
5. Click the Design Tools tab, and then start the Processing Option Design Aid.

    The Processing Options Design form appears.

6. Right-click <New Tab>, and from the pop-up menu choose Current Tab Properties.

The Tab Properties form appears.

7. On Tab Properties, complete the following fields, and then click OK:

   - Short Name

   - Long Name

8. To display data dictionary items on the Data Dictionary Browser form, perform one of the following:

   - Click the Search icon located directly beneath the Data Dictionary Browser heading.

   - Right-click on this form, and then choose Find.

   - Enter a value on the QBE line, and then press Enter.

9. Use one of the following methods to select items that you want to add to your processing options:

   - Double-click the item in the Data Dictionary Browser. The item appears in the left side of the form under your tab.

   - Drag the item from the Data Dictionary Browser to the position you want it in on the tab.

10. To reposition an item on the tab, click the item and drag it to its new position.

    The Processing Options tool automatically adjusts the size and position of data items to fit the width of the tab.

11. Double-click the text portion of the item to delete or overwrite it.

12. Right-click the data item and choose Properties from the resulting pop-up menu.

   The JDE.DataItem Properties form appears.

13. From the General tab, change the Alias field, if necessary. The Alias description must be a unique identifier.

14. Click the Help Override Data Item tab and modify the following field as necessary:

   • Data Item Help Override Name

15. Click OK.
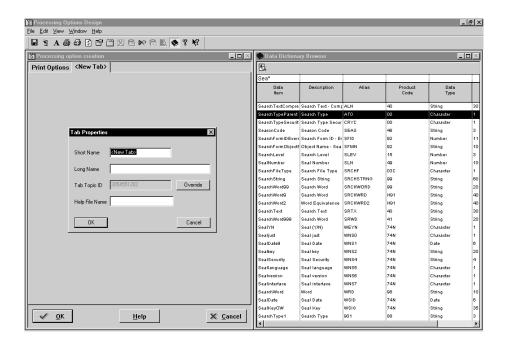
Field	Explanation
Object Name	The OneWorld architecture is object-based. This means that discrete software objects are the building blocks for all applications, and that developers can reuse the objects in multiple applications. Each object is tracked by the Object Librarian. Examples of OneWorld objects include: • Batch Applications (such as reports) • Interactive Applications • Business Views • Business Functions • Business Functions Data Structures • Event Rules • Media Object Data Structures
Product Code	A user defined code (UDC 98/SY) that identifies a J.D. Edwards system.
Product System Code	A code that designates the system number for reporting and jargon purposes. See UDC 98/SY.
Object Use	Designates the use of the object. For example, the object may be used to create a program, a master file, or a transaction journal. See UDC 98/FU.

▶ **To add a tab to a processing options template**

1. On Processing Options Design, right-click on <New Tab> and from the pop-up menu choose New Tab.

   A second <New Tab> is added to the form, and the Tab Properties form appears.

2. On Tab Properties, complete the following fields, and then click OK:

   - Short Name
   - Long Name

3. When your processing option is complete, you can choose Edit Test from the menu to see how it will display. From there you can test the visual assist to make sure you have chosen the correct data item for your processing option. Be sure to save your changes before you exit.

Attaching a Processing Options Template to a Report

You must attach a processing options template to a report to use the functionality at run time. Because the template exists as a separate object, you can attach the same template to multiple reports.

▶ **To attach a processing options template to a report**

1. On Report Design, from the Report menu, choose Select Processing Options.

   The Select Processing Option Template form appears.

2. On Select Processing Option Template, choose the template you want to use, and then click OK.

   A check mark appears next to Select Processing Options on the Report menu indicating that a processing options template is attached to this report.

3. To confirm that the correct processing options template is attached to the report, from the Report menu, choose Report Properties. The Processing Options field indicates the processing options template attached to the report.

4. To remove an existing processing options template, on Select Processing Option Template, click Remove.

Working with Director Templates

The Report Design Director aids you in report design by helping you create a report object and guiding you step-by-step through the design process. In addition to creating a group, columnar, or tabular section through the Director, the Director uses director templates to help you create application reports, such as financial reporting, fixed assets, or job cost. These templates, included with OneWorld, contain default criteria. When you choose one of the templates in the Director, the Director program reads the template specifications (stored in OneWorld tables) and presents the default criteria through the Director forms. You can modify the OneWorld templates and create your own through the Smart Field Templates (P91420) and Report Director Templates (P91400) programs. For each director template you create, you must determine the following specifications:

- Which business view to use as the default view
- Which processing options to attach to the report
- Which Director forms to display
- Which smart fields to display for column selection
- The preferred smart field data selection
- The preferred data sequencing
- Which additional properties to include

The template specifications are stored in the following One World tables:

Report Director Templates Header (F91400)	This table holds the default business view and processing option information.
Report Director Templates Sequence Items (F91410)	This table holds the information about the preferred data sequencing.
Report Director Templates Smart Field Activation (F91420)	This table holds the information about which smart fields to display.
Smart Field Template Criteria (F91430)	This table holds the information about smart field data selection.

Working with director templates describes the following tasks:

- Working with smart field templates
- Adding or modifying director templates

Working with Smart Field Templates

A smart field template lets you group smart fields so that you can include them collectively in a director template. For example, the smart field template called "S09001 - Financial Reporting" contains all the smart fields for financial reporting. OneWorld includes predefined smart field templates. Through the Smart Field Templates program (P91420), you can add new or modify existing smart field templates to meet your reporting needs.

When you create a director template, you must attach a smart field template to the director template. The smart fields and data fields included in the smart field template determine which template you attach to the director template. For example, if you are creating a financial report, the smart field template called "S09001 – Financial Reporting" might contain all the smart fields and data fields that you require. Therefore, you could specify S09001 as the smart field template to attach to your director template. When you use the director template to create a report, the smart fields in the specified template appear on the Select Column form. From this form, you can choose any of the fields to include in your report.

In addition to specifying which smart fields you want to include in the template, you can also include fields used for data selection within the smart field column. The fields chosen appear on the Smart Field Data Selection form of the Director.

Complete the following tasks:

- Creating a new smart field template
- Modifying an existing smart field template

Before You Begin

❑ Before you can create a smart field template, the smart fields to include in that template must already exist. To create smart fields, see *Attaching a Smart Field Trigger* in the *OneWorld Development Tools* guide.

▶ **To create a new smart field template**

1. From the Advanced Report Setup menu (GH9141), choose Smart Field Templates.

   The Work With Smart Field Templates form appears.

2. Click Add.

   The Smart Field Template Revisions form appears.

3. Complete the following fields:
   - Smart Field Template
   - Description

4. Click in the Data Item field to access the visual assist icon.

   The Smart Field Search & Select form appears.

5. Click the following option:
   - Smart Field

6. Click Find to display a list of all available Smart Fields.

   Use the QBE line to limit your search.

7. Choose a smart field, and then click Select.

8. Repeat Steps 4–7 until you have added all smart fields you want to include in the smart field template.

9. On Smart Field Template Revisions, click OK.

   The Smart Field Template Criteria Revisions form appears. This form lets you determine smart field data selection.

10. Click the visual assist icon in the Data Item field.

    The Data Dictionary Search and Select by Alias form appears.

    Note: The search form allows you to choose from all data items in the system. Select only those appropriate to your business views.

11. Click Find to display a list of available data items.

    Use the QBE line to refine your search.

12. Choose the data item, and then click Select.

13. On Smart Field Template Criteria Revisions, in the row of the data item that you selected in Step 12, complete the following field:

   - Range Values

     Enter a 0 to indicate that the data item will have a single value only. Enter a 1 if you want a data item to accept a range of values, such as Object Account: From and Object Account: Thru. These data items appear on the Smart Field Data Selection form in the Director.

14. Repeat Steps 10–13 to select all data items for smart field data selection, and then click OK.

   Note: Only five data items are allowed. A range of values counts as two data items.

15. Use Display Sequences to determine the order in which you want the data items to appear on the Smart Field Data Selection form.

To use a smart field template, you must attach it to a director template. Proceed with the task *Adding or Modifying Director Templates* for information about connecting the smart field template to the director template.

▶ **To modify an existing smart field template**

1. From the Advanced Report Setup menu (GH9141), choose Smart Field Templates.

   The Work With Smart Field Templates form appears.

2. Choose the template to be modified, and then click Select.

   The Smart Field Template Revisions form appears.

3. Add or delete smart fields from the template, and then click OK.

   The Work With Smart Field Templates form appears.

4. To change the smart field data selection for the modified template, from the Row menu, choose Template Criteria.

   The Smart Field Template Criteria Revisions form appears.

5. Click the visual assist icon.

   The Data Dictionary Search and Select by Alias form appears.

6. Click Find to display a list of available data items.

   Use the QBE line to refine your search.

7. Choose the data item, and then click Select.

8. On Smart Field Template Criteria Revisions, in the row of the data item that you selected in Step 7, complete the following field:

   • Range Values

      Enter a 0 to indicate that the data item will have a single value only. Enter a 1 if you want a data item to accept a range of values, such as Object Account: From and Object Account: Thru. These data items appear on the Smart Field Data Selection form in the Director.

9. Repeat Steps 5–8 to select all data items for smart field data selection, and then click OK.

   Note: Only five data items are allowed. A range of values counts as two data items.

10. Use Display Sequences to determine the order in which you want the data items to appear on the Smart Field Data Selection form.

To use a smart field template, you must attach it to a director template. Proceed with the task *Adding or Modifying Director Templates* for information about connecting the smart field template to the director template.

Adding or Modifying Director Templates

This task describes how to use the Report Director Templates program (P91400) to create and modify director templates. When created or modified, the templates are available to you on the Director's Welcome form.

Caution: Smart fields associated with a director template rely on business view columns in the template's associated business view. If you change the business view or select a different business view, the associated smart fields might not function correctly. Before making any such changes, be sure you know which business view columns the smart fields in question require.

Before You Begin

❑ When you add a director template you will need to specify the name of a smart field template. If an existing smart field template does not contain the smart fields you need, you must create one suitable for your application. See *Working with Smart Field Templates* for information about how to add or modify a smart field template.

▶   **To add or modify a director template**

1. From the Advanced Report Setup menu (GH9141), choose Report Director Templates.

    The Work With Report Director Templates form appears.

2. To add a director template, click Add.

    To modify an existing director template, click Find and select the template to modify.

    The Report Director Templates Revisions form appears.

3. Complete the following fields:

    - Report Template Description

      This description appears when you click the down arrow on the Director's Welcome form.

      See *Choosing an Application Report Template* for information about how the description appears on the Director's Welcome form.

4. Click the Building Blocks tab and complete the following fields:

    - Section Type

    - Business View

    - Processing Options

    - Smart Field Template

      This field is active only if you chose to create a tabular section type.

5. Click in the Data Item field under the Default Sequence and Level Breaks column to display the visual assist icon.

6. Click the visual assist icon.

    The Data Dictionary Search and Select by Alias form appears.

7. Click Find to display a list of available data items.

    Use the QBE line to narrow your search.

8. Choose a data item in the detail area, and then click Select.

9. On Report Director Templates Revisions, click in the next Data Item field.

    The Description and Display Sequence form automatically appears for the data item selected in Step 8.

10. Repeat Steps 5–9 for every data item that you want to include on your report.

   The first two data item descriptions listed in the detail area are reflected in the Report Grouping column, and the subsequent data item descriptions are reflected in the Report Detail column on the Data Sequencing Help form of the Director.

   See *Defining Section Data Sequencing for an Application Report* for information about the Data Sequencing Help form as it appears in the Director.

11. On Report Director Templates Revisions, click the Properties tab.

12. Click the following options as necessary:

   - Display Financial Criteria

   - Display Generic Criteria

   - Display Suppress Zero Rows

   - Display Adjust Sign

   - Display AAI Subtotal

   - Display Level of Detail

   - Use Financial Description

13. Click the Drill Down tab.

   By turning the Drill Down option on, the Drill Down option appears on the Additional Properties form of the Director. After designing your report with the Director, you can drill into the application, form, and version identified in the director template to see the detail of the data that appears on the report.

   The Work With Applications form appears.

14. Locate and choose the application to launch when the report reader wants to research report information.

15. Click Select.

   The Work With Forms form appears.

16. Choose a form, and then click Select.

   If there are versions for a given form and application, the Work With Versions form appears.

17. Choose a version, and then click Select.

18. On Report Director Templates Revisions, click OK.

Field	Explanation
Report Template	A predefined set of specifications on which to base a report.
Section Type	The type of section used for the main section in a Report Director template.
Default View	The default business view to which a Report Director template is associated.
Default Processing Options	The processing option template to which a Report Director template is associated.
Smart Field ID	Use the Visual Assist to search for a smart field template. The smart field template could be one shipped with OneWorld or a custom template.
Sequence Number	A number that the system uses to sequence information.
Use Financial Description	The Financial Description property is used to get the correct description for object account. When enabled, the Report Director will turn the Financial Description option on in the tabular section properties.
Display Level of Detail	Display Level of Detail determines if the Account Level of Detail Rollup property displays on the Additional Properties form of the Director. Account Level of Detail Rollup is a method of summarizing object accounts based upon the level of detail (LOD) set in the chart of accounts.
Display AAI Subtotal	Display AAI subtotal determines if the AAI subtotaling property is displayed on the Additional Properties form of the Report Director. AAI subtotaling allows subtotals to be inserted based upon the Financial Statements (FS) series of AAIs.
Display Adjust Sign	Display adjust sign determines if the Reverse Sign For: property appears on the Additional Properties form of the Report Director. Reverse Sign For: lets you reverse the sign of amounts (debits and credits) in accounts for balance sheet or income statement reports.
Display Suppress Zero Rows	This property determines if the Zero Row Suppression property appears on the Additional Properties form of the Report Director. Zero Row Suppression will suppress the printing of a row in a tabular section using one of the following options: • No Zero Row Suppression • Suppress Zero Detail Rows Only • Suppress All Zero Rows

Field	Explanation
Display Criteria	If Display Generic Criteria is selected, the Report Director displays the Section Data Selection form.
	If Display Financial Criteria is selected, the Report Director displays the Help with Data Selection form. This form lets you select accounts based on Balance Sheets or Income Statements.
Drill Down	Determines whether the Report Director displays the Drill Down property. You must also specify the application, form, and version to launch. To enable drill down in the actual report, the report designer must also turn on this option when designing the report in the Report Director.
Drill Down Application	The name of the OneWorld application that will launch when a user wants to research the source of data in a report. Specify the application name, the form, and the version.
Form Name	The unique name assigned to a form.

Printing Text Attachments on a Report

OneWorld allows you to attach text to records in your database. For example, you might attach a comment to clarify a transaction, such as "Customer notified us that their payment was sent 02/01/99." Users can add text attachments to records from the OneWorld interactive applications.

You can design a report to show any text attachments that exist for a record. In this way, anyone who reads the report can see the same text attachments that are available in the interactive applications. The following illustrates how a text attachment (shown under the Comments heading) might appear on your report:

R55LWGT		J. D. Edwards & Company		2/1/99	15:49:26
		Voucher Detail		Page –	1
Document Number	Document Type	Invoice Date	Gross Amount	Comments	
1564	PV	6/5/05	1,500.0 0	Customer notified us that their payment was sent 2/1/99	
Document Number	Document Type	Invoice Date	Gross Amount	Comments	
1565	PVC	6/15/05	2,500.0 0	Voucher G9870 approved for payment by Jane Meade	

Before You Begin

❑ This documentation assumes that text attachments already exist for the records to be included in the report. See *Media Object Attachments* in the *OneWorld Foundation* guide.

❑ Access an existing report or create a new report that prints the records to which you have attached the text. See *Report Object Creation* or *Report Design Director* for information about accessing an existing report or creating a new report.

❑ OneWorld uses data structures to associate records with their text attachments. In this task you will need to specify the name of the data structure that the interactive application uses to associate records with their text attachments. You can use Object Management Workbench to see a list of all media object data structures (object type GT). For more information about media object data structures, see *Creating a Media Object Data Structure* in the *OneWorld Development Tools* guide.

▶ **To print text attachments on a report**

1. On Report Design, from the Insert menu, choose Alpha Variable.

2. Insert the variable into the the detail section.

3. Double-click the alpha variable field (the body, not the header) that you just inserted.

   An appropriate Variable Properties form appears.
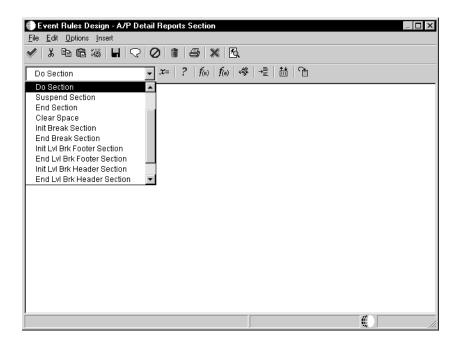
4. Click the Description tab and change the following field:

   - Variable Name

     Change the column or variable properties to a meaningful name, for example, Comments.

5. Click the Display tab and modify the following field to a length that accommodates the text attachments that will appear in this field. If the text is longer than the display length, the text will wrap.

   - Display Length

6. Click OK.

7. Click anywhere in the detail section of your report to deselect the newly created alpha variable, and then do one of the following:

   - From the Edit menu, choose Event Rules.

   - Click your right-mouse button, and then choose Event Rules.
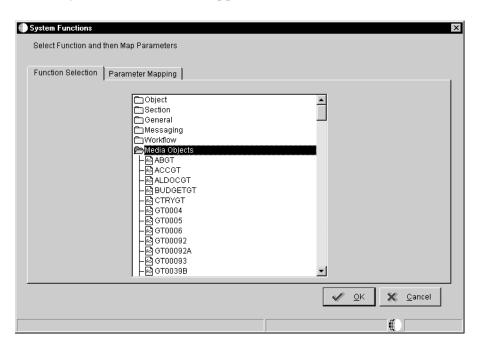
   The Event Rules Design form appears.

8. On Event Rules Design, click the down arrow to display the Events list.
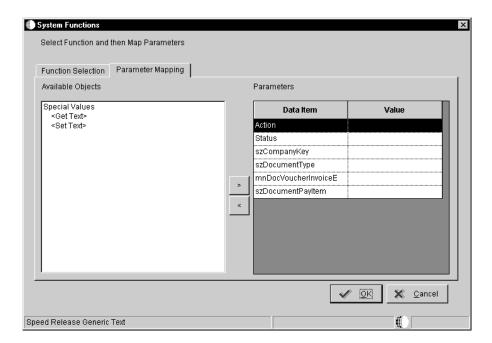
9. Choose the *Do Section* event.

10. Click the System Functions button.

The System Functions form appears.

11. On the Function Selection tab, double-click the Media Objects folder to see all available functions.

12. Choose the media object data structure that was attached to the original application.

13. Click the Parameter Mapping tab.

The Parameters that appear on this screen, other than Action or Status, vary depending on the criteria that you established.
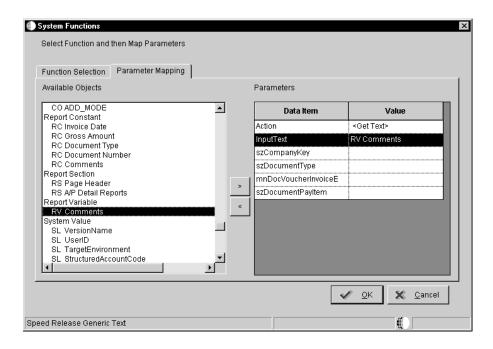
14. Define the following two parameters:

- Action

  Choose <Get Text> from the Available Objects. This action calls a function to retrieve the generic text associated with the parameter.

- Status
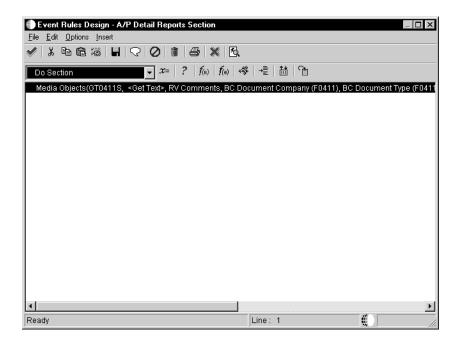
  When you choose <Get Text> for the Action, this data item automatically changes to Input Text. Input Text designates the variable into which you input the retrieved text.

  Choose RV Comments from the Available Objects.

15. Define all other parameters using the available business view columns, and then click OK.

An event rule similar to the one below appears on the Event Rule Design form. This varies depending on the criteria you entered.

16. On Event Rules Design, click the check mark to save and return to Report Design.

17. Preview or run your report.
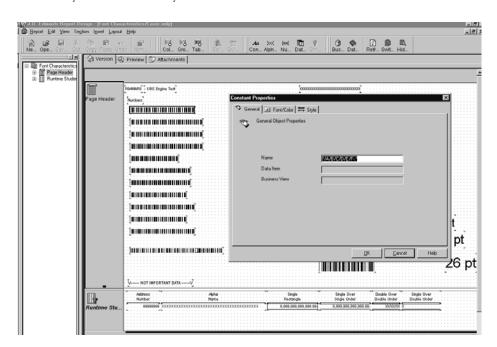
For any record that has generic text attached, the text prints where you placed the alpha variable on the report.

To see generic text for specific records, establish If/While criteria. See *Creating an If/While Statement in an Event Rule* for information about creating this criteria. If there is no generic text for the record, or if the record is excluded by the If/While logic, no text will print in the alpha variable location.

Working with Bar Codes

You can use bar code fonts to create bar codes in your reports. Report Design provides base bar code functionality for your report and batch job output. You can use any true-type bar code font. Bar codes print on both PCL and postscript printers.

You can use bar codes for reports and for batch output. To specify a particular barcode, you must enter the encoding for that barcode in the constant properties. The encoding is a series of characters and numbers preceded and followed by a * to let the system know this is a bar code.
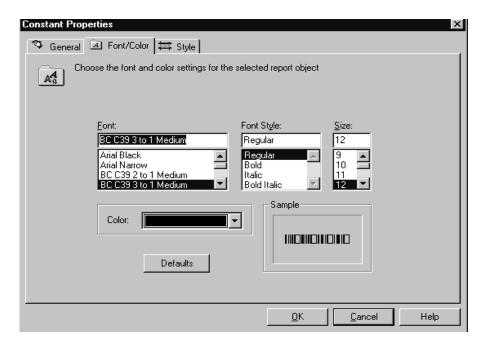
▶   **To work with bar codes**

1.   On Constant Properties, click the Font/Color tab and complete the following fields:

   •   Font
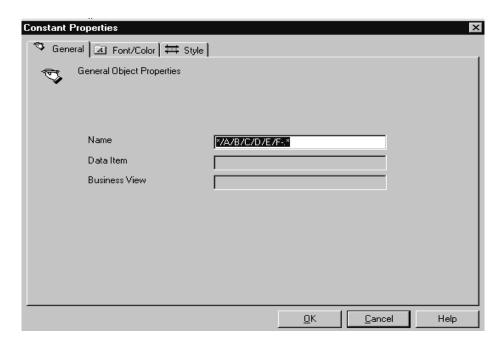
       The font is the bar code font name, for example the bar code font BC C39 3 to 1 Medium.

- Font Style

- Size

  You can see a sample of what the font will look like in case you
  need to make changes.
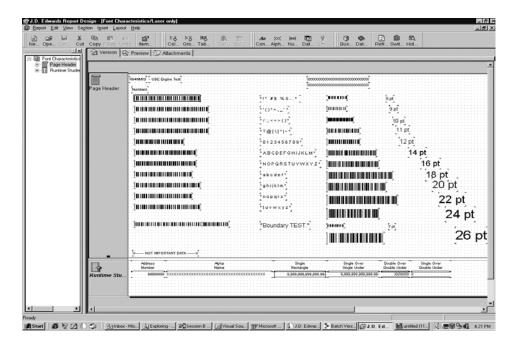
2. Click the General tab.
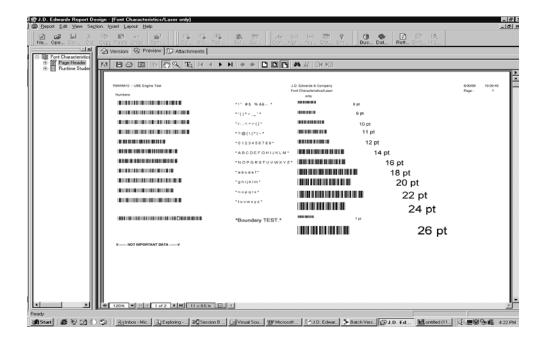
3. Enter the correct encoding sequence for the bar code in the following field and click OK.

    *   Name

        You can see the bar codes in Report Design. They should look similar to the ones shown below.

4. View the PDF file in Preview mode to display the bar codes.

    When you submit your job, the Job Submission form should also display the bar codes properly.

After you set up the bar code in your report, you must link the printer font name and the true type font name to a physical printer in the Bar Code Support application before you print to either a PostScript or PCL printer.

5. From the Bar Code Support program (GH9013), complete the following fields:

- Printer Name

- True Type Font Name

- Printer Font Name
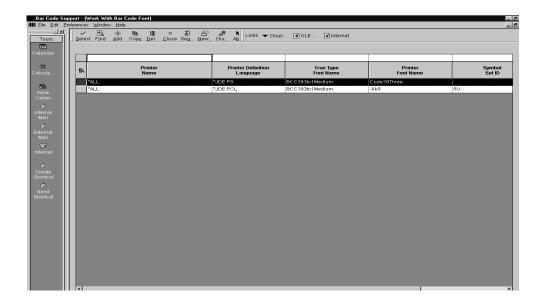
  The printer font name comes from the font vendor, for example Code39Three.

- Printer Definition Language

If you are printing to a PCL printer you must also complete the following field:

- Symbol Set ID

Note: Because font vendors do not sell scaleable PCL true-type bar-code fonts, only fixed-point size is supported for PCL. You should use point sizes between 8 and 24 for postscript.

Bar Code Support – [Work With Bar Code Font]

File   Edit   Preferences   Window   Help

Select   Find   Add   Copy   Del...   Close   Seq...   New...   Dis...   Ab| Links ▼ Displ...   OLE ...   Internet

	Printer Name	Printer Definition Language	True Type Font Name	Printer Font Name	Symbol Set ID
	*ALL	*JDE PS	BCC393to1Medium	Code39Three	
	*ALL	*JDE PCL	BCC393to1Medium	-6b0	5U

After you set up your bar code, you can use a scanner to test the bar code output.

Working with Report Properties

Report Design lets you modify your report and version output by changing report properties. Report properties include details such as the report format, the number of records a report displays, various font types and colors, and more advanced properties.

You can also modify your report dimensions to support a custom form type. For example, if you want to print information on mailing labels, tax forms, or a preprinted check, you can define the dimensions of your report to match the dimensions of the hard-copy form type. Also, you can change the fonts on your report to print correctly on a line printer.

The properties that can be modified include overall report properties, such as report format and number of records displayed, default fonts and colors, cover page options, decimal scaling, and advanced properties.

▶   **To work with report properties**

1. On Report Design, from the Report menu, choose Report Properties.

    The Properties form appears.

2. Click the Report Properties tab and click the following options as necessary:

    - Print Totals Only

    - Print Grand Totals

    - Suppress All Output

    - Limit Number of Primary Table Rows

3. Click the Font/Color tab.

4. Choose "Apply settings to all Objects," click Defaults, or change other options.

    "Apply Settings to all Objects" overrides any font/color choices you made at the individual field level.

5. Click the Cover Page Options tab.

6. Click the following options as necessary:

- Print Cover Page

  Cover pages provide information about the report or batch process including report properties, system properties, printer properties, and processing options. In addition, information is provided at the section level, including section properties, object properties, data selection and sequencing, and row properties. You can choose what level of detail your cover page will display for these properties.

  If you choose Print Cover Page on Report Properties for the report template, a cover page will not print for the versions of the report. If you want to specify a cover page for a version, you will need to turn this option on using Version Detail or Advanced Version Detail.

- Under the General heading
  - Report Properties
  - System Properties
  - Printer Properties
  - Processing Options
- Under the All Sections heading
  - Section Properties
  - Data Selection
  - Data Sequencing
  - Object Properties

7. Click the Decimal Scaling tab and click one of the following options:

- No Scaling
- Scaling from 1 - 1,000,000,000
- Apply settings to all Objects

8. Click the Advanced tab and edit the following options as necessary:

- Subsystem Job
  - Subsystem
  - Wait Time (ms)
- Override Environments
  - Target
  - Prompt for overrides at runtime
  - Source

- Paper Size
  - Custom
- Transaction Processing
  - Enabled

  See *Transaction Processing* in the *OneWorld Development Tools* guide for additional information about using this option.

9. Click OK to save your changes.

Field	Explanation
Print Totals Only	Creates a summary report with totals only.
Print Grand Totals	Allows Grand Total printing at the end of the report.
Suppress All Output	If checked, a PDF file will not be produce for this report when run.
Limit Number Of Rows	Click on this to limit the number of rows of data the report will process.
Limit Number Of Primary Table Rows	Sets the number of rows of data to be selected and processed from the report's primary table. Note: This is useful for testing new reports.
Print Cover Page	When enabled, produces a cover page for the report.
Subsystem Job	Enables the batch application to be defined as a subsystem job.
Wait Time (ms)	The number you enter here, in milliseconds, determines the amount of time that the job waits before restarting the process.
Override Environments	For source environment overrides, the report will use the selected environment. For target environment overrides, the report will use the selected environment for database output. Click on Browse to select the source or target enviroment.
Prompt for overrides at run time	Prompts the user at the time of report execution to specify the name of a data source or environment.
Paper Size	Designates that the report will use forms of special size.
Transaction Processing	Enables transaction processing for this process or report. Transaction processing occurs with in the specified transaction boundary so that calculations are stored in a queue until a commit command is issued.

Batch Versions for Reports

In OneWorld, a batch version is a user-defined set of specifications. These specifications control how batch processes run. Typically, batch versions are associated with reports or batch processes and run as batch jobs on a OneWorld enterprise server.

Batch versions for reports are a predefined set of specifications contained in a file that is separate from the base report or batch specifications. These specifications control the logical functions and the appearance of the report. The version contains the processing instructions, which are a complete set of preselected processing options and additional characteristics specific to report design. Depending on how you assign security to your OneWorld applications, end users can choose or create different versions based on business requirements.

Versions are a powerful and convenient way to modify the behavior of reports. Typically administrators control the creation, modification, and location of the initial batch version files. When you upgrade OneWorld or a specific application to a new release level, you can apply the existing batch versions without additional modification.

When you start a batch application (that is, when you submit a batch job) you must use a batch version. Depending on how the report was designed, you might have the option to override processing option values for the version. However, you cannot add or select different processing values than those that already exist in the version. You might also be able to perform data sequencing and data selection, override default locations, or override the basic layout of the base report.

For example, suppose you have a report that prints the same financial information to two different audiences: one for an American subsidiary and one for a French subsidiary. You can create an American version, which shows financial information in dollars for a specific time period and formats the report for American sized paper. You can also create a French version, which shows the financial information in francs for a different time period and formats the report for European-sized paper. For the French subsidiary, you could also display additional information on the report by adding data items in the French version.

Characteristics of Batch Versions

A batch version is defined by the following characteristics:

- Data sequencing at the version level. For example, you can sort checks by date or by check number. Or you can sort address book records by employee or customer, or sort records alphabetically.

- Data selection at the version level. For example, you can specify which records to fetch, such as Business Unit 10–30 and 70, or all Address Book records with Category 1=North.

- Additions or overrides at the version section level. At the version section level, report designers can use batch versions to add or override functionality of base report sections. These section-level overrides differ from the version-level overrides in that they apply only to individual sections. At the section level, the report designer can override data selection, data sequencing, event rules, and database output. You cannot delete functionality if it exists in the base report.

- A specific set of processing option values. For example, you can set a processing option value to run G/L Post to print a different account number format on the report.

  For batch versions, processing options do the following:

  - Change functionality. For example, you can set a processing option to purge records to a history file after a report runs.

  - Change input parameters. For example, you can set a processing option to specify which category code to use when processing a report.

  - Define data. For example, you can set a processing option to define the fiscal year for which you want to run a report. You can also define the number of aging days in an Accounts Receivable aging report.

Batch versions for reports discusses the following topic:

❏ Working with batch versions

See Also

- *About Batch Processing* in the *OneWorld Development Tools* guide

Working with Batch Versions

For batch versions, OneWorld uses the same process as the Object Management Workbench to check in, check out, and erase checkouts for versions. You use this tool to control the movement of versions between the workstation and the server. Batch versions are submitted directly from the batch application.

Just like base report specifications, when you create a batch version, the specification records for that version exist only on your workstation. To make the version available to other users, you must check the version into the server. When you check in a version, OneWorld copies the version's specification records to the central objects data source (server) according to the path code of your current environment.

After you check in your version, you can still make certain changes to the version without checking it out. For example, when you make changes to the processing options, these changes are effective immediately, even if you have not checked in your local version. This is because a version's processing options are stored directly as a field in the version record that is stored in the server Version List table (F983051).

When you check a batch version into the central objects data source (server), anyone who installs and runs the version will be ensured of having the updated version. A version cannot be checked out by more than one user. The Version Detail form displays the user that has checked out a version.

You can create a new batch version that is not based on an existing version. For example, you might create a new version because you do not want to use the layout or data selection of the existing version. When you create a new version, you use the specifications provided by the base report.

If you make changes to the base (template) report, OneWorld automatically "pushes" any changes to all of the versions that exist for that base report, unless you created a version that contains overrides. See *Changing the Design of a Batch Version* in this section for information about overrides.

If you copy a version, the copied version inherits the same data selection and data sequencing as the existing version.

This topic contains the following tasks:

- Running a batch version
- Accessing the Work With Batch Versions form

- Changing the design of a batch version

- Changing processing options for batch versions

- Accessing data selection and sequencing for batch versions

- Creating reports of processing options

- Accessing properties for table conversion versions

- Working with version detail for batch versions

- Copying a batch version

- Creating (adding) a batch version

- Checking out or checking in a batch version

- Erasing the check-out record of a version

- Changing Batch Versions (P98305) processing options

- Accessing BrowsER for a report or version

- Moving Batch Version Specifications to an Enterprise Server

Running a Batch Version

If batch versions are associated with a form, you can access them for viewing and printing from the form's Reports menu. Base reports and versions of those reports are available on menus as icons.

In most cases, you submit batch versions to an enterprise server, which can more efficiently handle the processing. The OneWorld environment you sign onto specifies where your batch versions will run, though you can override this location when you submit a batch version. When you submit your batch job to the server, you can preview the report and use the Work With Servers form to monitor the progress of your job on the queue. See *The Work with Servers Program* in the *OneWorld Configuration Planning and Setup: System Administration* guide for information about the Work With Servers form.

When you submit a report to the enterprise server, if the report specifications do not currently reside on your workstation, the central objects data source (server) first performs JITI (just-in-time installation) to transfer the specifications to your workstation. After the JITI, your workstation continues with the submission of the report to the enterprise server, and OneWorld transfers the local version specifications (any changes you made to the version) to the enterprise server.

See Also

- See *Submitting a Report* for complete information about running a batch version

Accessing the Work With Batch Versions Form

You can access the Work With Batch Versions form, which is the entry point to managing batch versions, in one of several ways.

▶ **To access the Work With Batch Versions form**

- From any menu with a batch application on it, choose the batch application, and then from the Edit menu choose Prompt for Versions.

- From any menu with a batch application on it, right-click on the batch application, and then from the pull-down menu that appears, choose Prompt for Versions. If no versions are associated with the batch application, you must copy or add a version and run that version as explained in this section.

- On the System Administration Tools (GH9011) menu, choose Batch Versions (P98305).

  The Work With Batch Versions form appears.

Changing the Design of a Batch Version

If you want to change the report specifications for a version, you do not need to change the base (template) report. You can override the report specifications at the version level as explained in this task. The changes you make to the report specifications for the version do not affect any other versions associated with the base report. However, if you make changes to specifications at the base-report level, those changes will not be pushed down to the version specifications that you override.

When you make changes to specifications at the version level, you should include a description of your modifications in the Version Detail field on the Version Detail form. The description should include any differences between the base report specifications and the version specifications. See *Working with Version Detail for Batch Versions* in this section for more information.

The following can be changed in a report version:

- Section layout
- Section data selection
- Section event rules
- Section database output
- Section sort sequence

Before You Begin

❏ Override specifications only at the version level. To copy or create a version to override, see *Copying a Batch Version* or *Creating (Adding) a Batch Version* in this section.

❏ Check out the version before you access Report Design to create a version override; see *Checking Out or Checking In a Batch Version* in this section.

❏ Close the Report Design tool if it is open on your computer.

▶   **To change the design of a batch version**

1. From the System Administration Tools menu (GH9011) or the Financial Reporting Setup menu (G1041), choose Batch Versions (P98305).

   The Work With Batch Versions – Available Versions form appears.

   On this form you can locate and run versions of reports. Also, you can modify version detail information, data selection, and data sequencing.

2. Type an application ID in the Batch Application field. For example, to locate a version for the One Line Per Address report, type R014021.

3. Click Find to locate the versions available on your workstation.

   For alternate lists of versions, from the Form menu, choose Display, then one of the following:

   - Available Versions for the versions available on your workstation

   - My Versions for just the versions you created

   - All Versions for any version that exists for the batch application

     When you view all versions, you can work only with versions that appear with black text.

   You can, however, delete any version (depending upon your application and user security). If you try to delete a version that is not on your machine, a warning message appears.

4. In the detail area, choose a version with which you want to work.

5. From the Row menu, choose Advanced.

   The Advanced Operations form appears.

   Note: Before you can complete the following steps, you must have already checked out a version of the report; see *Checking Out or Checking In a Batch Version* in this section.

6. From the Row menu, choose Design Version.

   Report Design opens with the report specifications for the version.

7. Click a section. Then from the Section menu, choose Override Version Specifications. You cannot make any changes to a section until you access the Override Version Specifications form and choose which overrides you want to change.

   Depending on the type of section with which you are working, the Columnar, Tabular, or Group Section - Override form appears.

   Any overrides you make to a section are valid only for that section. You need to override additional sections separately.

8. Select any of the following overrides:

   Note: Keep in mind that if you override any version specifications, those specifications will not be updated if you then make changes to those specifications in the base (template) report. For example, if you turn on the Section Data Selection override and make changes to the version's data selection, and then later you change the data selection of the base report, the base-report data selection changes will not be pushed down to the version.

   • Section Layout

     Select this override if you need to change section properties or to delete a column, add a new column, move a column, or make column heading changes on a report version.

   • Section Data Selection

     Select this override if you need to have report versions that utilize specific data selection, such as a version for customer information only and a version for employee information only.

   • Section Event Rules

     Select this override if you need a report version that utilizes a specific event rule, such as a version for employee information with a calculated percentage raise amount, date title, or Balance Auditor.

   • Section Database Output

     Select this override if you need a report version that prints to a specific location other than the default printer location. If you want other sections, such as the page header, to also print to this location, you need to override the specifications to each of those sections as well.

- Section Sort Sequence

  Select this override if you need a report version that is sorted differently than the base report. For example, you can have a version sort by name rather than by address number.

9. The changes you make will affect only the version on your local workstation. To make these changes available to the enterprise, you must now check in the version; see *Checking Out or Checking In a Batch Version* in this section. If you do not check in the version, make sure you erase your check out so that others can check out this version; see *Erasing the Check-Out Record of a Version* in this section.

Field	Explanation
Batch Application	The name of the OneWorld batch or interactive application (interactive or batch object). For example, the name of the Sales Order Processing interactive application is P4210, and the name of the Print Invoices batch process report is R42565.
	The name of the program ID is a variable length value. This value is assigned according to a structured syntax in the form TSSXXX where:
	T The first alphabetic character of the program name identifies the type such as P for Program, R for Report, and so on. For example, the value 'P' in the name P4210 indicates that this is a program.
	SS The second and third numeric characters of the program name identifies the system code. For example, the value '42' in the name P4210 indicates that this program belongs to System 42, which is the Sales Order Processing system.
	XXX The remaining numeric characters of the program name identify a unique program or report. For example, the value '10' in the name P4210 indicates that this is the Order Entry application.
User	Identifies the user ID of the user who last modified the application or version.
Last Modified	Indicates the last time an application or version was modified by the specified user.

Field	Explanation
Security	This field allows you to restrict user access for a report version. Valid values are: 0 No security. Anyone can design, change processing option values, change detail values, check in, check out, install, transfer, copy, delete, or run the version. This is the default when adding a new version. 1 Medium security. Only the "Last Modified By" user can design, change processing option values, change detail values, check in, check out, or delete the version. Anyone can install, copy, transfer, or run the version. This is how the JDE Demo versions are delivered. 2 Medium to full security. Only the "Last Modified By" user can design, change processing option values, change detail values, check in, check out, transfer, delete, or run the version. Anyone can install or copy the version. 3 Full security. Only the "Last Modified By" user can design, change processing option values, change detail values, check in, check out, install, transfer, copy, delete, or run the version.
Version	A version is a user-defined set of specifications. These specifications control how applications and reports run. You use versions to group and save a set of user-defined processing option values and/or data selection and sequencing options. Interactive versions are associated with applications (usually as a menu selection). Batch versions are associated with batch jobs or reports. To run a batch process you must choose a version.
Check in Path Code	For World, the Environment name is also called the Plan Name and is used to uniquely identify an upgrade environment for Install/Reinstall. For OneWorld (Install Applications), the environment name is also called the Plan Name and is used to uniquely identify an upgrade environment for Install/Reinstall. For OneWorld (Environment or Version Applications), this is the path code that identifies the location of the application or version specification data.
Location	For World, the Location indicates the machine (server or client). For OneWorld, the Location or Machine Key indicates the name of the machine on the network (server or workstation).

Field	Explanation
Path Code	For World, the Environment name is also called the Plan Name and is used to uniquely identify an upgrade environment for Install/Reinstall.
	For OneWorld (Install Applications), the environment name is also called the Plan Name and is used to uniquely identify an upgrade environment for Install/Reinstall.
	For OneWorld (Environment or Version Applications), this is the path code that identifies the location of the application or version specification data.
Checked Out	Indicates the availability of a version for checkout. Only one user may have the version checked out. Y Version is currently checked out. N Version is not currently checked out.
On Server	OneWorld: This field indicates the availability of a batch version. Y Version is available for installation from the server. N Version is not available for installation from the server.
Server Last Updated	This is the date the application or version was checked in to the server.

Changing Processing Options for Batch Versions

You can change the processing option settings for an existing batch version to suit your needs. For example, you can change processing option values that direct the system to show or hide a field or change order activity rules. However, not all batch versions have processing options associated with them. For example, a list of addresses might not require special prompting.

Processing option changes are stored for each UBE run. Unlike other changes to versions, changes to processing option values do not require you to check in or check out the version. Anyone who uses that version after you make the change will not be affected by the new processing option values.

Note: You should not modify J.D. Edwards demo versions, which contain ZJDE or XJDE prefixes. You should either copy these versions or create new versions to change any values, including the version number, version title, prompting options, security, and processing options.

▶ **To change processing options for batch versions**

1. From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).

   The Work With Batch Versions – Available Versions form appears. On this form you can locate and run versions of reports. Also, you can modify version detail information, data selection, and data sequencing.

2. Type an application ID in the Batch Application field. For example, to locate a version for the One Line Per Address report, type R014021.

3. Click Find to locate the versions available on your workstation.

   For alternate lists of versions, from the Form menu, choose Display, then one of the following:

   - Available Versions for the versions available on your workstation

   - My Versions for just the versions you created

   - All Versions for any version that exists for the batch application

     When you view all versions, you can work only with versions that appear with black text.

4. In the detail area, choose a version with which you want to work.

   The Work With Batch Versions form shows only the versions available to your workstation, including any versions you create locally. Versions created on another machine must first be checked in to the central objects data source (server) before they appear on this form.

5. From the Row menu, choose Processing Options.

   If processing options do not exist for this version, or if you have been secured from changing processing options, a message box appears informing you of this; otherwise, the Processing Options form appears for the application. On this form, you can define the values that control how your report processes.

   You can also access the Processing Options form the following ways:

   - Choose a batch application, and then choose Prompt for Values from the Edit menu on OneWorld Explorer.

   - Right-click on the batch application name in OneWorld Explorer, and then choose Prompt for Values from the pull-down menu that appears.

6. Click each tab to view and change information on that tab.

If there are numerous tabs and you cannot see all of them, left and right arrow buttons appear on the form. Click the arrow buttons to view the other tabs. You can also resize the Processing Options form by pointing to the edge of the form and dragging, or use the scroll bar to view additional processing options on a tab.

7. Change the processing option values as appropriate, and then click OK.

Accessing Data Selection and Sequencing for Batch Versions

With batch versions, you can select certain values of your data to narrow the range of your report. For example, you can select to view only customers from New York. You can also sequence how you want your data presented in the report. For example, you can place your search type field first, followed by your address number, and then employee names.

You can select and sequence your data from one of two places, either from the Work With Batch Versions form, as explained here, or from the Version Prompting form, as explained in *Submitting a Report*. With either method, any changes you make with selections and sequences remain with that version. Every successive run (from the same workstation) of that version will use the changed selection and sequencing.

Before You Begin

❑ If you access data selection and sequencing from the Row menu of the Work With Batch Versions form, as explained below, you must check out the version to your machine. See *Checking Out or Checking In a Batch Version* in this section.

▶ **To access data selection and sequencing for batch versions**

1. From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).

    The Work With Batch Versions – Available Versions form appears. On this form you can locate and run versions of reports. Also, you can modify version detail information, data selection, and data sequencing.

2. Type an application ID in the Batch Application field. For example, to locate a version for the One Line Per Address report, type R014021**.**

3. Click Find to locate the versions available on your workstation.

    For alternate lists of versions, from the Form menu, choose Display, then one of the following:

    • Available Versions for the versions available on your workstation

- My Versions for just the versions you created

- All Versions for any version that exists for the batch application

  When you view all versions, you can work only with versions that appear with black text.

4. In the detail area, choose a version with which you want to work. The version must be checked out.

5. From the Row menu, choose one of the following:

   - Data Selection

     The Data Selection form appears.

   - Data Sequencing

     The Selection Data Sequencing form appears.

     When you are working with table conversion batch applications, OneWorld grays out the Data Selection and Data Sequencing menu items because they do not apply to table conversions.

6. The changes you make affect only the version on your local workstation. To make these changes available to the enterprise, you must now check in the version; see *Checking Out or Checking In a Batch Version* in this section. If you do not check in the version, make sure you erase your check out so that others can check out this version; see *Erasing the Check-Out Record of a Version* in this section.

Creating Reports of Processing Options

This task explains how to create reports about processing options for interactive and batch application versions. This report shows the tab, text, and value of any processing option attached to an application's version (not all versions have processing options).

Caution: Run this process only locally (on your workstation).

▶ **To create reports of processing options**

1. From the System Administration Tools (GH9011), choose Batch Versions (P98305) or choose Interactive Versions (P98301).

   The Work With Batch Versions – Available Versions form appears or the Work With Interactive Versions form appears.

2. Type an application ID in the Batch Application field or the Interactive Application field. For example, to locate a version for the General Journal by Batch report, type R09301 into the Batch Application field.

3. Click Find to locate the versions available on your workstation.

4. Do one of the following:

    - Choose a version. Then from the Row menu, choose Processing Options to view the version's default values.

    - Choose a version. Then from the Row menu, choose Print Options.

    - Without choosing a version, from the Form menu, choose Print Options.

    The Report Output Destination form appears.

5. Specify one of the following, and then click OK:

    - On Screen

    - To Printer

    - Export to CSV

    - OSA Interface Name

    The report processes.

Accessing Properties for Table Conversion Versions

This task is only for table conversion batch applications. You can access the version's properties from the Table Conversion Prompting form, as explained in *Submitting a Table Conversion* in the *OneWorld Data Conversion* guide. You can also access properties directly from the Work With Batch Versions form.

Before You Begin

❑ If you access properties from the Row menu of the Work With Batch Versions form, as explained below, you must check out the version to your machine. See *Checking Out or Checking In a Batch Version* in this section.

▶ **To access properties for table conversion versions**

1. From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).

    The Work With Batch Versions – Available Versions form appears. On this form you can locate and run versions of table conversions.

2. Type a table conversion application ID in the Batch Application field.

3. Click Find to locate the versions available on your workstation.

   For alternate lists of versions, from the Form menu, choose Display, then one of the following:

   - Available Versions for the versions available on your workstation
   - My Versions for just the versions you created
   - All Versions for any version that exists for the batch application

     When you view all versions, you can work only with versions that appear with black text.

4. In the detail area, choose a version with which you want to work. The version must be checked out.

5. From the Row menu, click Properties. This menu selection is enabled only for table conversions.

   The Properties form appears. See *Submitting a Table Conversion* in the *OneWorld Data Conversion* guide for information about changing table conversion properties.

6. The changes you make will affect only the version on your local workstation. To make these changes available to the enterprise, you must now check in the version; see *Checking Out or Checking In a Batch Version* in this section. If you do not check in the version, make sure you erase your check out so that others can check out this version; see *Erasing the Check-Out Record of a Version* in this section.

Working with Version Detail for Batch Versions

Use version detail to review information about a version, such as its title, the prompting options associated with it, or the security level. You can also specify whether to print a cover page on a report.

Before You Begin

❑ Check out the version before you work with version detail; see *Checking Out or Checking In a Batch Version* in this section.

▶ **To work with version detail for batch versions**

1. From the System Administration Tools menu(GH9011), choose Batch Versions (P98305).

   The Work With Batch Versions – Available Versions form appears. On this form you can locate and run versions of reports. Also, you can modify version detail information, data selection, and data sequencing.

2. Type an application ID in the Batch Application field. For example, to locate a version for the One Line Per Address report, type R014021.

3. Click Find to locate the versions available on your workstation.

   For alternate lists of versions, from the Form menu, choose Display, then one of the following:

   - Available Versions for the versions available on your workstation

   - My Versions for just the versions you created

   - All Versions for any version that exists for the batch application

     When you view all versions, you can work only with versions that appear with black text.

4. In the grid, highlight a version with which you want to work. The version must be checked out.

5. From the Row menu, choose Version Detail.

   The Version Detail form appears.

   On this form, you can change information such as the title of the version, how the version uses processing options, and the security level for the version. You can also review background information about the report.

6. Modify or complete the following information:
   - Version Title
   - Prompting

     This option appears only if processing options are attached to this version.

   - Security
   - Version Detail
   - Print Cover Page
   - Job Queue

If you leave the Job Queue field blank, OneWorld reads the setting in the jde.ini on the enterprise server. If you submit the job to an AS/400, OneWorld looks to your user profile to determine the job queue.

7. Review the additional information that appears on the form as needed.

8. Click OK.

9. Check in this version to make it available to the enterprise; see *Checking Out or Checking In a Batch Version* in this section.

Field	Explanation
Version Title	A description of the version that appears next to the version number. The version title is different from the report title.
	This field should describe the use of a version. For example, an application for generating pick slips might have a version called Pick Slips - Accounting and another version called Pick Slips - Inventory Management.
Prompting	This code specifies how processing options will be executed based on user defined code table 98/CR. Valid values are:
	Blank Disables the processing options for the version.
	1 The application will use existing processing option without prompting the user. This is sometimes referred to as blind execution.
	2 The application will prompt the user for processing options at runtime.

Field	Explanation
Security	This field allows you to restrict user access for a report version. Valid values are:
	0 No security. Anyone can design, change processing option values, change detail values, check in, check out, install, transfer, copy, delete, or run the version. This is the default when adding a new version.
	1 Medium security. Only the "Last Modified By" user can design, change processing option values, change detail values, check in, check out, or delete the version. Anyone can install, copy, transfer, or run the version. This is how the JDE Demo versions are delivered.
	2 Medium to full security. Only the "Last Modified By" user can design, change processing option values, change detail values, check in, check out, transfer, delete, or run the version. Anyone can install or copy the version.
	3 Full security. Only the "Last Modified By" user can design, change processing option values, change detail values, check in, check out, install, transfer, copy, delete, or run the version.
Version Detail	Use this space to list all the overriding specifications and differences in functionality between the base report specifications and the version level report specifications. The information you provide in this field will allow version developers to easily see the functional difference between this version and the base report. Examples of things you should list includes additions such as sections that you have added in your version that do not exist in the base report. You should also list changes in your version for areas that function differently than the base report. For example, you should list areas where you use different criteria for data sequencing or data selection.
Print Cover Page	When enabled, produces a cover page for the report.
Job Queue	The job queue to which the job was submitted. On the AS/400 this is an actual system job queue. On other systems it is a JDE logical queue.

Copying a Batch Version

You can copy an existing version and then tailor its information to fit your needs. The copied version inherits all the report and version properties of the original version, including overrides.

When you copy a batch version, you should add security to the new version. Security settings range from none, which means anyone has the authority to modify or run a version, to full security, in which only the person who last modified a version can modify and run the version. Version security is separate from Security Workbench, which allows you to set security for different OneWorld objects, such as applications. For information about Security Workbench, see *Security* in the *OneWorld Configuration Planning and Setup: System Administration* guide.

▶ **To copy a batch version**

1. From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).

    The Work With Batch Versions – Available Versions form appears. On this form you can locate and run versions of reports. Also, you can modify version detail information, data selection, and data sequencing.

2. Type an application ID in the Batch Application field. For example, to locate a version for the One Line Per Address report, type R014021.

3. Click Find to locate the versions available on your workstation.

    For alternate lists of versions, from the Form menu, choose Display, then one of the following:

    -   Available Versions for the versions available on your workstation

    -   My Versions for just the versions you created

    -   All Versions for any version that exists for the batch application

        When you view all versions, you can work only with versions that appear with black text.

4. In the detail area, choose a version with which to work.

5. Click Copy on the toolbar.

    The Version Copy form appears.

6. Enter the following information:

- New Version

- Security

- Version Title

7. Click OK to save your version and return to the Work With Batch Versions form.

   When you click OK to copy a report version, if the version specifications do not currently reside on your workstation, the central objects data source (server) performs JITI (Just-in-time Installation) to transfer the specifications to your workstation.

8. Check in the new version to make this version available to the enterprise; see *Checking Out or Checking In a Batch Version* in this section.

Field	Explanation
New Version	A sequence number that identifies versions of a menu selection. For example, where multiple versions of a report menu selection are set up, this sequence number identifies each of those versions.
	. . . . *Form-specific information* . . . .
	Specifies a unique name that identifies the new version for the application.

Creating a Batch Version

You can create a new batch version that is based solely on the base version of an existing report. Unlike copying a version, when you create a batch version, the new version does not inherit the base version's overrides. By creating a new version, you are starting with the specifications provided by the base report.

When you create a batch version, you should add security to the new version. Security settings range from none, which means anyone has the authority to modify or run a version, to full security, in which only the person who last modified a version can modify and run the version. Refer to the Security field description for more information. Version security is separate from Security Workbench, which allows you to set security for different OneWorld objects, such as applications. For information about Security Workbench, see *Security* in the *OneWorld Configuration Planning and Setup: System Administration* guide.

▶ To create a batch version

1. From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).

   The Work With Batch Versions – Available Versions form appears. On this form you can locate and run versions of reports. Also, you can modify version detail information, data selection, and data sequencing.

2. In the Batch Application field, enter the batch application upon which you want to base the new batch version.

3. Click Add to create a new version.

   The Version Add form appears.

4. On the Version Add form, complete the following information:

   - Version

   - Version Title

   - Prompting Options

     If the batch application on which you base your version does not have any processing options attached, OneWorld leaves the Prompting Options field inactive. You can attach processing options only to a batch application template in Report Design.

   - Security

   - Job Queue

   - Version Detail

   - Print Cover Page

5. Click OK to save your version and return to the Work With Batch Versions form.

6. Check in the new version to make this version available to the enterprise; see *Checking Out or Checking In a Batch Version* in this section.

Field	Explanation
Application	The name of the OneWorld batch or interactive application (interactive or batch object). For example, the name of the Sales Order Processing interactive application is P4210, and the name of the Print Invoices batch process report is R42565.
	The name of the program ID is a variable length value. This value is assigned according to a structured syntax in the form TSSXXX where:
	T The first alphabetic character of the program name identifies the type such as P for Program, R for Report, and so on. For example, the value 'P' in the name P4210 indicates that this is a program.
	SS The second and third numeric characters of the program name identifies the system code. For example, the value '42' in the name P4210 indicates that this program belongs to System 42, which is the Sales Order Processing system.
	XXX The remaining numeric characters of the program name identify a unique program or report. For example, the value '10' in the name P4210 indicates that this is the Order Entry application.
Version	A version is a user-defined set of specifications. These specifications control how applications and reports run. You use versions to group and save a set of user-defined processing option values and/or data selection and sequencing options. Interactive versions are associated with applications (usually as a menu selection). Batch versions are associated with batch jobs or reports. To run a batch process you must choose a version.
Prompting Options	This code specifies how processing options will be executed based on user defined code table 98/CR. Valid values are:
	Blank Disables the processing options for the version.
	1 The application will use existing processing option without prompting the user. This is sometimes referred to as blind execution.
	2 The application will prompt the user for processing options at runtime.
Print Cover Page	When enabled, produces a cover page for the report.

Checking Out or Checking In a Batch Version

To modify a report version using Report Design or to set data selection and sequencing using the row exits, you must first check out the report version. The check-out procedure copies the specification records from the central objects location to your workstation. This is based on your path code. Only versions in that central objects path code will be visible. You cannot access Report Design until you check out the version. A version cannot be checked out by more than one user at a time.

If you have checked out a version but are not going to make changes to it, erase the check-out record so others can check out that version. You need to check out a version to make changes that are overrides to the base (template) report. You do not need to check out a version if you make the following changes at the time you run the version: data selection, data sequencing, override location, or processing option values. However, if you make changes to data selection or data sequencing from the Work With Batch Versions form, you must check out and check in the version to save those changes and make them available to the enterprise.

Before you check in a version, make sure that you want to make permanent changes. When you check in a version, the system copies the report specifications back to the central objects location. These new specifications will override the previous specifications for that version. The report specifications on your workstation remain intact.

You can check batch versions in or out with the Object Management Workbench or with the Batch Versions application as described in the next task.

▶ **To check out or check in a batch version**

1. From the System Administration Tools menu (GH9011), choose Batch Versions (P98305)

    The Work With Batch Versions – Available Versions form appears. On this form you can locate and run versions of reports. Also, you can modify version detail information, data selection, and data sequencing.

2. Type an application ID in the Batch Application field, and then click Find. For example, to locate a version for the One Line Per Address report, type R014021.

3. In the detail area, choose a version with which to work.

4. From the Row menu, choose Advanced.

    The Advanced Operations form appears. On this form, you can design report specifications for the version, check in and check out versions, and erase the check out for a version.

5. Choose a version to check out or to check in.

6. From the Row menu, choose either Check Out Version or Check In Version.

7. Click Yes.

Erasing the Check-Out Record of a Version

Batch versions can be checked out by only one person at a time. Erasing the check out record allows another user to check out the version. After you have erased a check-out, you cannot check in that version. However, the report specifications on your workstation remain intact.

The Erase Check-Out procedure changes the status of the server-based record of version check-in and check-out. When you erase a check-out of a version, OneWorld updates the Checked Out field in the Versions List table (F983051) from a Y to an N. OneWorld also updates the version's Location field in the Versions List table. This value is changed from the location of the workstation that checked out the version to the machine name of the central object's server.

You can erase the check-out of batch versions with the Object Management Workbench or with the Batch Versions application as described in the next task.

▶   **To erase the check-out record of a version**

1. From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).

   The Work With Batch Versions – Available Versions form appears. On this form you can locate and run versions of reports. Also, you can modify version detail information, data selection, and data sequencing.

2. Type an application ID in the Batch Application field and click Find. For example, to locate a version for the One Line Per Address report, type R014021.

3. In the detail area, choose a version with which to work.

4. From the Row menu, choose Advanced.

   The Advanced Operations form appears. On this form, you can design report specifications for the version, check in and check out versions and reports, and erase the check out for a version.

5. On Advanced Operations, choose the check-out record you want to erase.

6. From the Row menu, choose Erase Check Out.

Changing Batch Versions (P98305) Processing Options

This task explains how to change the processing options for the Batch Versions (P98305) application.

Processing option changes are stored for each UBE run. Unlike other changes to versions, changes to processing option values do not require you to check in or check out the version. Anyone who uses that version after you make the change will not be affected by the new processing option values.

See Also

❏ See *Changing Processing Options for Batch Versions* for instructions on changing processing options for batch versions in general

▶ **To change Batch Versions (P98305) processing options**

1. From the System Administration Tools menu (GH9011), right-click Batch Versions (P98305), choose Prompt For, and then choose Values from the resulting pop-up menu.

    If you have been secured from changing processing options, a message box appears informing you of this; otherwise, the Processing Options form appears.

2. On the Processing Options form, complete the following fields:

    • Option 1: Confirmation Box

       Enter a Y or 1 to enable, or enter N or 0 to disable the overwrite/delete local specifications confirmation box. If you enable the confirmation box, it appears when OneWorld is about to overwrite or delete specifications on your local machine. For example, when enabled, the confirmation box appears when you check out a batch version.

    • Option 2: Schedule Job

       Enter a 0 (or leave the field blank) to not allow users to schedule when their batch versions run, meaning their batch version runs as soon as they submit it; enter a 1 to give the users the option of scheduling their batch versions; enter a 2 to force the users to always schedule their batch versions.

       See *Scheduling Jobs* in the *OneWorld Configuration Planning and Setup: System Administration* guide for complete information about how to schedule batch versions.

Accessing BrowsER for a Report or Version

BrowsER is an application you can use to view event rules and design layout for your reports and versions. BrowsER displays the structure of sections within a batch application. The sections are displayed in a hierarchical structure, with events and event rules for each section. You can enable or disable one or more event rules without extensive work in the design tools. This is useful for debugging specific event rules. For complete information about using BrowsER, see *BrowsER* in the *OneWorld Development Tools* guide.

▶ **To access BrowsER for a report or version**

1. From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).

    The Work With Batch Versions – Available Versions form appears. On this form you can locate and run versions of reports. Also, you can modify version detail information, data selection, and data sequencing.

2. Type an application ID in the Batch Application field. For example, to locate a version for the One Line Per Address report, type R014021.

3. Click Find to locate the versions available on your workstation.

    For alternate lists of versions, from the Form menu, choose Display, then one of the following:

    -   Available Versions for the versions available on your workstation

    -   My Versions for just the versions you created

    -   All Versions for any version that exists for the batch application

        When you view all versions, you can work only with versions that appear with black text.

4. In the detail area, choose a version with which you want to work.

5. From the Row menu, choose Advanced.

    The Advanced Operations form appears. On this form, you can design report specifications for the version, check in and check out versions and reports, and erase the check out for a version.

6. From the Form menu, choose either Report BrowsER or Version BrowsER.

    If you select Report BrowsER, you can enable or disable event rules for the report. If you select Version BrowsER, you can enable or disable event rules for a specific version of the report. When you are working with table conversion batch applications, OneWorld grays out the Version BrowsER button because it does not apply to table conversions.

The BrowsER form appears.

Moving Batch Version Specifications to an Enterprise Server

You can move batch version specifications to an enterprise server without actually running the batch version. You need to do this only when you have modified a batch version that is called by another batch version. After you modify the version, use this option to move its specifications to the same location as the batch version that calls it. This ensures that the batch version calls the updated specifications rather than obsolete specifications.

▶ **To move batch version specifications to an enterprise server**

1. On the ActivEra Solution Explorer, perform one of the following to access the Work With Batch Versions form:

    - From a menu, double-click a report icon.

    - From the System Administration Tools menu (GH9011), choose Batch Versions.

2. On Work With Batch Versions – Available Versions, complete the following field if necessary:

    - Batch Application

3. Click Find to display a list of versions based on the batch application you enter in the Batch Application field.

4. Choose the report version you want to submit, and then click Select.

    The Version Prompting form appears.

5. From the Form menu, choose Advanced.

    The Advanced Version Prompting form appears.

6. Turn on the following options, and then click OK:

    - Submit Version Specifications Only

        Turn this option on to move batch version specifications to an enterprise server that you specify.

    - Override Location

        Turn this option on to access the JDE Data Sources form, which you use to specify the location of the enterprise server to which you want to move the batch version specifications.

7. On JDE Data Sources, choose the enterprise server to which you want to move the batch version specifications, and then click Select.

The batch version that you indicated will not run, but OneWorld moves the batch version specifications to the enterprise server that you specified. You can use the Work With Servers form to monitor the progress of your job on the queue. See *The Work with Servers Program* in the *OneWorld Configuration Planning and Setup: System Administration* guide for information about the Work With Servers form.

Field	Explanation
Submit Version Specifications Only	Turn this option on to move specifications of a batch application version from your workstation to an enterprise server. The version you are submitting does not actually run, but OneWorld moves the version's specifications to an enterprise server that you specify. Use the Override Location option to specify which enterprise server to move the specifications to.
	You need to turn this option on only when you have modified a batch application version that is called by another batch application. After you modify the version, use this option to move its specifications to the same location as the batch application that calls it. This ensures that the batch application calls the updated specifications rather than obsolete specifications.

Understanding Database Output

You can use database output to update the database in conjunction with your report generation. You can attach a database output specification to any report section with a business view, but not a report or page header or footer.

You can use database output in Report Design to update, insert, or delete records in a table or text file. You can also use a special operation called "Insert or Update". This operation attempts to insert a record into a table. If a record with the same primary key exists, the insert fails and the existing record is updated.

You can use database output to output data to OneWorld tables or to text files. Text files can be specified as either comma delimited or fixed length text records. The comma delimited format is useful for transferring data to spreadsheets.

OneWorld provides several tools that you can use for batch database maintenance.

Table Conversion	Use for high-performance SQL table-to-table processing. Allows access to non-OneWorld tables. No reporting.
Database Output	Reporting and output must occur simultaneously. Source and destination tables can reside in different environments. Allows output to text files.
Table I/O (in Event Rules)	Reporting and output must occur simultaneously. Input data must be transformed before it can be output.

Database output is performed for every row of data processed in the section. All database operations occur on a record-by-record basis using the standard JDE Base middleware APIs.

This section describes the following topics:

❑ Defining database output

❑ Overriding environments for database output
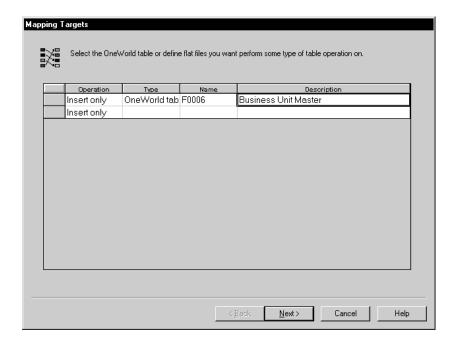
Defining Database Output

Defining database output involves defining the output and then overriding the specific environment.

▶ **To define database output**

1. From a report section in Report Design, from the Section menu, choose Database Output.

   The Mapping Targets form appears.

2. Complete the following fields to define a list of output tables or files (targets).

   - Operation
   - Type
   - Name

Operation	For a OneWorld table operations, may be Insert, Update, Delete, or Insert or Update. For text files, it must say insert.
Type	OneWorld table, comma delimited text file, or fixed record length text file
Name	Name of a valid OneWorld table or a valid file used for text file output
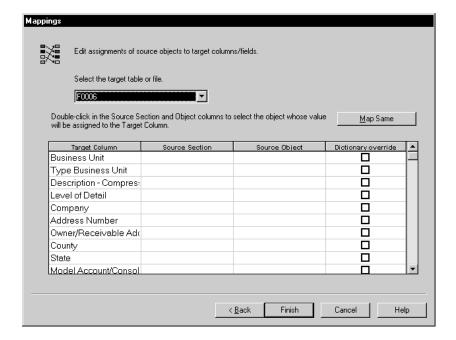
You can double-click on these fields to see a list of available choices. Double-click on your choice to select it. You can also type in the first few letters of your choice to see a list of available choices that start with those letters.

You can use the source target several times with different operations.
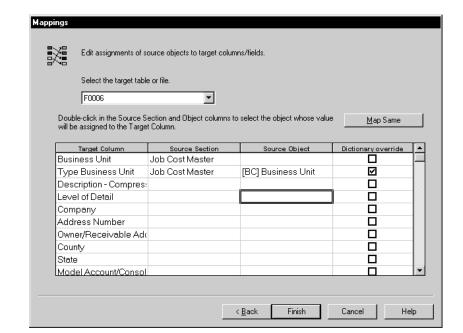
The Mappings form appears.

3. Click Next.
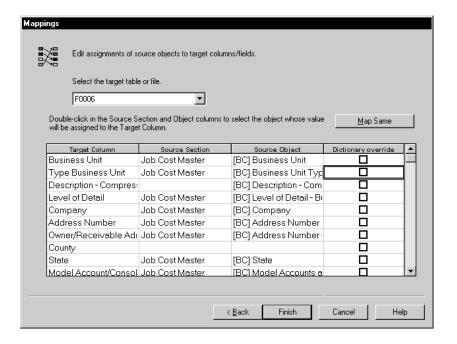
4. On Mappings, for each target, specify which of the available section columns or variables should be assigned (mapped) to which column in the target.

Double-click on a Source Section or a Source Object cell to display a list of options.

You can also turn data dictionary overrides on and off here.

5. On Mappings, click Map Same if you wish to map all columns.

6. On Mappings, click Finish when you have finished your assignments.

Field	Explanation
Database File	The target is a pre-existing database table.

Field	Explanation
Flat File	The target is a flat file that will dynamically be created by the database output process.
Object Name	The OneWorld architecture is object based. This means that discrete software objects are the building blocks for all applications, and that developers can reuse the objects in multiple applications. Each object is stored in the Object Librarian. Examples of OneWorld objects include: • Batch Applications • Interactive Applications • Business Views • Business Functions • Business Functions Data Structures • Event Rules • Media Object Data Structures
Insert Only	Inserts a new record into the target.
Update Only	Updates an existing record in the target.
Insert Or Update	Updates a record if it exists in the target or inserts a new record if it does not.
Map	Use this grid to assign available objects to output columns for the currently selected target. You can double click in the Source Selection or Source Object to display a list of available choices. Click in the Overrides column to display the Dictionary Overrides dialog.

See Also
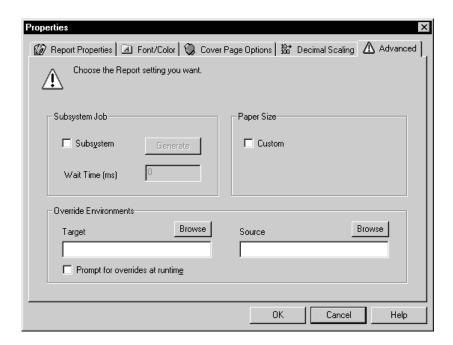
- *Overriding Data Dictionary Triggers at Design Time* in the *OneWorld Development Tools* guide for information on how to override and disable data dictionary triggers

Overriding Environments for Database Output
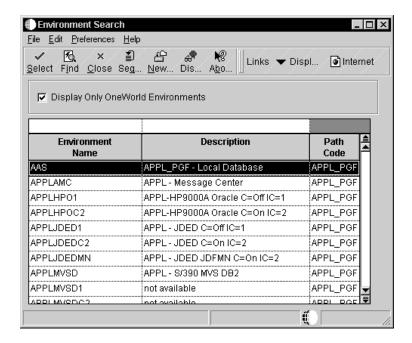
You can override the environment you use for your database output.

▶ **To override environments for database output**

1. From a report in Report Design, from the Report menu, choose Report Properties.

2. Click on Advanced.

3. On Report Properties, complete the following field or click the Browse button to find the source environment.

   • Source
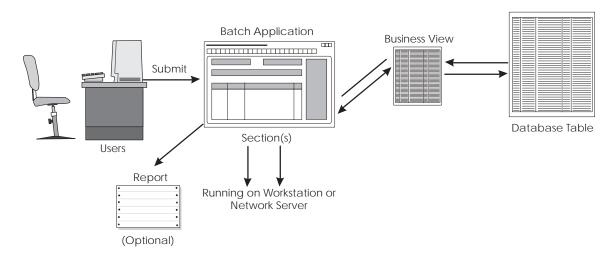
4. Choose a source environment and click Select.

5. On Report Properties, click Prompt for overrides at runtime, if desired.

6. Choose a target environment and click Select.

7. To suppress the database output features, choose between two options:

   • If you do not want database output for the entire report, then override the database output in the version and delete the mapping record.

   • If you do not want database output for specific rows of data, then use the Suppress Section Write system function. This system function suppresses not only printed output but also database mapping.

Field	Explanation
Override Data Source	Specifies the name of the data source the report will use to access all tables. This will override the default data source for any table in the report.
Prompt At Run Time	Prompts the user at the time of report execution to specify the name of a data source or environment.

Report Processing

Report Processing

Reports are processed via a batch process. A batch process is an application that processes automatically without user interaction. The following graphic illustrates the flow of a batch process.

With interactive processes, the engine pauses at certain points and waits for the user's interaction or response. Based on the user's response, the program decides what to do next. There is no user interaction with batch processes. The engine executes the logic attached to the events within the report or process without any user interaction. After a batch process is launched, the user has no control over the flow of the logic within the batch process. If you need to change the flow of the logic within the process or report, you make those changes using Report Design.

Examples of batch processes include reports, subsystem jobs, database output, and table conversion.

Subsystem jobs are batch processes that constantly run in the background and offload processor resources. You can also use subsystem jobs to move activities along in a process, such as an escalation process in Workflow, which moves unanswered messages from one user to another after a certain period of time.

The database output function within Report Design allows you to update or insert records within tables. Table conversion transfers data from one table to one or more tables, changes the data or schema of a OneWorld table, and transfers data from a single OneWorld business view to one or more tables.

This section describes some of the advanced features behind batch and report processing and is intended to give you an understanding of how the features of batch and report processes work.

The following topics are discussed:

❏ Understanding batch processing

❏ Understanding section processing

❏ Understanding custom sections

❏ Understanding level-break processing

❏ Understanding batch events

❏ Understanding batch run-time processing

Understanding Batch Processing

You create reports and batch processes using the Report Design tool, and you use OneWorld Explorer to access the reports. You can also associate individual reports and batch processes with applicable menus. One difference between a batch process and a report is that a batch process does not usually print a report. You can use batch processes to update tables. You can also create a batch process that prints a report showing the results of the batch process.

OneWorld reports contain all the specifications for the report, including section and field layout, business views, event rules, data selection, sequencing, and database output. Reports are named with a unique identifier.

Each report contains one or more *sections*, which you create in Report Design. Sections are self-contained elements that are used as building blocks to construct a report. You can relate sections to one another or use them as stand-alone reports. Sections can also serve a special purpose, such as headers and footers.

The following is the typical process that occurs when you create a report or batch process.

Report Sections

OneWorld sections include headers, footers, and detail sections (columnar, group, and tabular).

Independent (level-one) sections include:

- Group sections
- Columnar sections

Level-one sections can also be parent sections.

Dependent (level-two) sections include:

- Tabular sections
- Level-break headers
- Level-break footers
- Total sections (used in non-tabular reports)
- Subsections
- Custom sections

The following graphic illustrates how the batch engine processes sections within a report.

Batch Processing

Data Selection and Sequencing (at submission time, only affects the first level-one section)

EOF — Level 1 Section

EOF — Level 1 Section

Process Flow

Parent

EOF

Subsection

EOF — Child

Report View (this applies to batch processes also)

Conditional - can be called from any level above

EOF — Level 2

The report view within Report Design determines the flow of the report. For example, if you have multiple level-one sections within your report, each having their own business view, the first level one section (such as V0101E) is executed before the next level-one section (such as V4211A). Any level-two sections that exist between the level-one sections are processed when they are called from a level-one section or are connected to one. If the report contains a joined section (parent/child section) after the level-one sections, the parent/child section will be processed independently of the first two sections. Child sections are in subsection joins.

The system reads and processes all records in a section from beginning to end within a section based on its data selection. If you do not specify data selection, then all the records in the table will be read until the end of the file (EOF).

If your report contains a joined section (parent/child section) after a level-one section, the parent/child section is processed independently of the first section.

The parent/child section in the middle of the graphic illustrates the flow of a joined (parent/child) section. Parent/child sections can be called at any point within the process flow. Depending on how your sections are joined (one-to-one, one-to-many, or many-to-many), records are fetched from the child business view for each corresponding parent record. When all parent records have been processed, the system continues to the next section. If any database updates are performed in the first section over the V0101 business view, that change will be reflected when the records are fetched for the parent/child join section.

The last section shown in the graphic (the conditional section) can be called from any of the previous sections by using the system function DO_Custom_Section. A conditional section is considered a level-two section because you must call a conditional section from another section. Memory allocation occurs at the beginning of the section, so you must hide and show objects in the section as needed because memory is allocated and freed once, instead of each time a section is called. You can place conditional logic in your INIT_SECTION or END_SECTION event to hide and show objects.

OneWorld processes all section types the same way, except for tabular sections. Tabular sections output to the report only when the system encounters a level break. In tabular sections, the system does not initialize the DO_Section for each record. Instead, it summarizes the records to the lowest level-break level. Tabular sections are similar to level breaks in that the output to a report is similar to a level-break header section.

The flow of sections in a report or batch process depends on how you set up the sections in the report view in Report Design. In Report View, you can move sections up or down, which might affect the sequence of execution for the sections. Moving level 1 sections affects the sequence of execution. In report processing, the system processes all level-one sections in the order in which they appear. Moving conditional sections, subsections, level-break sections, page-headers, page-footers, and report headers will not affect the sequence of execution. Report execution takes place from top to bottom for sections, and top to bottom, left to right for objects within a section.

All level-two sections are processed as dependents of the level-one section. Custom sections appear as a level-one section in the report view, but are not processed unless explicitly called by the DO_Custom_Section system function.

See *Using a Custom Section* for more information about custom sections.

Sections in themselves can be considered "mini reports," or batch processes, and each section can contain its own business view. Because other sections in your report might contain different business views, you must add any data sequencing and selection to the template for each section using Report Design.

Note: If a user sets up data sequencing and selection in the batch version at run time, sequencing and selection will affect only the first section of the report or batch process. Therefore, when you design a report or batch process, consider the impact on the users as they will not be able to change data selection and sequencing for any other sections.

Whether a level-one section has a business view attached to it or not, it will be executed at least once. This is important if you want to execute special event rule logic and you want to attach it to that section's DO_Section event.

See Also

- *Subsystem Jobs* in the *OneWorld Development Tools* guide for information about how to create subsystem jobs

- *Understanding Database Output* in the *OneWorld Development Tools* guide for more information about the database output function

- The *OneWorld Data Conversion* guide for information about how to create a table conversion using the table conversion tool

Understanding Section Processing

When a report is processed, certain events occur. You can attach logic at these events. Your logic might be dependent on what happens before and after a particular event.
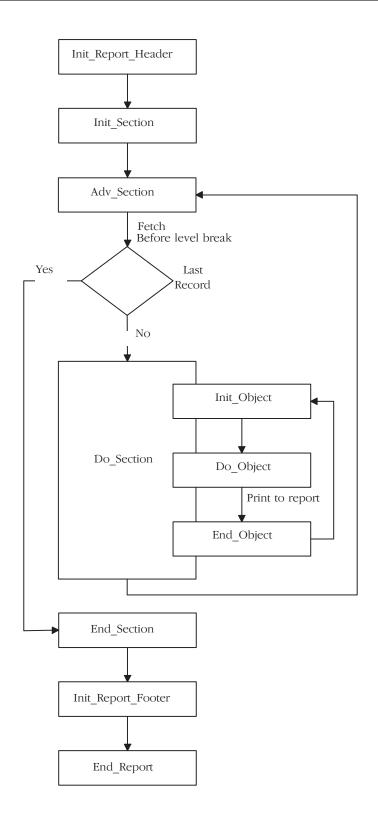
The report header is processed before the section is processed, and the level-one section is initialized by the INIT_Section event. After INIT_Section, the system processes the ADV_Section, Page Footer, Page Header, and so on. When the system finishes processing the first level-one section and all dependent sections associated with it, it repeats the process for the next level-one section.

The Do_Section event is discussed in *Understanding Batch Events*, and the level-break section is discussed in *Understanding Level-Break Processing*.

Processing Group and Columnar Sections

Group and columnar sections are alike in their processing because they both write to the output after each record is read, unlike tabular sections, which write to the output only when there is a level break. This output is determined by the data sequencing of that section.
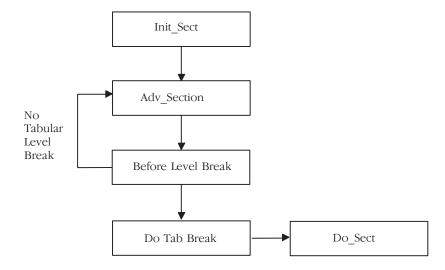
The following diagram illustrates the typical event flow for group and columnar sections.

```
        ┌──────────────────────┐
        │  Init_Report_Header  │
        └──────────┬───────────┘
                   │
                   ▼
        ┌──────────────────────┐
        │     Init_Section     │
        └──────────┬───────────┘
                   │
                   ▼
        ┌──────────────────────┐◄──────────────────┐
        │     Adv_Section      │                    │
        └──────────┬───────────┘                    │
                   │  Fetch                          │
                   │  Before level break            │
                   ▼                                 │
             ◇─────────────◇                        │
      Yes   ◇              ◇   Last                  │
   ┌────────◇             ◇   Record                 │
   │        ◇─────────────◇                          │
   │               │                                 │
   │               │ No                              │
   │               ▼                                 │
   │    ┌──────────────────────────────────────┐    │
   │    │              ┌──────────────┐◄───┐    │    │
   │    │              │  Init_Object │    │    │    │
   │    │              └──────┬───────┘    │    │    │
   │    │                     ▼            │    │    │
   │    │  Do_Section  ┌──────────────┐    │    │    │
   │    │              │  Do_Object   │    │    │    │
   │    │              └──────┬───────┘    │    │    │
   │    │                     │Print to report   │    │
   │    │                     ▼            │    │    │
   │    │              ┌──────────────┐    │    │    │
   │    │              │  End_Object  │────┘    │    │
   │    │              └──────────────┘         │    │
   │    └───────────────────────────────────┬──┘    │
   │                                         └───────┘
   │    ┌──────────────────────┐
   └───►│     End_Section      │
        └──────────┬───────────┘
                   │
                   ▼
        ┌──────────────────────┐
        │  Init_Report_Footer  │
        └──────────┬───────────┘
                   │
                   ▼
        ┌──────────────────────┐
        │      End_Report      │
        └──────────────────────┘
```
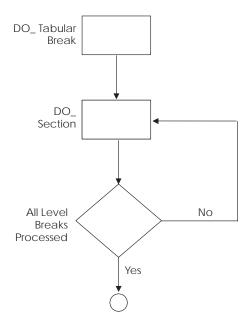
Processing Tabular Sections

Tabular sections are comprised of columns, rows and cells. To define what information is contained in each column, row, or cell, you define inclusion rules or calculations. An inclusion rule is either a set of criteria, a business function, or a named event rule for that row or column. One advantage of tabular sections is that you do not have to define additional sections for level-break logic or processing as would have to be defined with a group or columnar section. However, you must set up the data sequencing correctly because the level-break part of the section is dependent on it.

The following diagram illustrates the typical event flow for tabular sections:

```
                      ┌─────────────────────┐
                      │      Init_Sect      │
                      └─────────────────────┘
                                 │
                                 ▼
                      ┌─────────────────────┐
                 ┌───▶│     Adv_Section     │
  No             │    └─────────────────────┘
  Tabular        │               │
  Level          │               ▼
  Break          │    ┌─────────────────────┐
                 └────│  Before Level Break │
                      └─────────────────────┘
                                 │
                                 ▼
          ┌─────────────────┐        ┌─────────────────┐
          │   Do Tab Break  │───────▶│     Do_Sect     │
          └─────────────────┘        └─────────────────┘
```

As shown in the following graphic, tabular sections summarize information and print only when there is a level break. Because level breaks are dependent on data sequencing, your report can be as detailed as your data sequencing allows or as general as is needed. For example, suppose you sequence your data in a tabular section by Company only, but you have the objects Object Account and Subsidiary included in your report as well. If you sequence by Company only, and only two company records exist, the tabular section prints only those two records on the report. If you sequence by Company and Object Account, the tabular section prints both Company and Object Account information. Likewise, if you sequence on Company, Object Account, and Subsidiary, the system prints information for all three objects. Therefore, the more data you sequence and level break in your report, the more detailed your report will be.

DO_ Tabular Break

DO_ Section

All Level Breaks Processed

No

Yes

Other features in tabular sections include Drill Down, Account Level of Detail, a summarization feature, and automatic totaling. You can use Drill Down to provide a shortcut to an interactive application from the viewable output of a report. The interactive application shows the detail for the balances on the viewable output of your report. You can use the summarization feature (After Last Object Printed) to print or process logic after a section has been processed. The Automatic Totaling feature automatically totals any numeric values, regardless of what type of numeric values they are. However, keep in mind that the system may try to total any value in your report (numeric or otherwise). To keep the system from totaling a particular column, open that column's properties and choose the Suppress Printing at Totals option. Note that some items might be defined at the data dictionary level to prevent totaling.

You might have a situation in which you process a report using multiple sections or a combination of group and columnar sections. In this case, you might be able to use one tabular section in place of the multiple sections. An advantage of replacing multiple sections with a tabular section is that using a tabular section improves your system's performance. Instead of calling multiple sections, your system calls only one section.

Attaching Logic to Joined Sections

If you join sections and want to attach logic to the joined sections, you must attach it to the Refresh Section event, not the INIT_Section event, to ensure that the logic is processed every time the section is processed. When joined sections are processed, the system initializes the INIT_Section event the first time the parent/child section is processed, then initializes the Refresh Section event for all subsequent times the parent/child section is processed. Therefore, if you attach an event to INIT_Section, the logic is processed only once. If you attach it to the Refresh Section event, it is processed each time the section is processed.

Data Selection and Sequencing

If your report or batch process takes a long time to process because it contains multiple sections, you might want to check the data selection for each section because the system will process all the records in the table unless you specify otherwise. If you want a level-one section to adopt the data selection and sequencing from another section, you can use the Use Data Sel/SeqFromASection system function. This system function propagates the data selection and sequencing to other sections. This functional capability affects only the level one sections in your report.

For example, in the Pick Slips Print program (R42520), you can choose from the hundreds of columns in the F4211 table for data selection. In the first section, which is hidden and has database output to the F4211 table, the report must first process "commitments," which could add rows to the F4211 table. The next section in the report needs to display the modified and updated F4211 table to show the committed records. Possible solutions are to use a temporary file or to change the data selection on multiple sections. In this case, you would use the Use Data Sel/SeqFromASection system function, which adopts the data selection and sequencing from a previous level-one section.

The Use Data Sel/SeqFromASection system function allows a section to adopt the sequencing or data selection specifications from another section in the same report or from a section in an entirely different report. The target section can adopt the data selection criteria, the sequencing information, or both, from the source section. The selection or sequencing information from the source section replaces the information contained in the target section's specifications.

To use the Use Data Sel/SeqFromASection system function, access the event rules for the Initialize Section event of the "target" section. The Initialize Section event is the only event that should invoke this system function. Access the General folder to locate the Use Data Sel/SeqFromASection system function.
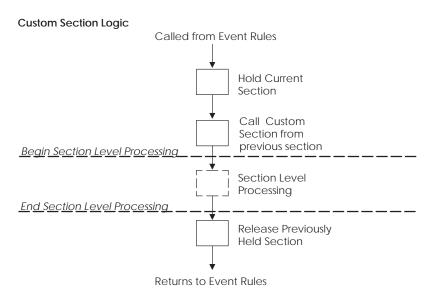
See Also

- *Understanding Level-Break Processing* for more information about level-break headers and footers and level-break events.

Understanding Custom Sections

Custom sections allow you to control, through event rules, the information that prints on a report. You can use custom sections to force a page break by creating a custom section with no objects, then activating Page Break After Print in that section's Section Properties. You can use custom sections to print variable text. Custom Sections can also be used for sections that present the same information, but are formatted differently. For example, a report that exists in two different modules, but depending on a user's needs, calls a different section that displays information specific to that particular module.

The following graphic illustrates the process flow for custom sections. The batch engine stops processing the current section when it encounters a call for information contained within a custom section. After it processes the custom section, it returns to the previously held section.

Custom Section Logic

Called from Event Rules

Hold Current Section

Call Custom Section from previous section

Begin Section Level Processing

Section Level Processing

End Section Level Processing

Release Previously Held Section

Returns to Event Rules

When you run the report, the batch engine calls and processes each section until it encounters the system function for the custom section. The batch engine then retrieves the information for the custom section and processes it. When it finishes processing the custom section, it returns to the previous section unless instructed to do otherwise by another event rule.

You can call a custom section from any event rule except INIT_Section. If you try to call a custom section using INIT_Section, your report will not process.

The custom section process flow occurs in the same order as the type of section it is defined as, for example, group, columnar, or tabular.

Understanding Level-Break Processing

You use level breaks to identify a change in a report or batch process's data by comparing the previous record to the current record. If there is a change between the records, a level break occurs. You can use level breaks to segregate large report listings into smaller, logical groups. For example, you could group telephone numbers by area code or employees by department. You can set up level breaks to initiate page breaks, totals, headers, or footers. Level breaks can be attached only to business view fields and not to any other variables in the report.

You can attach only one level-break header or level-break footer to one data item. If you try to attach more than one level-break header or footer to a data item, the batch system processes only the first level-break header or footer section that is attached to that item and ignores any other level-break sections that you have attached.

See Also

- *Working with Level-Break Header and Footer Sections* for more information about level-break headers and footers

The following graphic illustrates level-break logic processing. Before a level-break header or footer is processed, the batch system issues the INIT_Break Section event, which stops processing for the current section and moves to the level-break footer section. After the level-break footer section has been processed, the batch system processes the level-break header, if specified in the report.

Level-Break Logic Processing

Level
Break

Output ◄── No

Yes

All Level
Breaks
Processed?

No

Break Section Processing

INIT_Break
Section

Refresh Section

ADV_Section

DO_Section
Break

End Section

More Breaks

Yes

No

**Level Break
Footer/Total
Section
Processing**

INIT_Total Section

DO_ Section
Level Break
Footer

End Section

More
Totals

Yes

No

**Level Break
Header
Processing**

INIT_ Level Break
Header

DO_ Section Level
Break Header

End Section

More
Levels

Yes

No

Output

Level-Break Section Events

When you process a report that contains level-break headers and footers, OneWorld automatically calls the INIT_Level Break Footer Section or INIT_Level Break Header Section event. You can attach event rules to these events to control how the batch system processes them.

For example, if you want to create a report that summarizes information by company, you can design the report to read the detail file by company using a level-break footer. You set a level break on the Company data item, and when the company changes, the batch system calls the level-break footer for the detail section.

You can attach business functions, table I/Os, or other events to level-break section events.

INIT_Level Break Footer Section Event

When the batch system calls the INIT_Level Break Footer Section event, the values in the previous section are accessed and are either summarized or totaled. For example, if you have a level-break footer set up to total the revenue for a company, the level-break footer inserts the total below all the records that have been processed in the previous section. The INIT_Level Break Footer Section event is attached to the level-break footer section.

If you set up multiple level-break footers within a report, the batch system processes the footers starting from the lowest section up to the highest section.

If you need to attach logic to a level-break footer, attach it on the End Level Break Footer Section event rather than on the End Section event.

INIT_Level Break Header Section Event

The INIT_Level Break Header Section event is called after the previous section finishes processing. It is also called after the INIT_Level Break Footer Section event, if you have set one up. The INIT_Level Break Header Section event locates the header section associated with the current level and processes the information in the level-break header.

For example, if you have a level-break footer set up to create a grand total for a section, it will process before the level-break header for the next section, which might contain another company's revenues. The header section processes new records, or different data, from the previous section.

If you have set up multiple level-break headers within a report, the batch system processes the headers starting from the highest section down to the lowest section in the report.

END_Level-Break Header and Footer Section Events

After the Initialize Level Break events are processed, OneWorld launches the END_Level Break Header or Footer Section event, which ends the level-break process and returns to the previous section. You can attach logic that calls a custom section to the End Level Break Section event. For example, you might want to print text, such as a disclaimer, after information in a level-break footer. In this case, you can create a custom section that contains the information you want to print and attach the custom section logic to the End Level Break Section event. When you process the report, the disclaimer appears below the level-break footer section.

Understanding Batch Events

As a report or batch application is processed, the run-time engine pauses at certain points to process logic that has been attached. These points are called events, and you can use these events to insert custom logic for processing. OneWorld provides you with a set of predefined batch events. The basic flow of these events within a section is Initialize, Do, then End.

The engine processes some events only if the appropriate type of section exists. For example, INIT_Report Header and END_Report Header are initialized only if the report contains a report header section. Likewise, INIT_Level Break Footer and END_Level Break Footer are processed only if there is a level-break footer.

The Do_Section Event

The DO_Section event is invoked after the system has assigned new values to objects in the report and immediately prior to processing objects within a section. You most commonly attach logic to the DO_Section event because it occurs before any objects are processed, and most often the logic you attach at this point will affect the objects in some way.

The system processes the column headings first, then fetches the first line. For each object (column) in the line, it runs INIT_Object, DO_Object, and End_Object. After processing the last object, the system calls After_Last_Object_Printed and then fetches the next line and repeats the process. When all objects have been fetched from the database, the engine runs End_Section.

If the object will not fit on the page, the engine invokes Suspend Object, which moves the object to the next page.

If the object is a child section, such as in a joined section, the system invokes INIT_Section the first time it is processed. For any subsequent times that the child is processed, the engine invokes Refresh Section.

Additional Batch Events

In addition to the basic batch events you typically use, there are other events that give you flexibility in your batch processes.

Report Level Events

Do Initialize Printer   Resolves and validates the printer name.

Initialize Report   Resets global Report Variable and global ER Variable values if the event point has no ER in a subsystem; preserves global variable values otherwise. The Initialize Report event is executed only once per report, and is always the first event to be processed. If the report is a subsystem report, the ER on this event is executed once as the sybsystem is starting before any subsystem triggers are processed.

End Report   Executed once at the end of report processing, and is always the last event to be processed. If the report is a subsystem, the ER on this event is executed only after the system processes a End Subsystem trigger and the subsystem is in the process or terminating.

Section Level Events

Advance Section   Occurs each time you do a fetch from the database. Use this if you need to perform processing on objects before a fetch. If this section does not have a business view attached, then this event is processed once.

After Last Object Printed   Occurs after a row is printed to an output file. Use this to process information after a row has been output.

Before Level Break   Use this to do processing after a fetch, but before any level breaks are checked.

Do Balance Auditor   Valid only for tabular sections. Use this for the drill down feature.

Do Section   Occurs after Advance Section after values have been assigned to print out to a printer or an output file. This event occurs before any information for the current record is written to the PDF file. This event occurs before Do Cell (if Tabular cells exist) and before Do Variable/Do Constant.

Do Tabular Break
Valid only for tabular sections. This event occurs when any of the business view fields set as level breaks change. Use this to do processing that requires a change of values in any of the level break fields.

End Break Section
Occurs after a level break finishes. Use this to do processing immediately after a level break.

End Lvl Brk Footer Section
Use this to do processing immediately after a level break footer.

End Lvl Brk Header Section
Use this to do processing immediately after a level break header.

End Section
Occurs after a batch process has completed processing the last set of section values. Use this to do processing immediately after a section ends. This event is useful for last record and end-of-file procedures.

Init Break Section
Occurs after a level break begins processing. This event initializes a child section that is joined to the parent section on a level break.

Init Lvl Brk Footer Section
Use this to do processing immediately before a level break footer.

Init Lvl Brk Header Section
Use this to do processing immediately before a level break header.

Initialize Section
Occurs when a batch process encounters a section for the first time. Use this to do processing immediately before a section begins. This is useful for working with global variables or performing other preparatory procedures. For conditional sections, this event will be processed each time the section is called.

Refresh Section
The first time the UBE encounters a child section, it issues an initialize section event. Each subsequent time the child section is to be processed, the batch process uses Refresh Section. At this point, the internal structures and pointers for the child section have been established and the UBE is about to select a new group of records for the child section. This logic also works for the level break sections. Use this to set the object values of level two sections based on the parent section. You can also use this event to reset or modify data selection and sequencing of the child section.

Suspend Section	Processes when an overflow page break (that is, information exceeds the space available on the page) occurs. This temporarily stops the section processing. Use this do to processing when a page break occurs.

Page Header Section Level Events

Initialize Page Header	Occurs at the beginning of a report after any report header logic and before the page header section processes for the first time. It also processes every time a page break occurs. Use this to initialize values that cannot be set until after the report header logic executes. This is similar to Init Section for a normal group, columnar, or tabular section, except that it is processed only for a page header section.
End Page Header	Occurs after the page header finishes processing. Use this to do processing immediately after a page header.

Page Footer Section Level Events

Initialize Page Footer	Occurs at the beginning of the report after any report header logic and before the page header section processes for the first time. Use this to initialize values to be printed in the current page footer section. These assignments typically depend on information processed so far on that page.
End Page Footer	Occurs after the page header finishes processing. Use this to do processing immediately after a page header.

Report Header Section Level Events

Initialize Report Header	Processes once at the very beginning of the report before anything else in the report processes. Use this to initialize values at the beginning of a report. This is similar to Init Section for a normal group, columnar, or tabular section except that it processes only for a report header section.

End Report Header	Occurs after the report header processes. Then the report processes the page header for a report. Use this to do processing immediately after a report header.

Report Footer Section Level Events

Initialize Report Footer	Occurs once at the very end of a report after everything else processes and before the report footer prints. Use this to initialize values to print in the report footer.
End Report Footer	Occurs after the report footer processes. After processing finishes, the report terminates. Use this to do processing immediately after a report footer.

Constant and Variable Events

Do Column Heading (constant)	Occurs when the column is initialized. Use this to populate the column heading based on ER associated with a business function.
Do Variable/ Do Constant	Occurs just before the font and color are selected and before the value of the object is translated into a printable string of characters and is output to the page. Use this to do processing after an object has been processed. This is your last chance to manipulate the value or display attributes of the objects before output.
End Variable/ End Constant	Occurs immediately after an object processes even if the object is invisible or suppressed. Use this to do processing after an object processes.
Initialize Variable/ Initialize Constant	Occurs each time a report object or variable is to be processed. Use this to do processing before an object processes. This is useful to do processing that affects the calculation of an object's position because the object's position on the page has not yet been determined.
Skip Variable/ Skip Object (constant)	Occurs when an object will not fit on the current page. The batch process issues a skip variable to bypass the object until the next page begins processing. Use this to change the value of an object at the page break.

Suspend Object (constant)	If an object requires multiple text strings or column headings and if only part of the object fits on a page, then the batch process issues a suspend variable to halt processing of the object until the next page has been started. Use this to modify the value at the page break. Because the value of the object has already been partially processed, this is not a good time to manipulate that value.
Column Inclusion	Valid only for tabular sections, this event occurs after a record is fetched from the database. Use this event to perform calculations.
Do Cell (Tabular)	Occurs during Do Object after processing calculations for a cell. Use this event to manipulate cell data before displaying it. This event occurs before Do Variable/Do Constant. This event occurs during calculations.

System Functions within Batch Events

Batch system functions give you flexibility and control over how your reports are processed. For example, you can use batch system functions to hide or show an object, to hide or show a section, to generate a message, and so on.

The batch system functions you might use consist of the following main categories:

Object	You can use Object system functions to do things such as hide or show objects.
Section	You can use Section system functions to do things such as hide or show sections or work with totals.
General	You can use general system functions to do things such as work with selection and sequencing.
Messaging	You can use message system functions to do things such as send, update, or delete messages.
Workflow	You can use workflow messages to do things such as work with processes.
Transaction Processing	You can use transaction processing system functions to begin, commit, or roll back transactions.

Media Objects	You can use media object system functions to work with media objects.

Some general batch system functions that are commonly used are:

Set Sequence Append Flag	This system function allows you to append or add the sequence for a section to the report's sequencing.
Stop Section Processing	Stops processing the current section and moves to the next section. This system function is helpful for performance, especially when there is a large amount of event rule logic that remains to be performed. For example, if no more customers exist with a credit limit over a certain amount, the system stops processing that section and moves to the next section.
	Stop Section Processing differs from Suppress Section Write in that Suppress Section Write suppresses only the current record, which causes the engine to process the same section for the next record.
Hide Object	For group and columnar sections, when you hide objects using the Hide Object system function in Event Rules, be aware that even though it might be the only object on that line, the system still prints a blank line for it. The system has no way of knowing whether there are any other objects on that line that need to be printed. To keep the system from printing a blank line, place the object in its own conditional section and suppress the printing of that section using the Hide Object system function.

Other system functions are published online under *Published APIs*.

See Also

- *Appendix B: Available Objects* for a listing of events available in each report section and the order in which they are processed.

Understanding Batch Run-time Processing

The term "Batch run-time processing" refers to how events, such as initializing a section, and their attached event rule logic are evaluated at run time.

Run-time structures are blocks of memory that hold data as it is read, processed, and written to the database.

Report Design provides several different field types and event rules that are associated with run-time structures.

Available Objects

An available object is represented by a two-character, alphabetical code that characterizes the source of data and determines how the object data is used in a report or batch process at run time.

During run-time processing, data is stored in memory in an internal data structure. Certain fields of the data structure temporarily store data during run time until it is no longer needed. Then data can be cleared to process another record.

The following available objects are defined for batch processing:

BC   A column in the business view. Business view columns will appear in this list. These columns are filled with values from the database when a fetch is performed and are the values saved to the database during an add or update.

PO   A value passed from a processing option. These values are passed into the application when it is started and can be accessed by any form in that application. These processing option values could have been entered by the user or set up in a particular version of an application.

VA   Event rules variables. These objects represent variables set up by the developer in event rules. They are not manipulated by the system.

SV	System variables. These objects represent some environment variables that have been made accessible to event rules.
SL	System literals. These objects represent some constant system values that have been made accessible to event rules.
TV	Text Variable
RC	Report Constant (UBE)
RV	Report Variable (UBE)
PC	Previous Constant
PV	Previous Variable

Typical Event Flow for a Group Section

The run-time engine processes events in a certain order. The typical events for a group section and the order in which they are processed follow.

The following example represents how values in the run-time structures are stored in memory compared to how they appear in the report. This example uses a group section for an Address Book report.

Initialize Section

The following graphic illustrates what values are in the run-time structures after the following events occur.

- Initialize Section

RC

AN8	Address Number
ALPH	Alpha Name

BC

AN8	
ALPH	

Advance Section

The following graphic illustrates what values are in the run-time structures after the following events occur.

- Initialize Section
- Advance Section

RC			BC	
AN8	Address Number		AN8	
ALPH	Alpha Name		ALPH	

Before Level Break

The following graphic illustrates what values are in the run-time structures after the following events occur.

- Initialize Section
- Advance Section
- Before Level Break

RC			BC	
AN8	Address Number		AN8	1
ALPH	Alpha Name		ALPH	Financial/Distribution Company

Do Section

The following graphic illustrates what values are in the run-time structures after the following events occur.

- Initialize Section
- Advance Section
- Before Level Break
- Do Section

RC

AN8	Address Number
ALPH	Alpha Name

BC

AN8	1
ALPH	Financial/Distribution Company

After Last Object

The following graphic illustrates what values are in the run-time structures after the following events occur and what the report will look like at this point.

- Initialize Section
- Advance Section
- Before Level Break
- Do Section
- After Last Object

RC

AN8	Address Number
ALPH	Alpha Name

BC

AN8	1
ALPH	Financial/Distribution Company

	Report
Address Number	1
Alpha Name	Financial/Distribution Company

Advance Section

The following graphic illustrates what values are in the run-time structures after the following events occur and what the report will look like at this point.

- Initialize Section
- Advance Section
- Before Level Break
- Do Section
- After Last Object
- Advance Section

RC	
AN8	Address Number
ALPH	Alpha Name

BC	
AN8	1
ALPH	Financial/Distribution Company

Report	
Address Number	1
Alpha Name	Financial/Distribution Company

Before Level Break

The following graphic illustrates what values are in the run-time structures after the following events occur and what the report will look like at this point.

- Initialize Section
- Advance Section
- Before Level Break
- Do Section
- After Last Object
- Advance Section
- Before Level Break

RC	
AN8	Address Number
ALPH	Alpha Name

BC	
AN8	27
ALPH	Eastern Area Distribution Cent

Report	
Address Number	1
Alpha Name	Financial/Distribution Company

Do Section

The following graphic illustrates what values are in the run-time structures after the following events occur and what the report will look like at this point.

- Initialize Section
- Advance Section
- Before Level Break
- Do Section
- After Last Object
- Advance Section
- Before Level Break
- Do Section

RC

AN8	Address Number
ALPH	Alpha Name

BC

AN8	27
ALPH	Eastern Area Distribution Cent

Report	
Address Number	1
Alpha Name	Financial/Distribution Company

After Last Object

The following graphic illustrates what values are in the run-time structures after the following events occur and what the report will look like at this point.

- Initialize Section
- Advance Section
- Before Level Break
- Do Section
- After Last Object
- Advance Section
- Before Level Break
- Do Section
- After Last Object

	RC
AN8	Address Number
ALPH	Alpha Name

	BC
AN8	27
ALPH	Eastern Area Distribution Cent

Report	
Address Number	1
Alpha Name	Financial/Distribution Company
Address Number	27
Alpha Name	Eastern Area Distribution Center

Advance Section

The following graphic illustrates what values are in the run-time structures after the following events occur and what the report will look like at this point.

- Initialize Section
- Advance Section
- Before Level Break
- Do Section
- After Last Object
- Advance Section
- Before Level Break
- Do Section
- After Last Object
- Advance Section

RC

AN8	Address Number
ALPH	Alpha Name

BC

AN8	27
ALPH	Eastern Area Distribution Cent

Report	
Address Number	1
Alpha Name	Financial/Distribution Company
Address Number	27
Alpha Name	Eastern Area Distribution Center

End Section

The following graphic illustrates what values are in the run-time structures after the following events occur and what the report will look like at this point.

- Initialize Section
- Advance Section
- Before Level Break
- Do Section
- After Last Object
- Advance Section
- Before Level Break
- Do Section
- After Last Object
- Advance Section
- End Section

Report Output

Report Output

Reports are created using the Report Design tool in which certain printing properties can be defined for the report that can affect the resulting output. After the report is created and submitted, the Batch Engine can process the report on the various servers or on the client. After report processing is complete, Output Management handles output generation and printing. This topic describes printing properties during report creation, submission, output generation.

After completing this section, you should have an understanding of the following:

❑ Printing properties in Report Design

❑ Printing properties at report submission

Printing Properties in Report Design

Report Design incorporates printing properties that determine the format of output. In all cases, print properties set in Report Design override default properties established for batch processes. Setting print properties in a report version overrides the properties specified by the report template. Printer properties set in Report Design can be overridden at submission. This topic describes how to set print properties in Report Design. It includes the following information:

- Overriding a designated printer
- Selecting paper type
- Specifying print orientation
- Exporting to Comma Separated Value (CSV) files
- Using system function K2DoInitPrinter
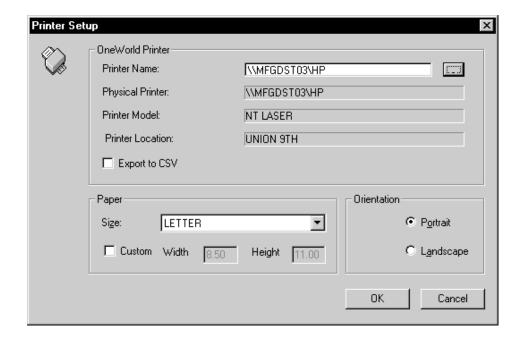
Note: Changes in print properties in a report template will not be reflected in any of its already existing versions.

Overriding a Designated Printer

A default printer is associated with batch processes. Default printers can also be associated with users; a user-associated printer overrides a batch process-associated printer. You can override both of these printers by selecting a printer when you design a report in Report Design. The printer you select is stored in the print specifications, causing the report to always print to that printer unless overridden at submission.

▶ **To override a designated printer**

1. In Report Design, from the Report menu, select Print Setup.

   The Print Setup form appears.

2. Click the Printer Name button.

   The Logical Printer Search & Select form appears.

3. Click the printer to which you wish the report to be output, and then click Select.

The Print Setup form reflects your choice.

4. Select other options as desired and click OK.

Selecting Paper Type

You can select from a group of predefined paper sizes, or you can enter your own paper dimensions.
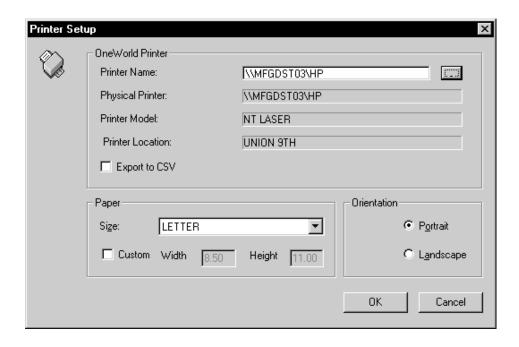
The standard predefined selections are A4, Legal, and Letter. Letter is the default paper type. The paper size used for PDF generation is the one defined in the Printer Table (F986162). Report Design inherits the paper size from the same table. Change this table to modify the predefined group.

Alternately, you can define paper size by width and height in inches. The minimum definable width is 2 inches and the maximum is 21 inches. The minimum definable height is 2 inches and the maximum is 24 inches.

▶ **To select paper type**

1. On Report Design, from the Report menu, choose Print Setup.

   The Print Setup form appears.

2. Select a predefined paper type from the drop-down menu in the Size field, or click Custom and indicate the paper width and size in inches.

3. Select other options as desired and click OK.

Specifying Print Orientation
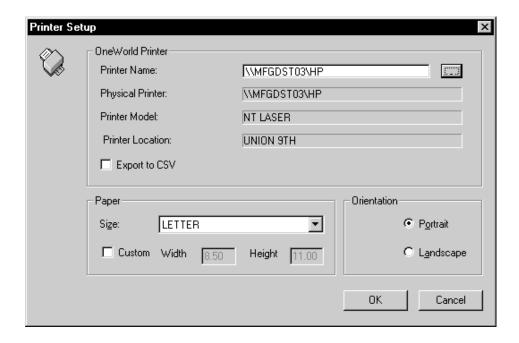
Orientation refers to how the paper is rotated when it is printed. A vertical orientation is called Portrait; a horizontal orientation is called Landscape. Orientation can be applied only to predefined paper types. The option is disabled for user-defined paper sizes.

In OneWorld, the default orientation is Landscape. When you are printing to line printers, a Portrait orientation is recommended. Orientation does not apply for CSV generation.

▶ **To specify print orientation in Report Design**

1. From the Report menu, select Print Setup.

   The Print Setup form appears.

2. Click the desired orientation in the Orientation box.

   Orientation options are deactivated if you have selected a custom paper type.

3. Select other options as desired and click OK.

Exporting to Comma Separated Value (CSV) Files

To view OneWorld report data in a spreadsheet programs such as Excel or Lotus, you must choose to export the data to a CSV file. Before exporting, it is recommended that no fields overlap and that the horizontal spacing be set to 52 (this spacing corresponds to the default width of a column in Excel).

Both a .csv and a .pdf file are created in the Print Queue directory when the report is submitted to the screen or to the printer. Note that only single spacing and portrait orientation is supported for CSV files. Drill down links are ignored in CSV generation.

▶   **To export to Comma Separate Value (CSV) files**

1. In Report Design, check the layout of columns and fields. Ensure that no columns or fields overlap.

2. Click a report section, and from the Layout menu, select Grid Alignment.
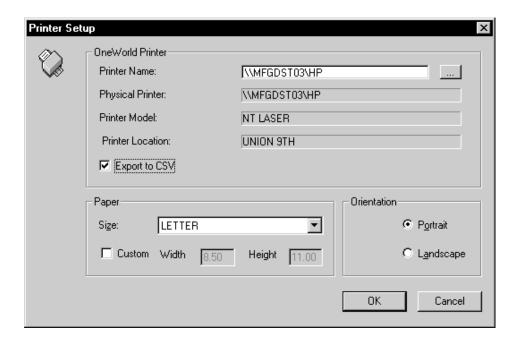
   The Alignment Grid form appears.

3. Set the horizontal spacing to 52 and click OK.

   Report Design applies this value to the entire report.

4. From the Report menu, select Print Setup.

   The Print Setup form appears.

5. Set the orientation to Portrait.
6. Click Export to CSV, and then click OK.

See Also

- *Modifying the Appearance of Report Objects* for information on altering field lengths and column widths

Using System Function K2DoInitPrinter

You can use the DO_INIT_PRINTER event to specify a printer when the batch application processes. In this way, you could print the same report to different printers based on other criteria that you specify. The event rule (ER) for this event is the first ER that is processed when the report is submitted. The system function resolves and validates the printer, and the Batch engine then uses the printer name (if valid) to obtain a printer device context. Portions of this device context can be overridden if certain flags in the report specification are set.

Printing Properties at Report Submission

To submit a report, you must select the version of the report to be processed. You can submit the job in one of two ways:

- When a version is submitted locally, the OneWorld client immediately launches the UBE process, giving you the option to view the output on screen or to print it to a printer.

- The version can also be submitted to an enterprise server that handles the processing more efficiently than the client can. When the version is submitted to the server for processing, the client packs the version specifications and other information necessary to run a report, (such as Processing Option values, Report Interconnect values, Printer Information), and sends a message to the server with all this information. For more information, refer to *Creating Report Interconnections* in the *OneWorld Development Tools* guide.

  When a job is initiated on the server, it can be launched in one of two ways:

  - By another report or interactive applications through a report interconnect**.** Report Interconnects can also be used to submit jobs locally. For more information regarding Report Interconnects refer to *Creating Report Interconnections* in the *OneWorld Development Tools* guide.
  - Through RUNUBE from the command line.

Printing properties at report submission provides information about the following tasks:

- Resolving printers
- Selecting paper type
- Specifying print orientation
- Using the Print Immediate option
- Using the SavePDL (Printer Definition Language) file option
- Exporting to Comma Separated Value (CSV) files
- Storing and Passing Printer Information
- Job Submission on Client

Resolving Printers

When a job is submitted on the client or server, the following applies:

- If a printer is selected at design time, the printer name is stored in the report specifications. On the client, the printer name is passed in at submission time to the Printer Selection dialog box.

- The user can override this printer.

- If no printer is selected at design time, then during submission the default printer for that user is used. The default printer is selected by user, OW environment, and host.

- Depending on the printer that was selected, the corresponding Printer Definition Language on the Advance tab will be enabled.

If a job was submitted through report interconnects, the child reports inherit the printer name from the parent report. At print time, for the child report, the user can override the printer from the Work with Servers application once the job has completed.

When a job is submitted through RUNUBE, if a printer name was stored in the specifications it is used at print time; otherwise, the default printer for the user is used. At print time, the user can override the printer from the Work with Servers application when the job has completed.

Selecting Paper Type

If custom paper size is used in Report Design to design the report, then at submission time the user will *not* have an option of changing the paper type.

The paper type defined for the printer is used during job submission. From the Print Property tab on the Printer Selection dialog box, the user can change the paper type. Depending on the printer that the user selects, the Paper Type field will automatically be populated with the default paper type set for that printer.

Specifying Print Orientation

The orientation selected in Report Design is stored in the report specifications. Orientation from the specifications is displayed in the Print Property tab of the Printer Selection dialog box at submission time. The user can, however, change the orientation at submission time (locally or on the server).

However, if custom paper size was selected at design time, the orientation control will be disabled in the Printer Selection dialog box. In the case of line printers, the CPI, CPP, LPI, and LPP defined for the line printer will determine the orientation.

Using the Print Immediate Option

On the server, if a job is marked for immediate printing (by setting the Print Immediate flag to TRUE in the client JDE.INI file under NETWORK QUEUE SETTINGS), the following is true:

- The job will automatically print without having to actually click the Print option on the Work with Servers application. The PrintImmediate option will come in checked on the Printer Selection dialog box if the JDE.INI setting for PrintImmediate was set to TRUE. The user can override this setting.

  [NETWORK QUEUE SETTINGS]

  PrintImmediate=TRUE/FALSE

- For report interconnects, if the Print Immediate function is turned on then, the function is inherited by the child reports from the parent. In this case, the user does not have an option to override it.
- In the case of job submission through RUNUBE, Print Immediate can be passed as an argument from the command line. In this case, just like on the server, the job will automatically print if the PrintImmediate option was set to TRUE.

Using the SavePDL (Printer Definition Language) File Option

If the JDE.INI file has the SavePDL option set to TRUE under NETWORK QUEUE SETTINGS, then at submission time the Printer Definition Language File option on the Document Setup tab will be enabled. However, this option can be changed at submission time.

[NETWORK QUEUE SETTINGS]

 SavePDL=TRUE/FALSE

Additionally, if the SavePDL option in the JDE.INI file is set to FALSE, the user has the option at submission time to select this option in order to save the intermediate temporary file created. The PDL file, when created, is created in the Print Queue directory. In the case of report interconnects, the child reports inherit this property from the parent.

At submission time the user has the option of modifying the Printer Definition Language File option and, depending on whether it is checked or unchecked, a PDF and a PDL file will be created for that particular job only.

Exporting to Comma Separated Value CSV Files

When you are submitting the job on the client, if the Export to CSV option was selected, the option is stored in the report specifications. This option from the specifications is displayed in the Report Output Destination dialog. The user can override this option by submitting the job To Printer or to On Screen.

If the user chooses to submit to the printer, the user has the option of overriding the Export to CSV option on the Document Setup tab of the Printer Selection form. A .csv and a .pdf file are created in the Print Queue directory when this option is selected.

When you are submitting the job to the server, if the Export to CSV option was stored in the report specifications at design time, then from the Work with Servers application, the user will have the opportunity to modify this option.

In the case of report interconnects, the export to CSV option is not inherited by the child report from the parent. Therefore, the option must be selected at design time to enable this option for the child or parent report.

Storing and Passing Printer Information

When you launch a UBE on the client, the printer information is stored in the pUBEDs structure and this information is passed to the Batch Engine.

For submission of a job from client to server, the printer information that is obtained from the Printer Selection dialog box is stored in the F986110 (Job Maintenance Table) as a BLOB (Binary Large Object).

For job submission through report interconnects, the printer information for the child reports is inherited through the PRT_GetInfoFromPreviousReport API from the parent report. The inherited values are Printer name, Print Immediate, SavePDL information, Paper Type and Printer flags, Number of Copies, and Paper Source, if any. If the child report in its specifications had a printer name defined or custom paper type set, then that would override the inherited values.

In the case of RUNUBE, the printer information, as well as information regarding Print Immediate and Save PDL, are packed and stored in the F986110 table (Job Maintenance Table).

Job Submission on Client

A job can be submitted on the client in one of the following ways:

- To Printer
- On Screen (for viewing the PDF file)
- Export to CSV
- Export via OSA

When the job is submitted to the To Printer option, the Printer Selection dialog box that was discussed in detail in the previous sections is available to the user to modify output options.

When a job is submitted to the On Screen option on the Report Output Destination dialog box, the PDF file is displayed through the Acrobat Reader.

If the user submitted the job to the Export to CSV option, then the report will be automatically displayed through a default CSV viewer, such as Excel.

If the user submitted the job to the Output Stream Access (OSA) option, then the location of the output is determined by the OSA's interface functions. For example, the J.D. Edwards XML functions create an XML file in the same directories that are used for PDF and CSV output. An OSA library created by another company might store the OSA output in a different location.

Report Submission

When you submit a report, you can modify the data selection and data sequencing and select advanced version functions. You can also choose to view the report on screen, send it to the printer, export it to a Comma Separated Values (CSV) file, or use Output Stream Access (OSA) to export it to another software program.

This section describes the following:

❏ Submitting a report

❏ Working with submitted reports

❏ Understanding subsystem jobs

❏ Defining subsystem jobs

❏ Adding an API record to the subsystem table

Submitting a Report

To submit a report, you must select a version of the report that you want to process. If you submit and process the report version on your workstation, you can specify whether to:

- View the report online

  When you view the report online, the report is in a PDF format and is readable only with the Adobe Acrobat Reader.

- Print the report

- Export the report to a generic Comma Separated Values (CSV) file

  A CSV file has all of the commas stripped from the data fields. When you export the report to a CSV file, the file can be viewed in a default CSV viewer, such as Microsoft Excel or Lotus 1-2-3. In addition to viewing the CSV file, you can manipulate report data after the report has finished processing.

- Export the report to a specific environment via Output Stream Access (OSA)

  Unlike the generic CSV file, you can direct OneWorld to pass data to other software programs during batch processing, allowing the second software program to process and format the data concurrently. An OSA interface must already be defined before you can employ this option.

In most business environments, you submit your version to a designated enterprise server that manages the processing needs more efficiently than your workstation. Your system administrator determines whether the system automatically processes and prints your output or places it on hold in the queue.

When you submit your version to the server for processing, it is sent to a job queue. Version specifications and information required to run the version are sent from the workstation to the servers. You can monitor the progress in the queue and preview the version when the processing is complete.

Perform the following tasks:

- Submitting a report for batch processing

- Defining processing options

- Overriding data selection and data sequencing

- Using advanced option overrides
- Command line submission

Submitting a Report for Batch Processing

You can submit a report using various methods. For example, you can double-click a report icon from a menu, choose Batch Versions from the System Administration Tools (GH9011) menu, choose Report Writer from the Foundation Systems (G0) menu, or choose Report Versions from the Tools menu bar in OneWorld Explorer. The following procedure describes the second method.

▶ **To submit a report for batch processing**

1. From the Report Writer menu (GH9111), choose Batch Versions.

   The forms that appear depend on whether you submit the report version to a workstation or a server.

2. On Work With Batch Versions - Available Versions, choose your report. Use the visual assist to more easily locate your report.

   If the report version is new and has not been checked in, other users cannot run the version. If you modify the version and run the modified version, the *local* modified specifications will run. If the modified version is executed on the server, the updated version specifications will be used when you submit that version.

3. Click Select.

   The Version Prompting form appears.

   See *Overriding Data Selection and Data Sequencing* and *Using Advanced Option Overrides* for your report.

4. On Version Prompting, click Submit.

   If your report version exists only on your workstation and you submit the version to the server, the Install Specifications form appears. You must first install the version and the report specifications to the server that processes the report.

5. On Install Specifications, click Yes.

   The Remote Job form appears. Run a package install to put the report specifications and version information on the server to which the version will be submitted.

6. Click OK.

   If you receive a communication failure message, resend the information to the server. If you continue to get a communication failure message, contact your system administrator.

   If you are submitting a job to run locally, the Report Output Destination form appears.

7. On Report Output Destination, choose from the following and click OK:

   - On Screen
   - To Printer
   - Export to CSV
   - OSA Interface Name

     Note: OSA runs in tandem with one of the first three choices. When you choose OSA Interface Name, you must also choose one of the other three options.

   If you are submitting a job to run on a server and you have already installed the version and its specifications on the server, the Batch Versions – [Printer Selection] form appears. If you selected a printer on the Printer Setup form in Report Design, the printer information appears on the Batch Versions – [Printer Selection] form. See *Working with the Printers Application* for additional information.

   The Printer Selection form appears.

8. Click the Printer Selection tab and enter the number of copies of the report you wish to print.

9. Click the Print Property tab and select from the following override options as appropriate:

   - Orientation
     - Portrait
     - Landscape
   - Copies
     - Number of Copies

       This number reflects the number of copies entered on the Printer Selection tab. The default value is 1. Changing the value here changes the value on the Printer Selection tab to match. The option is valid only for post script and line printers; it is disabled for PCL printers.

       If you are printing to an AS/400 line printer, you may need to modify your output queue description to enable this feature.

See *Setting Up a Printer for AS/400* in the *OneWorld Server and Workstation Administration* guide for details.

- Paper
  - Paper Type
  - Paper Source

    The default and maximum values are defined in the Printer Setup application. The option is only available for PostScript printers; it is disabled for PCL and line printers.

  The options you select on this form override settings specified in the report itself, but apply to the current batch process only.

10. Click the Document Setup tab and choose from the following options as appropriate:
    - PDF (Portable Document Format)
    - Printer Definition Language File
    - Print Immediate
    - CSV (Comma Separated Values)
    - OSA Interface Name

11. Click the Advanced tab and choose from the following options as appropriate:
    - PostScript
    - PCL
    - Line Printer
    - Custom

Comma Separated Values (CSV) Files

When you export a file to CSV:

- A CSV file is created in the print queue.
- A PDF file is created in the print queue.
- Your CSV file appears in Microsoft Excel, so you can view it if you are running locally. If you are running on a server, from Work with Server Jobs (P986110) choose View CSV file to launch Excel and view the file.

You can also use the CSV file for other spreadsheet applications. Microsoft Excel can read a CSV file by default.

If you are running locally and you want to export a report to a CSV file for just a specific instance, do one of the following:

- Click the Export to CSV option when submitting your report.
- Click Export to CSV on Printer Selection Advanced tab.

If you always want a report to export to a CSV file, click Export to CSV in the Printer Setup so that the report specifications are set to export the report to a CSV file.

If you do not want the report to export to a CSV file for a single instance, even though it is set in the report specifications, click Export to CSV to remove the check when submitting your report.

Reports do not always export to other programs perfectly. For example, group sections with several one-character data fields might need some cleanup. Following are several points to consider when exporting to CSV files.

- The startup default column width in Excel is equivalent to about 52 units in OneWorld Report Design, so for best results, set your horizontal grid alignment to 52 units and turn on "snap to grid."

  Each column you see in OneWorld is now equal to a column in Excel. Align the data so that the left edge of each data field is in a column. If a data field overlaps into the next column in OneWorld, the data in Excel will be in discrete columns. Since the text comes into Excel in one cell, you can then wrap the text in the calls in Excel. Delete unused columns in Excel and reformat information as needed.

- If data fields are vertically off in OneWorld, they appear in separate rows in Excel. If more than one data field with the same vertical and horizontal alignment appears in a column in OneWorld, only one of these fields will be in the CSV file. The first field to get output occupies the cell in Excel.

- Some countries use a comma as a decimal marker. In these countries, the decimal separator is recognized as a comma when the report exports and a tab-separated file with a .txt extension is created. Tabs are stripped out instead of commas.

  The information transfers as flat text, so totaling columns just show text and you must set up totaling in Excel.

- After your report is designed to export into Excel cleanly, you can use the Auto Format feature in Excel to further format your report in Excel.

- Excel uses the same date format you use in your OneWorld report.

Output Stream Access (OSA) Files

When you use OSA to direct your output, OneWorld passes its output to another program for processing. The OSA interface must be predefined; several interfaces may exist for one program, depending on the report type and the desired output.

The benefits of OSA are that it can eliminate the task of manually formatting output (as you must do with CSV output) and that it can employ the processing power of the target software program.

OSA can use its own set of commands, or it can use an XML library. Because many software packages already use XML libraries for several functions, creating and using an XML library can simplify the interface.

See Also

- *Appendix F: Building OSA Interfaces* for more information about defining OSA interfaces and libraries

Defining Processing Options

Processing option values are stored for each report version in the F983051 (Versions List) table. This table is centrally located and can be accessed by all OneWorld users within a given environment. Any changes to processing option values are immediately visible to all other users working with the same report version. Jobs running on client machines and jobs running on servers all access the same table.

Processing option values that you enter during submission are used at execution. If there is no prompting, values that exist at submission are used at execution. Values that you enter during submission are saved in F983051 and will be seen the next time you submit that version.

Processing options that are defined by a particular user during submission of a report are saved for that user. This means that multiple users can run the same report with different processing option values and receive the output they desire based on their individual processing option values. For example, User A submits R0005P (User Defined Codes Print) to run on a server, changing the Language Preference processing option to E for English. The job goes to the server and waits in its queue. User B also submits R0005P, changing the Language Preference processing option from E to F for French. That job also goes to the server and waits. When User A's job gets to the top of the queue and becomes active, it will use the Language Preference value of E, even though User B changes the processing option value to F during submission.

Consider the following scenarios:

- Submitted on client, running on client.

  During report submission, the user might be prompted for data selection and sequencing values. The values that the user specifies during prompting are retained in memory, but are not saved to the local RDASPEC files. The values in memory are passed along to the job as it processes. If no prompting occurs, then the job will load selection and sequence values from the local RDASPEC files at execution.

- Submitted on client, running on server.

  The submission process begins in the same way as when a report is submitted and running on a client, but when the job is transferred to the server, the processing option values are also sent to the server, where they are stored in the F986110 (Server Jobs) table. When the job is executed, the processing option values are retrieved from F986110, instead of being loaded from F983051.

Overriding Data Selection and Data Sequencing

From Version Prompting, you can change the data selection and data sequencing for your report. Every user (client machine) has a copy of a given version. Any changes made to a report version remain with the copy of the version that resides on that machine.

Data selection and sequencing values are stored in Report Design specification (RDASPEC) files, which can exist on the client as well as the server. In Terminal Server environments, multiple users share the same set of client RDASPEC files, so any change to specifications by one user are immediately visible to all other users of the same terminal server.

Values entered during submission are used for processing, but are not saved and will not be seen at the next report submission. If no prompting occurs, values that exist locally at submission are used during processing. Values entered on Version List or in Report Design are saved in the RDASPEC files.

Consider the following scenarios:

- Submitted on client, running on client.

  During report submission, you might be prompted for data selection and sequencing. The values that you specify during prompting are retained in memory, but are not saved to the local RDASPEC files. The values in memory are then passed along to the job as it processes. If no prompting occurs, the job will load selection and sequence values from the local RDASPEC values from the local RDASPEC files at execution time.

- Submitted on client, running on server.

  When a job is sent to a server, all of the specifications related to the version being submitted are copied into packed files that are sent to the server. When the job processes on the server, the information from the packed files is merged into the specifications on the server, which are then used to run the job. Every user gets his own copy of his report to run on the server.

  If prompting for selection and sequencing values occurs during submission, the values retained in memory are copied into the packed files instead of the corresponding RDASPEC information, so the values from prompting will be used when the job eventually executes.

Complete the following tasks:

- Changing data selection
- Changing data sequence

Changing Data Selection

Data selection uses Boolean logic to determine which records to include in the report. Boolean logic uses operators such as *And* and *Or*.

Use *And* to include only the data that two or more fields in a record have in common. For example, suppose you need a list of customers who are located in New York City. You might use the two fields Location and Search Type with the following criteria:

Location = New York

And

Search Type = C (customer)

Use *Or* logic to search for records that include data items for either NYC *Or* C. For example, if you need to find any New York City record or any customer record, you would indicate the same information for Location and Search Type.

▶ **To change data selection**

1. From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).

   The Work with Batch Versions – Available Versions form appears.

2. Type an application ID in the Batch Application field. For example, to locate a version for the One Line Per Address report, type R014021.

3. Click Find to locate the versions available on your workstation.

4. Choose the report version you want to submit, and then click Select.

   The Version Prompting form appears.

5. On Version Prompting, click the following option:
   - Data Selection

6. Click Submit.

   The Data Selection form appears.

7. Change the data selections as needed for your version.

   See *Defining Data Selection*.

8. Click OK.

   If you are submitting a job to run locally, the Report Output Destination form appears.

Changing Data Sequence

You can change the order of the way the data in your report appears.

▶ **To change data sequence**

1. From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).

   The Work with Batch Versions – Available Versions form appears.

2. Type an application ID in the Batch Application field. For example, to locate a version for the One Line Per Address report, type R014021.

3. Click Find to locate the versions available on your workstation.

4. Choose the report version you want to submit, and then click Select.

   The Version Prompting form appears.

5. On Version Prompting, click the following option:
   - Data Sequencing

6. Click Submit.

   The Section Data Sequencing form appears. See *Defining Selection Data Sequencing*.

7. Change the data sequencing as needed for your version.

8. Click OK.

   If you are submitting a job to run locally, the Report Output Destination form appears.

Using Advanced Option Overrides

Advanced options allow you to override your processing location and use a variety of logging features.

▶   **To use advanced option overrides**

1. From the System Administration Tools menu (GH9011), choose Batch Versions (P98305).

   The Work with Batch Versions – Available Versions form appears.

2. Type an application ID in the Batch Application field. For example, to locate a version for the One Line Per Address report, type R014021.

3. Click Find to locate the versions available on your workstation.

4. Choose the report version you want to submit, and then click Select.

   The Version Prompting form appears.

5. On Version Prompting, choose Advanced from the Form menu.

   If the menu bar does not appear at the top of Version Prompting, maximize the form.

   The Advanced Version Prompting form appears.

6. Click one or more of the following options, and then click OK:

   • Override Location

     You must have authorization from your system administrator to override your location. If you select Override Location, the JDE Data Sources form appears when you click Submit from Version Prompting.

     From this form, choose the enterprise server where you want to process your job, and then click Select to continue.

   • Logging (JDE.log)

   • Tracing (JDEDEBUG.log)

- UBE Logging Level

  When you choose a high value to receive more technical information, you also receive all the information for the lower values. For example, when you enter a value of 3 (object level messages), you also receive information for 2 (section level messages), 1 (informative messages), and 0 (error messages).

- Submit Version Specifications Only

  See *Moving Batch Version Specifications to an Enterprise Server* for information about working with this option.

Field	Explanation
Override Location	Allows you to override the data source before the report is submitted or previewed.
Logging (JDE.log)	When the batch job is run on a server, this field allows you to indicate if logging should be enabled for the execution. If the server is already set to perform logging, it occurs regardless of how this field is set.
Tracing (JDEDEBUG.log)	When the batch job runs on a server, this field indicates whether tracing is enabled for execution of the job. If the server is already set to perform tracing, it occurs regardless of how this field is set.
UBE Logging Level	Indicates the type of error logging that occurs when the batch job runs. The following list describes the different levels: 0 Error Messages 1 Informative Messages and Log Entry 2 Section Level Messages 3 Object Level Messages 4 Event Rule Messages 5 Database Mapping Messages 6 UBE Internal Function Calls, Textout Values

Command Line Submission

You can allow non-OneWorld applications to submit batch jobs for processing in OneWorld via a command line. OneWorld accepts two types of batch submission command lines:

- runube is a direct command line with which you can define which report and version to run, which job queue to use, how the queue is controlled, whether the report is printed or held, and where the report is output to. This command line requires no input files. It does not allow you to

override or change processing options, data selection, or data sequencing from what has already been set using a OneWorld client.

- runubexml is a command line that uses an xml input file to specify to OneWorld about how to process the report. It is nearly as flexible as submitting a batch process directly within OneWorld, and it does allow you to override the settings in specifications for processing options, data selection, and data sequencing. You must have an xml input file available for each processing variation for each version of each report you want to run, however.

Command line submission describes the following command line types:

- Using runube
- Using runubexml

Using runube

The format of the runube command line is as follows:

```
runube UID PWD ENV REP VER JQ B/I P/H S/D PTR
```

The following is a description of each of the command line components:

runube	The name of the executable that submits the job.
UID	A OneWorld user ID. As in OneWorld, you must have access to the report you want to run. If you do not enter a printer type and you have requested that the report be printed, the system uses the printer assigned as your default printer based on your user ID.
PWD	The OneWorld password corresponding to the user ID.
ENV	The OneWorld environment.
REP	The system name of the report you want to process, such as R0006P.
VER	The name of the version of the report you want to process; such as XJDE0001. You must enter a version; you cannot submit the template of a report.
JQ	The name of the job queue to which the system should route the batch job, such as QBATCH.

B/I	The processing mode. Enter *B* to use OneWorld's batch processing. In this case, the system uses the F986110 Job Control table to assign the report a place in the queue. Enter *I* for interactive mode which runs the report immediately outside of the OneWorld queueing mechanism.
P/H	The hold code. Enter *P* to send the output to a printer immediately after the job completes. Enter *H* to hold the processed file without printing. You can print the job later using the Work With Servers application located on the System Administration Tools menu (GH9011).
S/D	The save code. Enter *S* to save the file after processing is complete. The delete option (D) is reserved for future functionality. Currently, the option is disabled.
PTR	The printer ID. When printing the report, you may define which OneWorld printer to route it to. If you do not enter a printer type, the system uses the printer assigned as your default printer based on your user ID and environment. (See Define Default Printer on the Printers application off of GH9013.)

Caution: If you submit this line command in a UNIX environment, you should be aware of the possible security risk. Any user with access to the UNIX system can view this command line, including your password, while the runube command is processing.

Using runubexml

To use runubexml, you must create an xml file which is used as input to provide OneWorld with batch processing instructions. If you will be routinely submitting the same reports with the same options for processing, you might consider creating several xml files for each report.

Create and submit an xml file that gives OneWorld your OneWorld ID, password, and environment along with the name of the report and version you want to process. The system returns a new xml input file that defines the report version and its saved processing options. You can modify this input file and even create several variations of it to run.

You can run this input file as often as you wish. Note that changing the input file does not modify the report version as it is saved in OneWorld. The input file only provides the OneWorld batch processing engine with data; OneWorld does

not maintain any connection between the xml input file and the report upon which it is based. If the report is changed in OneWorld and you want those changes to be reflected in the output you receive with the xml input file, you must either change the input file, or generate a new input file after the report has been altered in OneWorld.

You must use a file called jdeRequest.xml to instruct the system to create an xml input file based on a OneWorld report for you. If you do not have this file available, run the following command:

```
runubexml G CREATE_XML jdeRequest.xml
```

This command generates the jdeRequest.xml file, which looks like this:

```
<?xml version='1.0' ?>
    <jdeRequest  type='ube'  user='MYUNAME'  pwd='MYPASS'  environment='MYENV'
session=''>
            <!--This    document    is    automatically    generated    by    the
J.D.Edwards APIs-->
            <ACTION TYPE='CREATE_XML' TEMPLATE_TYPE='LAUNCH_JOB'>
                        <REPORT_NAME VALUE='MYREPORT'/>
                        <REPORT_VERSION VALUE='MYVERSION'/>
                        <JARGON_SYSTEM_CODE VALUE='1'/>
                        <COMMENTS VALUE='1'/>
                        <DATA_TYPING VALUE='1'/>
                        <BUSINESS_VIEW VALUE='0'/>
                        <!-- Note that Printer Information cannot be
overridden at this time -->
                        <PRINTER_INFORMATION VALUE='0'/>
                        <POPULATED VALUE='1'/>
            </ACTION>
 </jdeRequest>
```

Edit the jdeRequest.xml file based on the following explanations:

user = 'MYUNAME'	Substitute a OneWorld user name for MYUNAME.
pwd = 'MYPASS'	Substitute a OneWorld password for MYPASS. The password must be submitted in plain text; therefore, the jdeRequest.xml file should be kept in a secure location on your file system.
environment = 'MYENV'	Substitute a OneWorld environment for MYENV.
REPORT_NAME VALUE = 'MYREPORT'	Substitute the system name of the report, such as R0006P, that you want to base the parameters for the xml input file on.

REPORT_VERSION VALUE = 'MYVERSION'	Substitute the name of the batch version that you want to base the parameters for the xml input file on. This is a required value; you cannot base the xml input file on a report template, such as XJDE0001.
JARGON_SYSTEM_CODE VALUE	Enter 1 to use jargon overrides. Enter 0 to turn jargon off.
COMMENTS VALUE	Enter 1 to see xml comments in the xml file. Enter 0 to suppress comments.
DATA_TYPING VALUE	Enter 1 to see the data type (numeric, alpha, etc.) populating the fields. Enter 0 to suppress data type identification.
BUSINESS_VIEW VALUE	Enter 1 to see which business view columns are being used to generate the report. Enter 0 to suppress business view data.
PRINTER INFORMATION VALUE	Enter 1 to see information about the printer to which the report is to be routed. Enter 0 to suppress printer information. **Note:** Even though print values are shown in both the jdeRequest.xml and the input xml file, you cannot override printer values with the xml input file.
POPULATED VALUE	Enter 1 to populate the resulting xml input file with the settings and options specified for the batch version. Enter 0 to generate a blank xml input file. Most of the time you will enter 1 in this field.

After you have edited and saved jdeRequest.xml, run the following command:

```
runubexml S jdeRequest.xml Filename.xml
```

This command submits the jdeRequest.xml file for processing and returns the input xml file you will need to run a batch job. Substitute the name you want to call this file for *Filename*. J.D. Edwards recommends naming the file after the report and version upon which it is based, such as R0006P_XJDE0001.

At this point, you can edit *Filename*.xml, if you wish. For example, you can modify the processing options, data selection, or data sequencing. You might create several input files based on the same file with slightly different processing option values to save time if you will be running the variations on a regular basis.

Caution: The input xml file is precisely formatted according to OneWorld input specifications. Altering the format of the file beyond modifying input values might result in errors when the file is run.

After creating, modifying, and saving the xml input file, use the following command line to process the batch application the file defines:

```
runubexml S Filename.xml jdeResponse.xml
```

This command submits your xml input file (substitute the filename for Filename in the above command line) for processing and returns the results (including error messages) in a file called jdeResponse.xml.

Working with Submitted Reports

You can view the status of your submitted reports by accessing Work with Servers. You can change your job priority, the printer, and the job's queue.

Working with submitted reports contains the following tasks:

- Checking your report status
- Viewing and printing your report
- Reviewing errors
- Holding and releasing reports on the queue
- Working with your report output

Checking Your Report Status

After you submit your report, you can review and modify its status.

▶ To check your report status

1. From the System Administration Tools menu (GH9011), choose Work with Servers.

   The Work With Servers form appears.

2. On Work With Servers, click Find to display the list of available servers.

   If you use the Data Source column in the QBE line to search for the server, you must type the server name using uppercase letters for the system to recognize the server.

3. Choose the server, and then click Select.

   The Submitted Job Search form appears.

4. On Submitted Job Search, the status of your report is shown in the following field:

   - Status

   Your system administrator might have set up your configuration to automatically print reports. If the report does not automatically print, you can print it or view it online from this form.

5. If you need to check on another person's report or a different job queue, modify one or both of the following fields, and then click Find:

   - User ID
   - Job Queue

6. To review the job, choose the job, and then click Select.

   The Job Maintenance form appears.

7. On Job Maintenance, modify the following field, as needed:

   - Job Priority

     If you have the proper administrative authority, you can change your job's priority on the job queue while your job is at a W (wait) status. You might choose to move more important jobs up in the queue and move those with less priority down in the queue.

8. Review the following fields for information about your report:

   - Job Status
   - Job Queue
   - Host
   - Environment
   - Server Job Number
   - User ID
   - Server Process ID
   - Origination Host Name
   - Date – Job Submitted
   - Time – Job Submitted
   - Date – Last Activity
   - Time – Last Activity

Field	Explanation
Database Name	The name assigned to the database during installation, such as HPDEVORAP or HP9000.
Data Source	The data source name.
Data Source Type	The type of database.
Library Name	These are the names of the libraries that contain J.D. Edwards files and programs. Each file should exist in only one library in the environment other than the 'JDF' library (usually JDFDATA). You may, however, enter multiple 'COM' or 'DTA' libraries. COM Common Files (for example, DREAMWriter and Data Dictionary) CSO Custom executable programs CSS Custom source library DTA Data files (for example, F0411 and F0911) JDF J.D. Edwards data (for example, JDFDATA) KBG World Case files OBJ JDE executable programs (for example, JDFOBJ) SEC Security files (for example, F0092, F0094) SRC JDE source code (for example, JDFSRC)
Data Source Use	Indicates how the data source is configured, Servers (SVR) to run UBE's and Business Functions, or a Database (DB) to access table data.
Decimal Shift	Check this to automatically shift decimals when retrieving or updating data based on specifications in the data dictionary. This field is for OneWorld tables only. Non-Oneworld tables should be in a separate data source with decimal shift turned OFF. If you bring in a OneWorld table as non-OneWorld table, OneWorld will not recognizethe fields in this table that have been decimal shifted. This is not checked in Table Conversion.
Julian Date	Check this to store dates in a Julian format. Otherwise, dates are stored as defined in the Microsoft Windows Control Panel. OneWorld automatically turns this flag OFF for non-OneWorld tables.
Use Table Owner	This activates use of the Owner ID field.
Object Owner	The database table prefix or owner.
Server Name	The name of the computer that receives documents from clients.

Viewing and Printing Your Report

After submitting your report and all processing is complete, you can print a version of the report from the Submitted Job Search form. Or, if you chose to submit your report to screen, the output will be in Portable Document Format

(PDF) and can be viewed in Adobe Acrobat Reader. If you chose to export to a Comma Separate Value (CSV) file, you can view and manipulate the output through the default CSV viewer.

In addition to one of these three options, if you chose to use an Output Stream Access (OSA) interface, your ability to view the result depends on how the target program was instructed to process the data and the reviewing tools that the program supports.

After submitting your report to a server and all processing is complete, you can view an online version of the report from the Submitted Job Search form.

Before You Begin

❑ If you have not already done so, install Adobe Acrobat Reader on your workstation.

❑ You must have a spreadsheet (for example, Microsoft Excel) or other application (for example, Lotus 1-2-3) available from which you can view a CSV file.

See Also

- Adobe Acrobat Reader online help for more information about using Adobe Acrobat Reader

- Your default CSV viewer's online help for more information about using your CSV viewer

▶ **To view and print your report**

1. From the System Administration Tools (GH9011) menu, choose Work with Servers.

   The Work With Servers form appears.

2. On Work With Servers, click Find to display the list of available servers.

   If you use the Data Source column in the QBE line to search for the server, you must type the server name using uppercase letters for the system to recognize the server.

3. Choose the server, and then click Select.

   The Submitted Job Search form appears.

4. From Submitted Job Search, choose the report you want to view or print. Then from the Row menu, choose one of the following:

- Print

  Use this option for jobs with a status of E (error in processing) or D (processing is complete). Printing jobs with a status of E prints the error log, which helps you troubleshoot. See the *Server and Workstation Administration Guide* for more information about error logs and troubleshooting from these error logs.

  If you choose this option, the Printer Selection form appears.

- View PDF Job

  If you choose this option, the Portable Document Format (PDF) output will be downloaded from the server. You can view an online version of your report in Adobe Acrobat Reader. All of the Adobe Acrobat Reader functions are available to view and zoom the report.

- View CSV Job

  To use this option, you must have chosen the Export to CSV option on the Printer Setup form in Report Design or from the Advanced tab of the Printer Selection form. When you choose this option, the CSV output will be downloaded from the server and the output will display the CSV format in your default CSV viewer, such as Microsoft Excel or Lotus 1-2-3. See *Working with the Printers Application* and *Submitting a Report* for additional information.

- View OSA Job

  When you choose this option, if the OSA process used to process the report produces an output file and if the OSA process passes the location of the output to OneWorld, then the system will attempt to launch the software program associated with the output file. Otherwise, you will receive an error messaging informing you that output is unavailable.

If you choose the Print option, the Batch Versions - [Printer Selection] form appears.

Reviewing Errors

If your print job shows an E status, this indicates that an error occurred during the process. On the Submitted Job Search form, you can print or view the error online and remove the job. Printing a job with a status of E prints the error log, which can help you troubleshoot.

▶ **To review errors**

1. From the System Administration Tools menu (GH9011), choose Work with Servers.

   The Work With Servers form appears.

2. On Work With Servers, click Find to display the list of available servers.

   If you use the Data Source column in the QBE line to search for the server, you must type the server name using uppercase letters for the system to recognize the server.

3. Choose the server, and then click Select.

   The Submitted Job Search form appears.

4. On Submitted Job Search, choose the appropriate job, and then click Select.

5. To check your report, you can print or view it online.

6. To remove (delete) the record and the job from the outqueue, click the Delete button.

   You can use this option with jobs that have a status of E (error) or D (done).

Holding and Releasing Reports on the Queue

If you submit a report in a wait status (status of W) on the job queue, you can release it to run at a more appropriate time. This might be necessary if running a report impacts system resources. If you want to stop a report that is processing (status of P), you will need to terminate it. The Terminate option does not delete the job; rather it changes the status to E.

If you do not have authority to change your job queue, contact your system administrator.

▶ **To hold and release reports on the queue**

1. From the System Administration Tools menu (GH9011), choose Work with Servers.

   The Work With Servers form appears.

2. On Work With Servers, click Find to display the list of available servers.

If you use the Data Source column in the QBE line to search for the server, you must type the server name using uppercase letters for the system to recognize the server.

3. Choose the server, and then click Select.

   The Submitted Job Search form appears.

4. On Submitted Job Search, choose the appropriate job, and then click Select.

5. From the Row menu, choose Hold.

   The status changes to H (hold).

6. To release the job, choose Release from the Row menu.

   The H status is removed, and the job is sent to the queue.

Working with Your Report Output

You can send your PDF report output as an attachment within an e-mail message or post your reports to the Worldwide Web. The OneWorld installation materials include Adobe Acrobat Reader to read report output in an e-mail message and Microsoft Internet Explorer, which enables you to read portable document format (PDF) files on the Worldwide Web.

In addition, you can select text and copy the unformatted text to other Windows applications that use the Clipboard. See your Adobe Acrobat Reader online help for more information.

You can view your CSV report output through a default CSV viewer such as Microsoft Excel or Lotus 1-2-3.

Where you submit or how you view your report output determines where the report is stored. Review the following:

- If you view your report output in PDF, CSV or OSA, the output is stored on your workstation. By default, your output will be in your \B7\PrintQueue subdirectory on the drive where OneWorld is installed. Contact your system administrator to find out the default location on your system. From this subdirectory, you can move, copy, and attach a file to an e-mail message.

- If you submit your report on an AS/400 server, your PDF or CSV file resides in the OneWorld system library. In this library, your PDF file resides in a member called Fxxxx, where xxxx represents your job number, in the PRINTQUEUE file. In this library your CSV file resides in a member called Cxxxx, where xxxx represents your job number, in the PRINTQUEUE file.

- For servers other than AS/400, the file resides in the PrintQueue subdirectory on the server. The location of the PrintQueue subdirectory depends on the path your system administrator sets in the jde.ini file. The following examples display possible settings for your jde.ini file:

  - **Windows NT Server jde.ini**

    [NETWORK QUEUE SETTINGS]

    OutputPath=c:\oneworld*output*\PrintQueue

  - **UNIX jde.ini**

    [NETWORK QUEUE SETTINGS]

    OutputPath=/usr/oneworld/*output*/PrintQueue
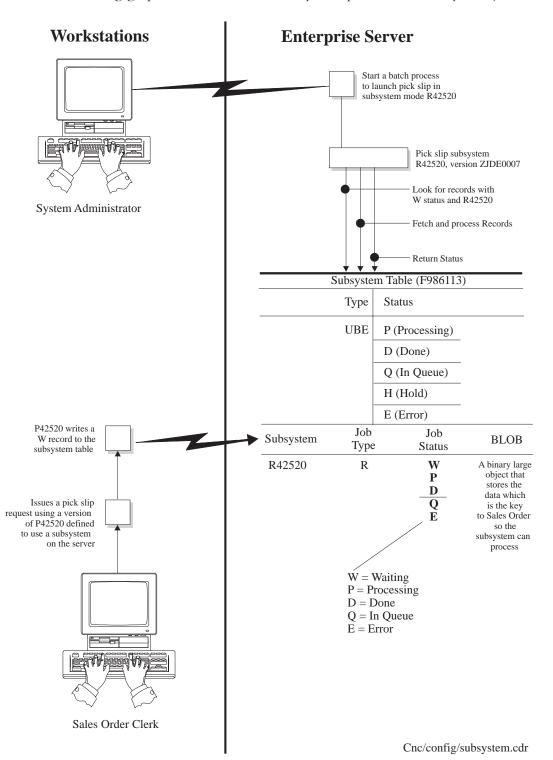
  In these examples, [NETWORK QUEUE SETTINGS] is the setting that determines the path to PrintQueue. For Windows NT Server, the full path for the setting is "c:\oneworld\output\PrintQueue." For UNIX, the full path for the setting is "/usr/oneworld/output/PrintQueue." The directory where PrintQueue resides for each example is *output*. This directory can be any valid directory on the server.

Understanding Subsystem Jobs

Within OneWorld, subsystem jobs are batch processes that continually run independently of, but asynchronously with, OneWorld applications. These OneWorld subsystem jobs function with the system's logical process or queue defined for the server platform. You can configure OneWorld to use one or more subsystems.

You use subsystem jobs to offload processor resources or to protect server processes. Examples of applications that are suited for use by subsystems include Distribution Warehousing, Inventory, and Sales Order Processing. For example, you might execute the Sales Order Entry application on a workstation and want to automatically print pick slips when all orders are entered. If you are using a version of pick slips that has the subsystem job function enabled in Report Properties, the request is executed by a OneWorld subsystem job. The pick slip request is routed to and processed by the subsystem job on the defined enterprise server. As a result, no additional processing resources are required of the workstation.

When a OneWorld application issues a request for a job to run in a OneWorld subsystem, it places a record in the subsystem table F986113. This record is identified by a subsystem job name and version, and contains status and operational indicators. Embedded in the record is key information that allows the OneWorld subsystem to process the record without additional interaction with the requesting application. The continuously running OneWorld subsystem monitors the records in this table. If the subsystem finds a record with its name, version, and appropriate status indicators, it processes the record and updates the status accordingly.

The following graphic illustrates how the system processes a subsystem job:

Workstations　　　　　　　　**Enterprise Server**

Start a batch process
to launch pick slip in
subsystem mode R42520

Pick slip subsystem
R42520, version ZJDE0007

Look for records with
W status and R42520

Fetch and process Records

Return Status

System Administrator

Subsystem Table (F986113)

Type	Status
UBE	P (Processing)
	D (Done)
	Q (In Queue)
	H (Hold)
	E (Error)

P42520 writes a
W record to the
subsystem table

Issues a pick slip
request using a version
of P42520 defined
to use a subsystem
on the server

Subsystem	Job Type	Job Status	BLOB
R42520	R	**W** **P** **D** **Q** **E**	A binary large object that stores the data which is the key to Sales Order so the subsystem can process

W = Waiting
P = Processing
D = Done
Q = In Queue
E = Error

Sales Order Clerk

Cnc/config/subsystem.cdr

Defining Subsystem Jobs

Subsystem jobs are continuous jobs, processing records from a data queue. This type of job runs until you request an end to the job. Subsystem jobs read records one at a time for a subsystem table, retrieve information from the particular record, and run a configurable processing engine for each record. At the end of the records, instead of ending the job, subsystem jobs wait for a specific period and then retrieve the information for each record once again. For each subsystem job, there can be multiple records in the subsystem table.

You start a subsystem job as you would a regular batch job. There is no difference between running a subsystem job and running a batch job.

Before processing, OneWorld makes sure that limits for the subsystem job on the particular server have not been exceeded. If exceeded, the configurable processing engine will not process the subsystem job.

▶ To define subsystem jobs

1. On Report Design with a report open, choose Report Properties from the Report menu.
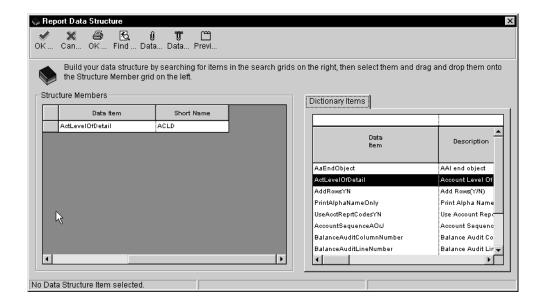
   The Properties form appears.

2. On the Properties - Advanced tab, choose the following options, and then click OK:

   - Subsystem
   - Wait Time (ms)

     The value in this field represents the time that the subsystem report will check the subsystem file for new records to process.

3. On Report Design, from the Report menu, choose Report Data Structure.

   The Report Data Structure form appears.

4. On Report Data Structure, click the Find button to display a list of data items.

5. From Dictionary Items, drag items into Structure Members, and then click OK.

6. On Report Design, from the Report menu, choose Report Properties.

7. On the Properties - Advanced tab, click the Generate button to create a header file.

    The header file takes the form of *Report_Name*.h under the \B7*$environ\include* subdirectory. In an interactive application, from which you will send a record to process in the subsystem report, you can use this header file inside a business function to create a subsystem record.

    For example, by clicking the OK button on Sales Order Entry, you can specify to call a business function that uses this report's data structure along with the subsystem's application programming interfaces (APIs) to trigger the subsystem report.

Adding an API Record to the Subsystem Table

You add an API record to the subsystem table so that the subsystem job can perform the batch process. When you add a record to the subsystem table, you create a business function, then attach the header file that you generated to that business function using Microsoft Visual C++. After you attach the header file to the business function, you attach the business function to the event rule process of the program you want to call.

This API record retrieves data structure and user information from the cache. If the server name is not passed, the API finds Object Map Record from Object Configuration Table (F98611). If the record exists, it will use the record to send a JDENet Message to the server to add the record to the subsystem table on the server. However, if the user provides an Override Server name, the JDENet message is sent to that server instead.

Before You Begin

You must generate the header file using Report Data Structure to ensure that the API is called from the business function. See *Defining Subsystem Jobs.*

Example: Subsystem Job Header File

The following example shows what the subsystem job header file looks like.

```
#include <jde.h>
/********************************************************
* Report    : R98SSUBE
* ReportId : 8123244
* DSTRId   : 380813
*
* Note:
* Do not edit the following typedef
* To make modifications, use the Report Design Aid Tool to
* Generate a revised version.
********************************************************/
#ifndef REPORT_DS_380813
#define REPORT_DS_380813
typedef struct tagDS_RI_380813
{
          char                          ProgramId[11];
} DSRI380813, *LPDSRI380813;
#define                  IDERRProgramId_1
                  1L
#endif /* #define REPORT_DS_380813*/
#endif /* #define __R98SSUBE_H */
```

▶ **To add a record to the subsystem table**

1. In OneWorld, create a new business function.

2. In Microsoft Visual C++, open the business function include file and add the name of the header file you generated.

   In the following example, lines that you enter are underlined.

```
/*****************************************************
*
/* Table Header Inclusions
******************************************************
/

/*****************************************************
*******************/
External Business Function Header Inclusions
******************************************************
*****************/
#include <R98SSUBE.h>

/*****************************************************
********************
* Global Definitions
******************************************************
******************/

/*****************************************************
********************
* Structure Definitions
******************************************************
*****************/
* TYPEDEF for Data Structure
*  Template Name:
Report Interconnect Data Structure
*  Template ID:
D983059
*  Generated:   Wed Oct 18 14:01:22 1995
```

3. Open the business function source file in Visual C++ and declare the variable of this data structure type, then populate the members of the data structure.

```
#include <jde.h>

/**********************************************************
**********************
* Variable declarations
**********************************************************
*********************/

HUSER hUser=NULL;
LPSTR szServer=NULL;
DSRI380813 dsRI; /* Declare the variable of type REPORT
INTERCONNECT DATA STRUCTURE */
BOOL bRet=FALSE;
JDEDB_RESULT rcode;

/**********************************************************
**********************
Declare structures
**********************************************************
*********************/

/**********************************************************
**********************
Declare pointers
**********************************************************
*********************/

/**********************************************************
**********************
Check for NULL pointers
**********************************************************
*********************/

if ((lpBhvrCom == NULL) ||
    (lpVoid == NULL) ||
    (lpDS == NULL))
```

4. In the source file, call the API to add the record.

```
**********************************************************
Main Processing
*******************************************************/
memset(&dsRI, 0, sizeof(DSRI380813));
/* Populate the members of the Report Interconnect Data
Structure */
strcpy(dsRI.ProgramId,lpDS->szString01);
/* Call Subsystem API to add the record to the Subsystem
Table */
/* Note : As Environment Name is set to NULL, this API will
use OCMto find the default Environment of this UBE */
   bRet=jdeAddSubsystemRecord( hUser,/* User Handle */
   "R98SSUBE",              /* Name of the subsystem */
   "XJDEOOO1",              /* Name of the Subsystem Version*/
   NULL,                    /* Name of the override env - not
                            used */
   szServer,                /* Name of the server */
   &dsRI);                  /* Subsystem Connect DS */
/*******************************************************/
```

5. After you call the API to attach the record, attach the business function to the event rule process of the program you want to call. This program can be either an interactive or batch application.

See Also

- *Working with Business Functions* in the *OneWorld Development Tools* guide
- *Working with Event Rules Design* in the *OneWorld Development Tools* guide

OneWorld Report Printing Administration

The Printers application (P98616) provides a single point of entry for configuring your printers within OneWorld. The application allows you to define printers for workstations and enterprise servers. These definitions reside in OneWorld tables that are maintained by the Printers application (P98616).

In addition to creating your own reports, OneWorld includes a number of predefined reports and report versions, which you can use and modify for your business needs. OneWorld uses the batch engine to create reports and generates these reports in Portable Document format (PDF). You can view the PDF files using the Adobe Acrobat Reader software.

Reports process as batch applications without user interaction. When a user submits a report for processing, the user makes choices, such as the selection and sequencing of data to include in the report, the location where the report will process, logging capabilities to monitor how the report processes, and the printer on which the report prints.

See the *OneWorld Foundation Guide* for more information about submitting and printing a report.

This section describes the following:

❑ Understanding OneWorld printing

❑ Working with the Printers application

❑ Generating and retrieving logs for your report

❑ Setting up a OneWorld printer to use a barcode font

❑ Designing reports to run on OneWorld line printers

Understanding OneWorld Printing

When you submit a OneWorld report, the batch engine generates a portable document format (PDF) file. The batch engine uses a device context to create the PDF file. This device context consists of information such as page size and the printable area of a page. OneWorld generates this information from the printer tables for all platforms.

OneWorld gives you the option of viewing the report (the PDF file) on your workstation, using Adobe Acrobat Reader, or sending the report directly to a printer. You can also print the report from the Adobe Acrobat Reader. When you send the report to a printer, OneWorld uses a conversion filter to transform the PDF file into one of three Page Description Language (PDL) formats: PCL, PostScript, or line-printer text, depending on the type of printer that prints the report.

The OneWorld batch engine uses the following logical path to determine to which printer to send a report. If the first method does not return a valid printer name, the batch engine uses the subsequent method.

When the user submits the report:

> 1. The batch process triggers the Do Initialize Printer event from Report Design Aid (RDA). If this process retrieves a valid printer name, the following processes are ignored.

> 2. The user overrides the default printer name at the time that the report is submitted. If the user overrides the default printer with a valid printer name, the following processes are ignored.

> 3. The RDA specifications pass a printer name to the batch process. If this process retrieves a valid printer name, the following process is ignored.

> 4. OneWorld determines from the Printer Definition table (F98616) a valid default printer based upon the current user, the environment that the user is signed onto, and the host that processes the report.

This chapter contains the following:

- ❏ Running reports on the server

- ❏ Running reports on the workstation

- ❏ Print-time characteristics

❑ Print settings for the workstation jde.ini

Running Reports on the Server

When you submit a report to the server, the engine prompts you for a printer name previously defined in the Printers application. Then the server automatically creates a PDF file using the settings associated with the selected printer, unless event rules (ER) override those printer settings. You can, however, affect how your report prints on the server before you generate a PDF file by changing settings, such as the printer, page orientation, PDL, and paper type, on the Printer Selection dialog box. When you view the report on the server, OneWorld copies the PDF file from the server to the local \b7\PrintQueue directory on your workstation.

When you run a report, you also have the option of turning on logging capabilities. You do so from the Advanced form when you submit your report. When you view a log, your workstation stores the log file in the \b7\PrintQueue directory.

See Also

* *Generating and Retrieving Logs for Your Report* for more information about the location of the PrintQueue directory on a server

Running Reports on the Workstation

When you choose to run a report and view the output on the screen, the engine tries to connect to the printer defined in Report Design. If the engine cannot connect or if there is no printer defined, the engine uses the default printer from the printer tables. Using the settings that it retrieves, the engine creates a PDF file and displays the report through Acrobat Reader. The PDF file is stored in your local \b7\PrintQueue directory.

When you run a report locally and send the output to a printer, the engine displays the Printer Selection dialog box, which gives you the option to change the printer, page orientation, PDL, paper type, and so on. The initial printer shown in this dialog box is the one defined in RDA or the default OneWorld printer, if none was defined. The engine connects to the printer defined in the printer dialog box and retrieves the associated settings. Using these settings, the engine creates a PDF file, converts the PDF into a PDL file using the OneWorld conversion filter, and sends the PDL file to a printer.

Print-Time Characteristics

The user has the option of overriding the printer at a report's print time. This option is different from the option for overriding the printer when the user first submits the report. At submit time, the user can choose any valid enterprise printer. At print time, however, the user can override the printer only with another printer that supports the same platform, PDL, and paper type as the original printer. This is because the batch engine has already created the PDF version of the report and has imbedded into the PDF file the platform, PDL, and paper type information.

Print Settings for the Workstation jde.ini

The workstation jde.ini settings control whether a report prints immediately and whether OneWorld saves the output after processing the report.

```
[NETWORK QUEUE SETTINGS]
PrintImmediate=TRUE/FALSE
SaveOutput=TRUE/FALSE
```

Setting	Description
PrintImmediate	Specifies whether the system automatically prints the report after processing is complete. Valid values are:
	TRUE. The system processes the report on the server, generates a PDF file, converts the PDF to the appropriate PDL for the defined printer, and then prints the report.
	FALSE. The system processes the report on the server, but does not automatically print the report. Users must use the Work with Servers application to manually print the report.
SaveOutput	Specifies whether the system saves or deletes the output after you view or print the job. Valid values are:
	TRUE. The system saves the output after you have viewed or printed the job.
	FALSE. The system deletes the output after you have viewed or printed the job.

Working with the Printers Application

OneWorld provides a single application that uses a director interface to help you set up your printer. From this director, you can add new printers, modify existing printers, and define default printers for a combination of a user, a host, and an environment. You can also add and modify the paper types and custom conversion programs that your printers use at the time that you add and modify printer settings.

See Also

- *Understanding OneWorld Printing* for information about how OneWorld determines which printer to print to when a user submits a report.

Note: You must set up printers for each server platform that you use in your enterprise.

This chapter contains the following tasks:

- Adding a new printer
- Defining a default printer
- Modifying an existing printer
- Copying an existing printer
- Deleting a printer
- Deleting a paper type
- Searching for incorrect printer records
- Determining logical printers attached to batch processes
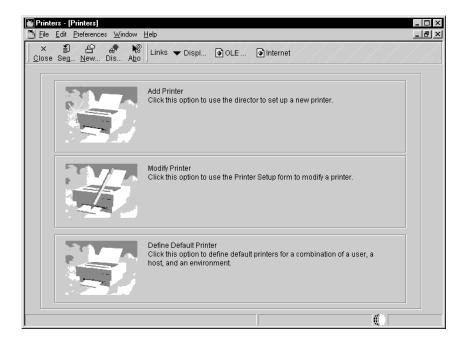
▶ To add a new printer

When you add a printer, OneWorld provides a director to help you with each step of the process. Instructions appear on each form of the director to guide you through the printer addition process. The following procedure should be used in conjunction with the steps that appear on the Printer Setup director.

First-time users who are installing their first printer must complete this task and then the task "Define a default printer" in this chapter.
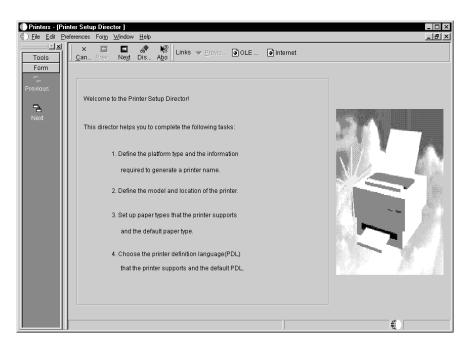
Note: You must complete all of the fields that appear on the director forms.

1. On the Printers menu (GH9013), choose Printers (P98616).

2. On the Printers form, click Add Printer.

   The welcome page for the Printer Setup director appears. This page describes the tasks that the director helps you to perform.

3. Review the welcome page and click the Next button.

The Platform Type defaults in automatically depending on which operating system your OneWorld is running on.

4. Complete the following fields and click Next:

- Print Server Name

  Type the name of the print server for the printer that you are setting up. You cannot use spaces or special characters in this field. OneWorld uses this name, along with the print shared name, to create the printer name, which appears grayed-out on the subsequent form.

- **AS/400:** *library name/outqueue name*

  For the AS/400, the physical printer name must be the same as the outqueue name. If you use the default QGPL library to store your outqueues, you need only enter the outqueue name in this field. This information must be entered in upper case.

  Example: DEVDES3A

  If your outqueues reside in a library other than the default QGPL library, you need to enter the library name and the outqueue name in this field.

  Example: QUSERSYS/DEVDES3A

  Note: When you qualify your outqueue name with the library name, you avoid possible name conflicts that might result in the submission of your report at an unexpected outqueue.

- **Windows NT:** *server name**printer name*

  Example: \\corprts1\docprf2

  This information must be entered in lower case.

- **UNIX:** *printer name* (no slashes)

  Example: devprn16

  This information must be entered in lower case.
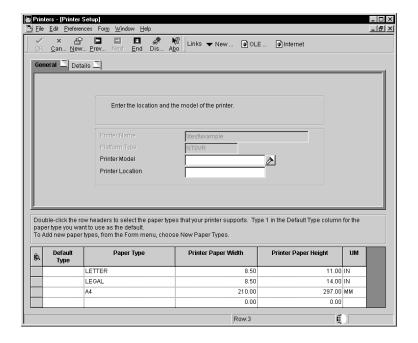
  For printing reports to a non-network printer, leave this field blank.

- Print Shared Name
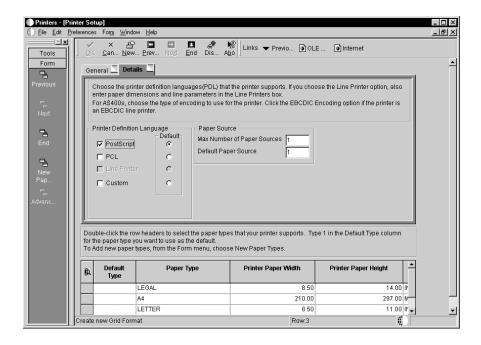
  Type the share name of the printer that you are setting up. You cannot use spaces or special characters in this field. OneWorld uses this name, along with the print server name, to create the printer name, which appears grayed-out on the subsequent form.

When you click Next, the Printer Setup form appears. Use this form to specify information for the printer such as the printer model, physical location of the printer, printer definition language, paper types, and encoding selection (AS/400 only).

Note: When you change an existing printer, this is the page where you make your modifications. See the task *To modify an existing printer.*

5. On the General tab, complete the following fields, and then click the Details tab:

    - Printer Model

    - Printer Location

6. On the Details tab, inside the box labeled Printer Definition Language, choose any the following options:

    - PostScript

    - PCL

    - Line Printer

    Note: If you choose PostScript or PCL from the left side of the box, OneWorld disables the Line Printer option. If you choose the Line Printer option from the left side of the box, OneWorld disables the PostScript and PCL options. You can choose multiple printer definition languages (PDLs) from the left side of the box, but only one default PDL under the Default label on the right side of the box. This sets the PDL that you want to specify as your default. You can override this PDL when a batch process is submitted.

    When you choose the Line Printer option, the following happens:

    - OneWorld disables the detail area at the bottom of the form. Any paper types that you chose are cleared. OneWorld automatically provides a printer type of *JDE LINE PAPER for the printer.

- Fields appear within a box labeled "Line Printers." You use these fields to set the paper dimensions and line parameters. This is fully explained in the following steps.

- When you choose the Line Printer option along with the AS/400 platform type, fields appear within a box labeled "AS400 Only." You use these fields to set the AS/400 encoding that your printer supports. This is fully explained in the following steps.

- Custom

    Caution: The custom option uses an advanced feature of the Printers application. Only users with knowledge about building parameter strings for printers should use this option. This is fully explained in the following steps.
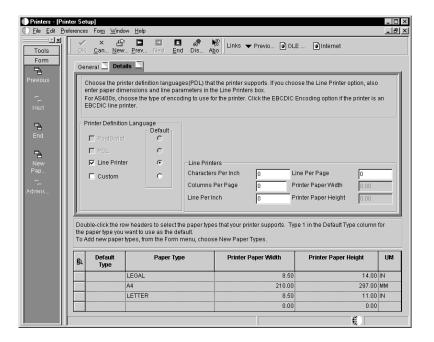
7. On the Details tab, when you choose the PostScript option, the Paper Source box appears, from which you can change the following options:

    - Max Number of Paper Sources

        Enter a numeric value in this field to indicate the number of paper trays that this printer has available.

    - Default Paper Source

        Enter a numeric value in this field to indicate the default tray number from which you want OneWorld to draw paper.

8. When you choose the Line Printer option, fields appear within a box labeled "Line Printers." You use these fields to set the paper dimensions and line parameters. Complete the following fields:

- Characters Per Inch

  The value that you enter in this field determines the number of characters that the physical printer allows in one horizontal inch.

- Columns Per Page

  The value that you enter in this field determines the number of characters that appear in one line of text in the given report.

- Lines Per Inch

  The value that you enter in this field determines the number of lines of text that the physical printer allows in one vertical inch.

- Lines Per Page

  The value that you enter in this field determines the number of lines of text that the physical printer allows on one printed page.
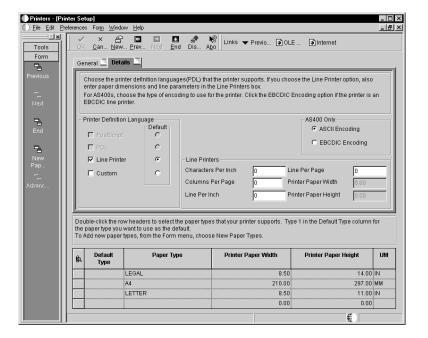
- Printer Paper Width

  The value in this field is calculated automatically, based on the numbers you enter in the Line Printers box.

- Printer Paper Height

  The value in this field is calculated automatically based on the numbers you enter in the Line Printers box.

9. When you choose the Line Printer option along with an AS/400 server, fields appear within a box labeled "AS400 Only." You use these fields to set the AS/400 encoding that your printer supports. Choose one of the following:

- ASCII Encoding
- EBCDIC Encoding

   Note: If you choose a PostScript or PCL printer along with an AS/400 server, the ASCII Encoding option is automatically checked and the "AS400 Only" box is disabled.

10. To use the Custom option, complete the following:

   Note: The custom option uses an advanced feature of the Printers application. Only users with knowledge about building parameter strings for printers should use this option.

- Click the Custom checkbox.
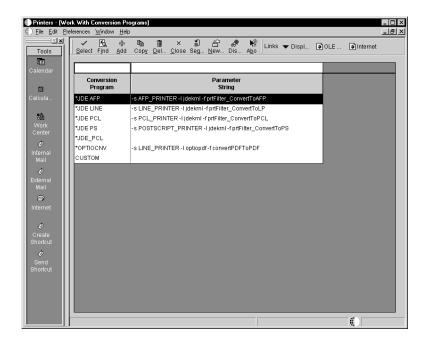
   A field appears beneath the Custom button.

- Enter the name of the conversion filter that you want to use.
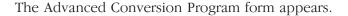
   You can either type a conversion filter name into the field below the custom option, or you can use the visual assist to select a filter.
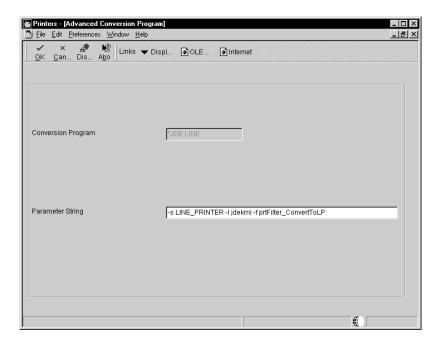
- To change or add a conversion filter, choose Advanced from the form menu. This option is enabled only when Custom has been chosen.

   The Work With Conversion Programs form appears.

- Either click Add, or choose one of the filters and click either Copy or Select.

  The Advanced Conversion Program form appears.

- Change the following fields, and then click OK:

  - Conversion Program

    If you clicked Add or Copy on the previous form, the Conversion Program field is enabled. Enter the name of the

conversion program that you want to add or copy. If you are making a copy, the string that you highlighted on the previous form appears in the Parameter String field.

- Parameter String
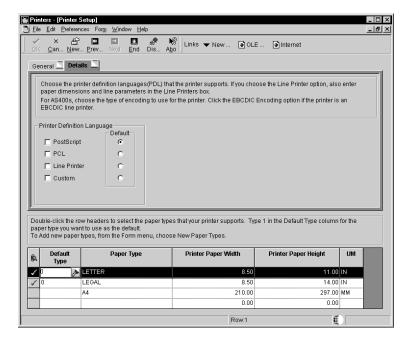
  The parameter string is entered automatically. It is based on the host from which you are printing (AS/400, HP9000, etc.) and the type of printer (postscript, PCL, or line). For example:

  ```
  -s string_name -l library_name -f convertPDFToPS
  ```

  where -s defines the string name, -l defines the library name (this value is the letter "l," not the number "1"), and -f defines the function name

11. In the detail area at the bottom of the Printer Setup form, double-click the row header for each paper type that your printer supports. A checkmark appears in the row header for each paper type that you choose.

    Note: You can add new paper types as necessary. Instructions to do so are included later in this task.

12. In the Default Type column, type the numeral "1" in the row for the paper type that you want to use as the default. You can choose only one default

paper type. You can override the default paper type when a batch process is submitted.

13. To add a new paper type, do the following:
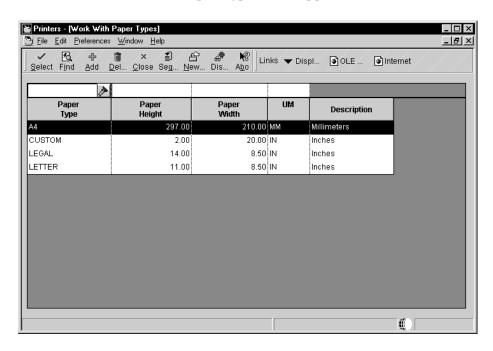
- From the Form menu, choose New Paper Type.
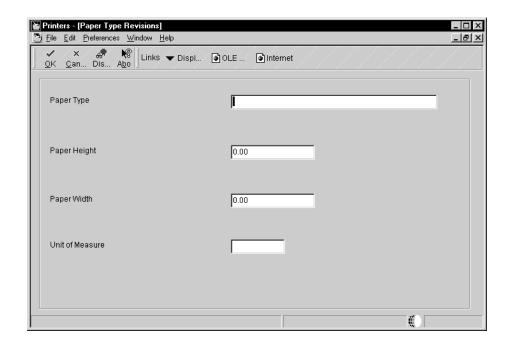
  The Work With Paper Types form appears.

- Click Add.

The Paper Type Revisions form appears.

- Complete the following fields, and click OK:

  - Paper Type

  - Paper Height

  - Paper Width

  - Unit of Measure

  OneWorld saves the new paper type and displays the Work With Paper Types form. After you close Work with Paper Types, the new paper type will be available in the the Printer Setup detail area form. All previous paper type selections are cleared and would need to be chosen again if you want to reuse them.

14. When you finish entering information for the printer, click End.

   OneWorld saves the new printer and displays the Printer form.

Field	Explanation
Platform Type	The type of physical hardware the database resides on.
AS400 Library Name	AS400 Library Name for setting up the printer
AS400 Outputqueue Name	AS400 Outputqueue Name for setting up the printer
Server Name	Refers to the computer that receives documents from clients.

Field	Explanation
Printer Name	A name that refers to a shared resource on a server. Each shared directory on a server has a share name, used by PC users to refer to the directory.

Printer Model	Printer capabilities are as follows:
	      Printer Model: the model of the printer
	      Printer Location: where the printer physically resides
	      Encoding: AS/400 users' only feature

Paper Type	A user defined code (H98/PT) that indicates the type of printer paper, such as letter or legal. For example, LETTER, LEGAL, and A4.
Paper Width	A value that specifies the width of the paper for this paper type. This value is in the unit of measure specified by Unit of Measure.
Paper Height	A value that specifies the height of the paper for this paper type. This value is in the unit of measure specified by Unit of Measure.

Unit of Measure	A user defined code (00/UM) that indicates the quantity in which to express an inventory item, for example, CS (case) or BX (box).
	
	. . . . *Form-specific information* . . . .
	
	Indicates the unit of measure in which the paper height and width are entered.
	
	Example:
	      IN = Inches
	      MM = Millimeters

EBCDIC Encoding	Printer capabilities are as follows:
	      Printer Model: the model of the printer
	      Printer Location: where the printer physically resides
	      Encoding: AS/400 users' only feature

Columns Per Page	A line printer parameter that specifies the number of columns per page. For example, 80 or 132.
Characters Per Inch	The horizontal printing density. Enter the number of characters per inch supported by your printer.
Line Per Page	A line printer parameter that specifies the number of lines per page. For example, 60 or 66.

Field	Explanation

Line Per Inch	The line spacing should be entered as the number of lines per inch and must be supported by your printer. The valid values are:
	    4 - IBM 5219, 5224, 5225, and 3287 printers only
	    6 - IBM 5224 printer only
	    8 - IBM 5224 printer only
	    9 - IBM 5225 printer only
	
	The standard computer print is 6 LPI and 10 CPI. If you are printing on 8 1/2" x 11" paper, you would specify 8 LPI and 15 CPI.

The maximum number of output tray	The maximum number of paper trays available on the printer you are setting up.
The output tray name	The output tray that a user wants to use for a given batch print job.
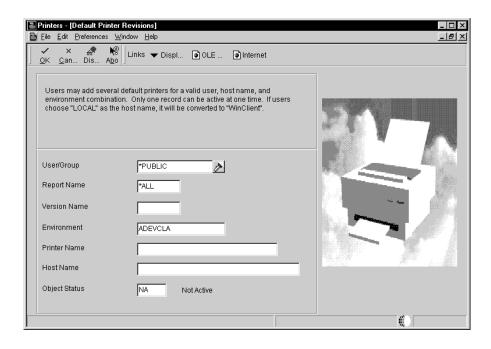
▶ To define a default printer

1. On the Printers menu (GH9013), choose Printers (P98616).

2. On the Printers form, click Define Default Printer.

    The Work With Default Printers form appears.

3. Click Add.

    The Default Printer Revisions form appears.

To access English documentation updates, see
https://knowledge.jdedwards.com/JDEContent/documentationcbt/overview/about_documentation_updates.pdf

4. Complete the following fields, then click OK.

- User/Group

  Click the visual assist to choose either a particular user for this printer or to choose an entire group. If the field is left blank, the default value is *PUBLIC.

- Report Name

  Click the visual assist to choose a specific report to print. If the field is left blank, the default value is *ALL.

- Version Name

  Click the visual assist to choose a specific version to run. If the field is left blank, the default value is *ALL. If the Report Name is *ALL, the version name will default to *ALL and be disabled.

- Environment

  OneWorld automatically enters the name of the environment that you are currently signed onto. You can change this information.

- Printer Name
- Host Name

  Include the host server to where reports will run. The visual assist displays the appropriate host names, based on the printer name you select.

- Object Status

  You can make this new printer the default printer by changing its status to active. If an error occurs, it means that another printer is currently the active default. You need to change the original default printer to inactive before you can activate the new printer. You can perform multiple status changes from the Work With Default Printers form as explained at the end of this task.

After you click OK from the Default Printers Revision form, the Work With Default Printers form appears.
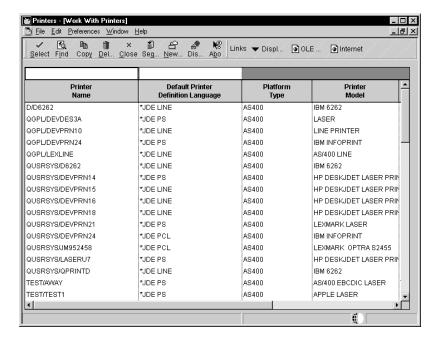
5. To change the status of a default printer from the Work With Default Printers form, choose a default record, and then from the Row menu, choose Change Status.

If another printer is already specified as the active default, an error occurs. To change the original default printer to inactive, choose it, and from the Row menu, choose Change Status. Then make the new printer the default.

▶ **To modify an existing printer**

1. On the Printers menu (GH9013), choose Printers (P98616).

2. On the Printers form, choose the Modify Printer option.

   The Work With Printers form appears. This form lists all available printers.

Printer Name	Default Printer Definition Language	Platform Type	Printer Model
D/D6262	*JDE LINE	AS400	IBM 6262
QGPL/DEVDES3A	*JDE PS	AS400	LASER
QGPL/DEVPRN10	*JDE LINE	AS400	LINE PRINTER
QGPL/DEVPRN24	*JDE PS	AS400	IBM INFOPRINT
QGPL/LEXLINE	*JDE LINE	AS400	AS/400 LINE
QUSRSYS/D6262	*JDE LINE	AS400	IBM 6262
QUSRSYS/DEVPRN14	*JDE PS	AS400	HP DESKJDET LASER PRIN
QUSRSYS/DEVPRN15	*JDE LINE	AS400	HP DESKJDET LASER PRIN
QUSRSYS/DEVPRN16	*JDE LINE	AS400	HP DESKJDET LASER PRIN
QUSRSYS/DEVPRN18	*JDE LINE	AS400	HP DESKJDET LASER PRIN
QUSRSYS/DEVPRN21	*JDE PS	AS400	LEXMARK LASER
QUSRSYS/DEVPRN24	*JDE PCL	AS400	IBM INFOPRINT
QUSRSYS/JM952458	*JDE PCL	AS400	LEXMARK OPTRA S2455
QUSRSYS/LASERU7	*JDE PS	AS400	HP DESKJDET LASER PRIN
QUSRSYS/QPRINTD	*JDE LINE	AS400	IBM 6262
TEST/AWAY	*JDE PS	AS400	AS/400 EBCDIC LASER
TEST/TEST1	*JDE PS	AS400	APPLE LASER

3. Choose the printer that you want to modify and then click Select.

   The Printer Setup form appears. Use this form to change information for the printer, such as the printer model, physical location of the printer, printer definition language (PDL), and paper types.

4. Modify the information for your printer as necessary and then click OK. You cannot modify the printer name and platform type. If you chose a line printer, the paper-type grid at the bottom of the form is disabled.

OneWorld saves the new printer information and returns you to the Work With Printers form.

▶ **To copy an existing printer**

1. On the Printers menu (GH9013), choose Printers (P98616).

2. On the Printers form, choose the Modify Printer option.

   The Work With Printers form appears. This form lists all available printers.

3. Choose the printer that you want to copy, and then click Copy.

   The Printer Setup form appears.

4. Complete the following fields:
   - Printer Name

     Enter the entire printer name, including the server path. For example, if printer docprf2 is on server corprts1, the printer name for a Windows NT printer would be: \\corprts1\docprf2. If you use multiple platforms, you must define a printer for each platform, using the following naming conventions:

- **AS/400:** *library name/outqueue name*

  For the AS/400, the printer name must be the same as the outqueue name. If you use the default QGPL library to store your outqueues, you need only enter the outqueue name in this field. The information that you enter must be in upper case.

  Example: DEVDES3A

  If your outqueues reside in a library other than the default QGPL library, you need to enter the library name and the outqueue name in this field.

  Example: QUSERSYS/DEVDES3A

  Note: When you qualify your outqueue name with the library name, you avoid possible naming conflicts that might result in the submission of your report to an unexpected outqueue.

- **Windows NT:** *print server name\printer name*

  Example: \\corprts1\docprf2

  The information that you enter must be in lower case.

- **UNIX:** *printer name* (no slashes)

  Example: devprn16

  The information that you enter must be in lower case.

- Platform Type

  Enter the platform that you are printing from, such as an AS/400 server.

5. On the Details tab, change any information as needed.

6. Click OK.

▶ **To delete a printer**

1. On the Printers menu (GH9013), choose Printers (P98616).

2. On the Printers form, choose the Modify Printer option.

   The Work With Printers form appears. This form lists all available printers.

3. Choose a printer or choose multiple printers by holding down the Ctrl key, and then click Delete.

    This removes the printer definition from OneWorld.

▶   **To delete a paper type**

1. On the Printers menu (GH9013), choose Printers (P98616).
2. On the Printers form, choose the Modify Printer option.

    The Work With Printers form appears. This form lists all available printers.

3. Delete a printer, then click Select.

    The Printer Setup form appears.

4. On the Printer Setup form, from the Form menu, choose New Paper Type.

    The Work With Paper Types form appears.

5. Choose a paper type and click Delete.
6. On Confirm Delete, click OK.

    The paper type that you deleted no longer appears in the detail area.

▶   **To search for incorrect printer records**

Use the following batch process to search the Printer Capability table (F986163) and list printer records that are incomplete, or that contain incorrect printer information. This task might be useful to users who are upgrading OneWorld from a release prior to B73.3.1 to release B73.3.2 or later. This report lists information that can help you correct your printing records.

1. From the System Administration Tools (GH9011) menu, choose Batch Versions.

2. On the Work With Batch Versions - Available Versions form, in the Batch Application field, type `R9861602`, and click Find.

    The `XJDE0001` version appears.

3. Run the version as explained in *Submitting a Report*.

    The report lists reports that have a logical printer name. Use this information to change existing printer settings, since logical and physical printer names are no longer used in OneWorld.

4. Go to the task *To modify an existing printer*, and using the report, find the printer record and correct it.

▶ **To determine logical printers attached to batch processes**

Use the following batch process to determine which of your batch processes, if any, are attached to printers. This task might be useful to users who are upgrading OneWorld from a release prior to B73.3.1 to release B73.3.2 or later.

1. From the System Administration Tools (GH9011) menu, choose Batch Versions.

2. On the Work With Batch Versions - Available Versions form, in the Batch Application field, type `R9861601`, and click Find.

   The `XJDE0001` version appears.

3. Run the version as explained in *Submitting a Report*.

   The report lists reports that have a logical printer name. Use this information to change existing printer settings, since logical and physical printer names are no longer used in OneWorld.

4. Use Report Design Aid (RDA) to attach a valid printer to those batch processes that had been attached to a logical printer. Only someone familiar with RDA should attempt to attach a printer.

Generating and Retrieving Logs for Your Report

When you run a OneWorld report, you can specify whether you want to create logs for the report. The logs that you can create are the jde.log and the jdedebug.log. These logs allow you to review how your reports process on the server. These logs reside in a specific directory on the server. Your jde.ini settings determine the location of this directory. Also, depending on the platform that you use, the jde.ini setting differs slightly. The following list provides sample jde.ini settings for the directory where your report logs reside:

- AS/400

```
[INSTALL]
DefaultSystem=B733SYS
```

  Example path: B733SYS\PRINTQUEUE

- UNIX

```
[INSTALL]
B733=/usr/jdedwardsoneworld/output
```

  Example path: /usr/jdedwardsoneworld/output/PrintQueue

- Windows NT Server

```
[INSTALL]
B733=d:\jdedwardsoneworld\output
```

  Example path: d:\jdedwardsoneworld\output\PrintQueue

The default directory for your log files is PrintQueue, which becomes a subdirectory to the directory that you designate in the jde.ini file. You can change the location of this directory as necessary.

Note: These jde.ini settings also determine the location where your report output resides after processing. If you set your jde.ini to save the output for your reports, OneWorld saves a PDF file for the report in the report output directory.

▶ **To create logs for your report**

1. On System Administration Tools (GH9011), choose Batch Versions (P98305).

    The Work with Batch Versions form appears. On this form you can locate and run reports. Also, you can modify version detail information, data selection, and data sequencing.

2. Type an application ID in the Batch Application field and click Find. For example, to locate a version for the One Line Per Address report, type R014021.

3. Choose a version to submit, and then click Select.

    The Version Prompting form appears. On this form, you can choose to change the data selection, change the data sequencing, and access the Advanced Operations form.

4. Choose Advanced from the Form menu.

    The Advanced Operations form appears. On this form, you can override the location where your report processes, activate the jde.log, activate the jdedebug.log, and modify the level of information that your logs include.

5. Modify the following information, then click OK:

    *   Logging (JDE.log)

        Turn on this option to activate a basic log that helps you determine when a fault occurs during a batch process.

    *   Tracing (JDEDEBUG.log)

        Turn on this option to turn on advanced UBE logging that includes details about the batch process.

    *   UBE Logging Level

        The value that you enter here, from 0-6, determines the level to which your batch process log shows errors ranging from error messages to object level messages and UBE function messages.

        Note: When you choose a high value to receive more technical information, you also receive all the information for the lower values. For example, when you enter a value of 6 (UBE function messages), you also receive information for values 0–5.

6. On the Version Prompting form, click Submit to run your report and create your logs.

Field	Explanation
JDE Logging	When the batch job is run on a server, this field allows you to indicate if JDE logging should be enabled for the execution. If the server is already set to perform JDE logging, it occurs regardless of how this field is set.
Tracing	When the batch job runs on a server, this field indicates whether tracing is enabled for execution of the job. If the server is already set to perform tracing, it occurs regardless of how this field is set.
UBE Logging Level	Indicates the type of error logging that occurs when the batch job runs. The following list describes the different levels: 0 Error Messages 1 Informative Messages and Log Entry 2 Section Level Messages 3 Object Level Messages 4 Event Rule Messages 5 Database Mapping Messages 6 UBE Internal Function Calls, Textout Values

Setting Up a OneWorld Printer to Use a Barcode Font

OneWorld supports the use of the BC C39 3 to 1 Medium barcode font. J.D. Edwards includes this barcode font with OneWorld. After you set up your OneWorld printers, you can assign a printer to use a barcode font for your reports. This section describes how to set a printer in OneWorld to support the barcode font BC C39.

Note: OneWorld printers that support barcodes must use either the PostScript or PCL printer definition languages.

Complete the following tasks:

- Set up a OneWorld printer to use a barcode font
- Modify OneWorld barcode printer information
- Copy OneWorld barcode printer information for a new printer
- Delete barcode support information from a OneWorld printer

▶ **To set up a OneWorld printer to use a barcode font**

1. On the Printers menu (GH9013), choose Bar Code Support (P986166).

2. On the Work with Bar Code Font form, click Add.

   The Bar Code Font Revisions form appears. USe this form to determine which printer uses the bar code font.

3. Complete the following fields and options:
   - Printer Name

     Click the visual assist for this field to access a list of OneWorld printers.

   - PostScript or PCL

     Choose the appropriate option, depending on the printer definition language of the printer in the Printer Name field.

   - True Type Font

     Click this button to select the true type barcode font BC C39 3 to 1 Medium on the Font form.

- Printer Font Name
- (PCL only) Symbol Set ID

    This value defines the character and the character mapping for a particular symbol set. Contact your PCL printer font vendor to obtain this information.

4. After you finish entering information for a barcode-capable printer, click OK.

    OneWorld saves the information and clears the revision form. You can continue to enter information for other OneWorld printers that support barcodes, or click Cancel to exit the form.

▶ **To modify OneWorld barcode printer information**

1. On the Printers menu (GH9013), choose Bar Code Support (P986166).
2. On the Work with Bar Code Font form, click Find.

    OneWorld printers previously set to support the barcode font appear in the detail area.

3. Choose the printer, the information for which you want to modify, and click Select.

    The Bar Code Font Revisions form appears.

4. Change the information on this form as necessary and click OK.

▶ **To copy OneWorld barcode printer information for a new printer**

1. On the Printers menu (GH9013), choose Bar Code Support (P986166).
2. On the Work with Bar Code Font form, click Find.

    OneWorld printers previously set to support the barcode font appear in the detail area.

3. Choose the printer, the information for which you want to copy, and click Copy.

    The Bar Code Font Revisions form appears.

4. Change the name of the printer. You can also change any other information on this form as necessary.

5. Click OK to save your information.

▶ **To delete barcode support information from a OneWorld printer**

1. On the Printers menu (GH9013), choose Bar Code Support (P986166).

2. On the Work with Bar Code Font form, click Find.

    OneWorld printers previously set to support the barcode font appear in the detail area.

3. Choose the printer that you want to delete, and click Delete.

4. On the Confirm Delete form, click OK.

Designing Reports to Run on OneWorld Line Printers

When you run a report on a line printer in OneWorld, you must follow certain guidelines to ensure that the information contained in the report prints successfully. These guidelines include font family, font size, grid spacing, the width of the fields on the report, paper dimensions, and line parameters.

This section provides the information necessary to create OneWorld line printer reports.

See Also

- *OneWorld Server and Workstation Administration Guide* for information on setting up printers on AS/400, UNIX, and Windows NT servers

Complete the following tasks:

- Design a OneWorld report to run on a line printer
- Set up a OneWorld line printer
- Print multiple copies to a remote AS/400 line printer

▶ **To design a OneWorld report to run on a line printer**

Important: In the Batch Versions application, create a version of the report to use only on line printers. Make the following modifications to this report version. Do not make these modifications at the report level. If you make these modifications at the report level, the information in your report might not appear properly on other printer platforms.

1. On the Cross Application Development Tools menu (GH902), choose Report Design Tool.

2. Open the report with the version that you want to modify to support line printers.

3. From the Layout menu, choose Grid Alignment.

   The Alignment Grid form appears. On this form, you need to modify the vertical grid spacing for the report.

4. Set the value in the Vertical field to 16 and click OK.

5. From the Report menu, choose Report Properties.

    The Properties form appears. On this form, you need to change the font properties for the report.

6. Click the Font/Color tab, set the following font properties, and then click OK:

    *   Change the font to Courier New.

        The Courier New font provides the best results; however, you can use other fixed-pitch fonts. For example, for reports that contain text in Japanese, users should use the fixed-pitch version of the MS-Gothic font.

    *   Change the font size to 10.

7. Turn on the Apply settings to all objects option to make sure these settings apply to objects that may have individual font settings applied.

8. After you change the font properties, you might need to increase the width of some of the fields on your report. Widen fields as necessary to provide enough room for information to appear on your report. Reposition the sections of your report so that all the report objects appear in the detail area.

9. (Steps 7 through 10 apply to Group sections only.) If some data fields still do not properly align, press and hold the Ctrl key, then click on each field that you want to align. The last field that you choose is the field, the top edge of which you will use to align the other fields.

10. From the Layout menu, choose Align.

    The Align Objects form appears.

11. In the Apply To box, choose the Current section option to enable the Top to Bottom box.

12. In the Top to Bottom box, choose the Top Edges option and then click OK.

13. When you complete the modifications to your report, save your report version.

▶   **To set up a OneWorld line printer**

Important: The following steps provide information about the values at which you should set the paper dimensions for a line printer. These steps should be used as a supplement to the steps that describe how to set up a OneWorld printer in *Working with the Printers Application*.

1. On the Printers menu (GH9013), choose Printers (P98616).

2. Choose the line printer from the detail are and click Select.

    The Logical Printer Revisions form appears. On this form, you need to set the columns per inch (CPI), columns per page (CPP), lines per inch (LPI), and the lines per page (LPP). These values determine the paper dimensions that your line printer will use when printing OneWorld reports.

3. Set the following values to print on an 8.5 in. x 11 in. piece of paper:

    - Characters Per Inch: 10
    - Characters Per Page: 85
    - Lines Per Inch: 6
    - Lines Per Page: 66

    Note: You can use the following formula to calculate your paper dimensions:

    CPP / CPI = width in inches (85 / 10 = 8.5)

    LPP / LPI = height in inches (66 / 6 = 11)

4. Click OK to save these settings.

►   **To print multiple copies to a remote AS/400 line printer**

This task is necessary only if the output queue for an AS/400 line printer does not support printing multiple copies. This task applies to remote output queues only. This task must be completed by a system administrator.

1. End the remote writer to which the output queue is connected.
2. Use the Change Output Queue (CHGOUTQ) command to change the Display Options (DSPOPT) parameter so that it contains the value "XAIX".
3. Restart the remote writer.
4. Your output queue should now be able to send multiple copies of your documents to the remote printer.

Appendices

Appendix A – Edit Code Table

Edit codes are used by OneWorld to determine how to display or format a particular value for a report. The default edit codes that pertain to reporting require particular attention because they account for a substantial amount of information.

To choose the appropriate default edit code for your report, review the Negative Amount Notation column in the following table and choose the appropriate option for your report figures. This narrows your search to four codes. For example, if you choose a trailing minus sign as your negative amount notation, your search is narrowed to a code of J, K, L, or M.

Review the Zero Balance column in the Default Edit Code table and determine whether you want to print zero balances. This narrows your search to two codes. For example, if you choose to print zero balances, your search is narrowed to a code of J or L.

Review the Commas column in the Default Edit Code table and determine whether you want commas to appear in the report figures on your report. For example, if you want commas in your report figures, choose J. If not, choose L.

Code	Commas Y/N	Zero Balance Y/N	Negative Amount Notation
A	Y	Y	Cr
B	Y	N	Cr
C	N	Y	Cr
D	N	N	Cr
J	Y	Y	-Trailing
K	Y	N	-Trailing
L	N	Y	-Trailing
M	N	N	-Trailing
N	Y	Y	-Preceding
O	Y	N	-Preceding
P	N	Y	-Preceding
Q	N	N	-Preceding
R	Y	Y	< >
S	Y	N	< >
T	N	Y	< >
U	N	N	< >
1	Y	Y	No sign
2	Y	N	No sign
3	N	Y	No sign
4	N	N	No sign

Appendix B – Events

Events typically execute in a specific order. Additionally, most events have limitations. For example, some events are available only in specific sections. This topic discusses the following:

❑ Events and section types

❑ Available objects

Events and Section Types

Certain events are available only in specific section types. The following tables list events that are available for the following levels:

- Report level
- Section level
- Object level

Report Level Events

The following table shows the report level events that are available. X indicates the events that are shown in RDA and O indicates the events that are supported by UBE.

Event List	Report
Do Initialize Printer	XO

Section Level Events

The following table shows the section level events available. X indicates the events that are shown in RDA and O indicates the events that are supported by UBE.

Event List	Report Header	Page Header	Columnar	Group	Tabular	Child/ Custom (CG)	Level Break Header	Level Break Footer	Page Footer	Report Footer
Advance Section			XO	XO	XO	XO	XO			
After Last Object Printed	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO
Before Level Break			XO	XO	XO	XO				
Do Balance Auditor						XO				
Do Section	XO	XO	XO	XO	XO	XO	XO	XO	XO	XO
Do Tabular Break						XO				
End Break Section			XO	XO	XO	XO				
End Lvl Brk Footer Section								XO		
End Lvl Brk Header Section							XO			
End Page Header		XO								
End Report Header	XO									
End Report Footer										XO
End Section			XO	XO	XO	XO				
Init Break Section			XO	XO	XO	XO				
Init Lvl Brk Footer Section								XO		
Init Lvl Brk Header Section			XO	XO		XO	X			
Initialize Page Header		XO								
Initialize Page Footer									XO	
Initialize Report Header	XO									
Initialize Report Footer										XO
Initialize Section			XO	XO	XO	XO	XO	XO		
Refresh Section						XO				
Suspend Section			XO	XO	XO	XO	XO	XO		

Object Level Events

The following tables show the events available at an object level. X indicates the events that are shown in RDA and O indicates the events that are supported by UBE.

Variable Objects

Event List	Report Header	Page Header	Columnar	Group	Tabular	Level Break Header	Level Break Footer	Page Footer	Report Footer
Column Inclusion					XO				
Do Variable	XO	XO	XO	XO	XO	XO	XO	XO	XO
End Column (future)			XO	XO	XO				
End Variable	XO	XO	XO	XO	XO	XO	XO	XO	XO
Initialize Column (future)			XO	XO	XO				
Initialize Variable	XO	XO	XO	XO	XO	XO	XO	XO	XO

Constant Objects

Event List	Report Header	Page Header	Columnar	Group	Tabular	Level Break Header	Level Break Footer	Page Footer	Report Footer
Do Column Heading			XO		XO		XO		
Do Constant	XO	XO	XO	XO	XO	XO	XO	XO	XO
End Constant	XO	XO	XO	XO	XO	XO	XO	XO	XO
Initialize Const	XO	XO	XO	XO	XO	XO	XO	XO	XO

Available Objects

Some objects are available only for specific events. This topic contains tables that list the available objects for:

- Section level events
- Object level events
- Life span of objects in section level events

RVs are considered as the print buffers. They obtain their run-time values in the event when the user assigns the values to them.

RVs are printed to the report during the processing of the *Do Variable* event.

Values in the RVs are cleared before the processing of the *Advance Section* event. Before current RV values are cleared, these values are used to populate the PVs.

In B733 and prior releases, if an RV is derived from a BC, only the BC is shown through the event rules editor. In a nontabular section, accessing the BC has the same effect as accessing the RV. But in a tabular section, BCs are actually treated by the UBE engine as RVs, meaning the print buffer. Thus the BCs contain cumulative values instead of the values of the record fetched from the database table. This BC/RV discrepancy will be addressed in the B81 release.

Section Level Events

The following table lists the available objects for various section level events. The tables use the following abbreviations:

- BC – Business View Column
- TR – Tabular Row
- TC – Tabular Cell
- PC – Previous Constant
- PV – Previous Variable

Report Header Section

	RV global	RV section
Initialize Report Header	x	x
Do Section	x	x
After Last Object Printed	x	x
End Report Header	x	x

Page Header Section

	RV global	RV section
Initialize Page Header	x	x
Do section	x	x
After Last Object Printed	x	x
End Page Header	x	x

Group Section

	BC	RV global	RV section	PC	PV
Initialize Section		x			x
Refresh Section (Child)		x	x	x	
Advance Section	x	x	x	x	x
Before Level Break	x	x	x	x	x
Init Lvl Break Header Section	x	x	x	x	
Do Section	x	x	x	x	x
After Last Object Printed	x	x	x	x	x
Init Break Section(conditional)	x	x	x	x	x
End Break Section(conditional)	x	x	x	x	x
End Section		x	x	x	x
Suspend Section(conditional)	x	x	x	x	x

Columnar Section

	BC	RV global	RV section	PC	PV
Initialize Section		x			x
Refresh Section (Child)		x	x	x	
Advance Section	x	x	x	x	x
Before Level Break	x	x	x	x	x
Init Lvl Break Header Section	x	x	x	x	
Do Section	x	x	x	x	x
After Last Object Printed	x	x	x	x	x
Init Break Section(conditional)	x	x	x	x	x
End Break Section(conditional)	x	x	x	x	x
End Section		x	x	x	x
Suspend Section(conditional)	x	x	x	x	x

Tabular Section

	BC	RV global	RV section	TR	TC	PC	PV
Initialize Section							
Advance Section	x	x	x			x	x
Before Level Break	x	x	x			x	x
Do Tabular Break	x	x	x	x	x	x	x
Do Section	x	x	x	x	x	x	x
Do Balance Auditor(conditional)	x	x	x			x	x
After Last Object Printed	x	x	x	x	x	x	x
Init Break Section	x	x	x	x	x	x	x
End Break Section	x	x	x	x	x	x	x
End Section	x	x	x			x	x
Suspend Section(conditional)	x	x	x	x	x	x	x

Level Break Header Section

	BC	RV global	RV section	PC
Initialize Section		x		
Do Section	x	x	x	x
After Last Object Printed	x	x	x	x
Advance Section	x	x	x	x
End Lvl Break Header Section	x	x	x	x
Suspend Section(conditional)	x	x	x	x

Level Break Footer Section

	BC	RV global	RV section	PC
Initialize Section		x		
Init Lvl Brk Footer Section	x	x	x	x
Do Section	x	x	x	x

After Last Object Printed	x	x	x	x
End Lvl Brk Footer Section	x	x	x	x
Suspend Section(conditional)	x	x	x	x

Page Footer Section

	RV global	RV section
Initialize Page Footer	x	x
Do Section	x	x
After Last Object Printed	x	x

Report Footer Section

	RV global	RV section
Initialize Report Footer	x	x
Do Section	x	x
After Last Object Printed	x	x
End Report Footer	x	x

Object Level Events

The following tables list the available objects for object level events.

- BC – Business View Column

- PC – Previous Constant

- PV – Previous Variable

Report Header Section

	RV global	RV section
Initialize Variable	x	x
Do Variable	x	x
End Variable	x	x
Initialize Constant	x	x
Do Constant	x	x
End Constant	x	x

Page Header Section

	RV global	RV section
Initialize Variable	x	x
Do Variable	x	x
End Variable	x	x

Initialize Constant	x	x
Do Constant	x	x
End Constant	x	x

Group Section

	BC	RV global	RV section	PC	PV
Initialize Column		x			x
Initialize Variable	x	x	x	x	x
Do Variable	x	x	x	x	x
End Variable	x	x	x	x	x
End Column		x	x	x	x
Initialize Constant	x	x	x	x	x
Do Constant	x	x	x	x	x
End Constant	x	x	x	x	x

Columnar Section

	BC	RV global	RV section	PC	PV
Do Column Heading	x	x	x	x	x
Initialize Column		x			x
Initialize Variable	x	x	x	x	x
Do Variable	x	x	x	x	x
End Variable	x	x	x	x	x
End Column		x	x	x	x
Initialize Constant	x	x	x	x	x
Do Constant	x	x	x	x	x
End Constant	x	x	x	x	x

Tabular Section

	BC	RV global	RV section	PC	PV
Do Column Heading	x	x	x	x	x
Initialize Column					
Column Inclusion	x	x	x	x	x
Initialize Variable	x	x	x	x	x
Do Variable	x	x	x	x	x
End Variable	x	x	x	x	x
End Column	x	x		x	x
Initialize Constant	x	x	x	x	x

Do Constant	x	x	x	x	x
End Constant	x	x	x	x	x

Level Break Header Section

	BC	RV global	RV section	PC
Initialize Variable	x	x	x	x
Do Variable	x	x	x	x
End Variable	x	x	x	x
Initialize Constant	x	x	x	x
Do Constant	x	x	x	x
End Constant	x	x	x	x

Level Break Footer Section

	BC	RV global	RV section	PC
Do Column Heading	x	x	x	x
Initialize Variable	x	x	x	x
Do Variable	x	x	x	x
End Variable	x	x	x	x
Initialize Constant	x	x	x	x
Do Constant	x	x	x	x
End Constant	x	x	x	x

Page Footer Section

	RV global	RV section
Initialize Variable	x	x
Do Variable	x	x
End Variable	x	x
Initialize Constant	x	x
Do Constant	x	x
End Constant	x	x

Report Footer Section

	RV global	RV section
Initialize Variable	x	x
Do Variable	x	x
End Variable	x	x
Initialize Constant	x	x

Do Constant	x	x
End Constant	x	x

Lifespan of Objects in Section Level Events

The following are common life ranges for section level events.

- BC/PC in Group and columnar section
- BC/PC in Column style tabular section
- BC/PC in Row style tabular section
- RV/PV Life Span

Appendix C – Report Examples

Sometimes getting started is the most difficult part of creating a report. To help you get started, the following tasks provide instructions for creating some typical reports.

- ❑ Report techniques by example

- ❑ Printing lists of information

- ❑ Printing lists of information grouped by a specific field

- ❑ Printing totals and auditing numeric data

- ❑ Creating Journal Entries with Report Design

Report Techniques by Example

This section provides several specific reports with a variety of features such as level-break sections, totaling, hidden controls, and so forth. Steps describing how to create each report follow each example, providing a contextual reference for using many of the features in Report Design.

The reports in this section examine:

- Printing journal entries by batch type
- Printing a work order report
- Printing outstanding balance by company

Printing Journal Entries by Batch Type

This example illustrates a report that shows journal entries by batch type for batch types K, V, W, and Z and for batches 1000–3000.

| R560001 | | | | J.D. Edwards & Company | | | 1/19/00 | 14:32:27 |
| | | | | | | | Page - | 1of 3 |

Listing by Batch Type

Batch Type   K   A/P Checks (Automatic)

Batch Number	Co	Document Type	Document Number	G/L Date	Object Account	Amount
2146	00050	PK	5002	6/30/05	1110	27,500.00-
	00050	AE	5002	6/30/05	4110	27,500.00
	00050	PK	5003	6/30/05	1110	394,966.48-
	00050	AE	5003	6/30/05	4110	394,966.48
	00050	PK	5004	6/30/05	1110	125,000.00-
	00050	AE	5004	6/30/05	4110	125,000.00
2147	00001	PK	2003	6/30/05	1110	144.64-
	00001	PK	2003	6/30/05	1110	800.00-
	00001	AE	2003	6/30/05	4110	800.00
	00001	AE	2003	6/30/05	4110	144.64
						.00

10   Total entries for   K

Batch Type   V   Voucher Entry

1028	00001	AE	1564	6/30/05	4110	1,500.00-
	00001	PV	1564	6/30/05	8720	1,500.00
	00001	AE	1565	6/30/05	4110	5,000.00-
	00001	PV	1565	6/30/05	8605	5,000.00
	00001	AE	1567	6/30/05	4110	1,000.00
	00001	PD	1567	6/30/05	8720	1,000.00-
	00001	AE	1568	6/30/05	4110	2,500.00-
	00001	AE	1568	6/30/05	4110	437.75-

To create this report, complete the following tasks:

- Create a report that contains a columnar section
- Change column spacing
- Suppress redundant data
- Change column justification
- Change column titles
- Total and count columns in a level-break footer
- Change the level-break footer
- Create a level-break header and hide objects
- Add text to the report and page headers

▶   **To create a report that contains a column section**

1. In Report Design, create a new report object with the following parameters:
   - Report Name: R560001
   - Description: G/L Transaction Detail
   - Product Code: 56

2. Using the Director, create a report with the following parameters:
   - Include a report header, page header, and a columnar section.
   - Include the default page header information in the report.

- Choose business view V0911G.
- Include the following business view columns in the following order:
  - Batch Number (ICU)
  - Company (CO)
  - Document Type (DCT)
  - Document (DOC)
  - Date – For G/L (DGJ)
  - Object Account (OBJ)
  - Amount (AA)
  - Batch Type (ICUT)
- Sequence the data based on the following business view columns in the following order:
  - Batch Type (ICUT)
  - Batch Number (ICU)
  - Company (CO)
  - Document (DOC)
  - Object Account (OBJ)
- Include a level break on Batch Type.
- Define criteria to select only batch types K, V, W, and Z and batch numbers 1000–3000. The first is a literal list, the second a literal range.

Report Director

Section Data Selection

Define the subset of data your report will use when reading records from the database. In other words, filter the incoming data so that your report only processes certain records.

	Operator	Left Operand	Comparison	Right Operand
	Where	BC Batch Type (F0911)	is equal to	"K,V,W,Z"
	And	BC Batch Number (F0911)	is equal to	"1000-3000"

< Back   Next >   Cancel   Help

3. When you are finished defining the report parameters, opt to create a report version and click Finish on the director.
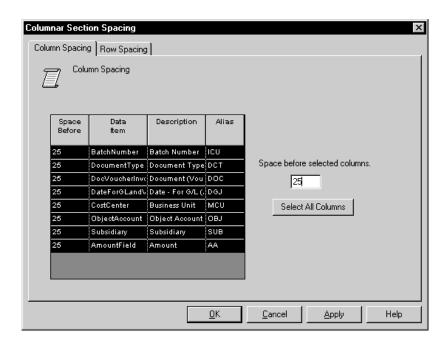
The system displays the report.

▶ To change column spacing

This process adds 25 pixels of space between each column to spread them evenly across the page. Furthermore, it adds 100 pixels of space before the first column to shift all of the columns to the right, thereby balancing the amount of white space to the left and right of the report body.

1. Click the columnar section and from the Layout menu, choose Spacing.

The Columnar Section Spacing form appears.

2. Click Select All Columns.

The system highlights all the columns on the form.

3. Enter 25 in the Space before selected columns field and click Apply.

4. Click Batch Number and enter 100 in the Space before selected columns field and click OK.

▶ **Suppress redundant data**

In this sample report, the data has been sequenced primarily by Batch Number. This process illustrates how to display the batch number only once per group, the first time it is encountered, that is, when Batch Number changes.

1. Double-click the variable portion of the Batch Number column.

   The Column Variable Properties form appears.
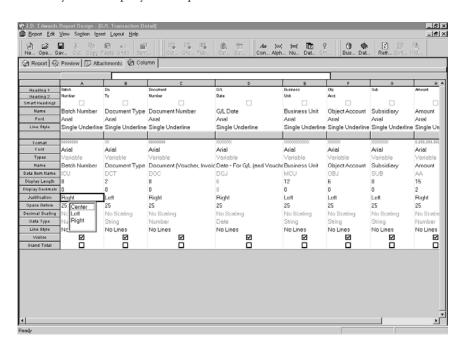
2. Click the Advanced tab and choose the following options. Then click OK:
   - Visible (accept the default value)
   - Print on Change Only

▶ **To change column justification**

In this sample report, the Batch Number, Document Type and G/L Date columns are centered; the rest of the columns are right-justified. This process illustrates how to change column justification.

1. Click the columnar section and then click the Column tab.

   The system displays the specifications for each column in the section.

2. Double-click the justification option in the Batch Number column and choose Center from the resulting drop-down menu.

3. Using this same technique, change the justification for the remaining columns.

4. Click the Report tab to return to the layout view of the report.

▶ To change column titles

In this sample report, two of the column titles have been changed from their default values as follows:

- Do Ty to Document Type
- Obj Acct to Object Account

This process illustrates how to change column titles.

1. Click the columnar section and then click the Column tab.

   The system displays the specifications for each column in the section.

2. Double-click Do in the Heading 1 cell and change it to Document.

3. Double-click Ty in the Heading 2 cell and change it to Type.

4. Using the same method, change the column titles for the Obj Acct column.

5. Click the Report tab to return to the layout view of the report.

▶ To total and count columns in a level-break footer

In this sample report, the Amount column is totaled for all of the items in each Batch Type. Additionally, the total entries displayed for each batch type is indicated. These values must be calculated and displayed in a level-break footer. Because a level break was attached to Batch Type, this process is possible. This process illustrates how to create a level-break footer and how to display an aggregate function for a column.
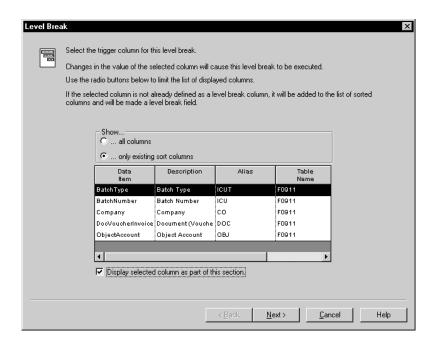
1. Click the columnar section.

2. From the Section menu, choose Create, and then choose Level Break Footer.

   The Level Break Footer form appears.
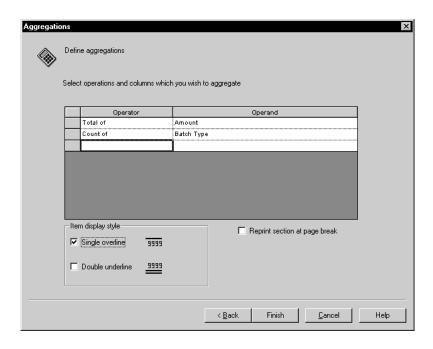
3. Choose Group Section, and then click OK.

   The Level Break form appears.

4. Choose *only existing sort columns,* and then choose the Batch Type column.

5. Choose to display the selected column in the section, and then click Next.

   The Aggregations form appears.

6. Double-click the first cell in the Operator column and select *Total of* from the resulting drop-down menu.

7. Double-click the first cell in the Operand column and select Amount from the resulting drop-down menu.

8. Double-click the next cell in the Operator column and select *Count of* from the resulting drop-down menu.

9. Double-click the first cell in the Operand column and select Document Type from the resulting drop-down menu.

10. Choose the Single overline option and click Finish.

The count variable does not have an overline in this sample report; you will remove the line from that report object later.

The level-break footer appears in the columnar section of the report.

▶ **Change the level-break footer**

In this sample report, the count value at each level break has the text *Total entries for* <batch type> after it. Furthermore, the total values for account display zero rather than a blank if the value is zero. This process illustrates how to add text to the report section, how to write an event rule for a variable, and how to change how a numeric field displays numbers.

1. Click the level-break footer section and from the Insert menu, choose Constant Field.

When you move your cursor back into the level-break footer section, the cursor indicates that you can place the constant.

2. Move the cursor to the right of the Batch Type column and click to place the constant field.

3. Double-click the constant field.

The Constant Properties form appears.

4. Click the Description tab and enter "Total entries for" in the Variable Name field. Then click OK.

5. In the level-break footer, double-click the total field under the Amount column.

The Variable Properties form appears.

6. Click the display tab and enter an R in the Edit Code field. Then click OK.

7. In the level-break footer, click the constant component of the Batch Type control and from the Edit menu, select Disconnect.

8. Delete the now disconnected constant component of the Batch Type control.

The variable component remains.

9. Double-click the variable field.

   The Variable Properties form appears.

10. Click the Advanced tab, deselect the Visible option, and click OK.

    Although you do not want it to appear, the Batch Type control must reside in the level-break footer so that the event rule created in the following steps will work properly.

11. From the Insert menu, choose Alpha Variable.

    When you move your cursor back into the level-break footer section, the cursor indicates that you can place the variable.

12. Move the cursor to the right of the Total entries for constant field and click to place the alpha variable.

    Because you are working so close to the report's edge and the default length for the alpha variable is so long, you might not be able to place the variable to the right of the constant field. If this is the case, place it below the constant field and then move it later after you have shortened the field length.

13. Double-click the alpha variable.

    The Variable Properties form appears.

14. Click the Description tab and change the variable name to Batch Type Variable.

15. Click the Display tab, change the display length to 1, and click OK.

    If necessary, reposition the variable on the report.
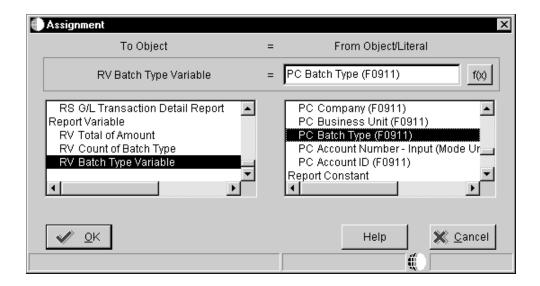
16. Save the report, and then click the alpha variable and from the Edit Menu, select Event Rules.

    The Event Rules Design form appears.
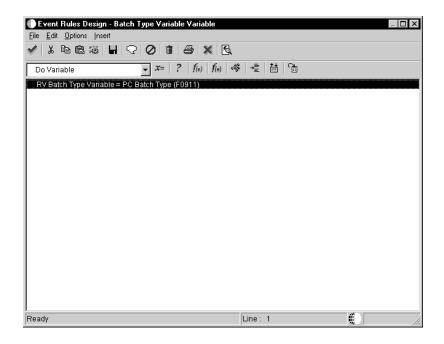
17. From the drop-down field at the top of the form, select Do Variable.

18. Click the Assignment/Expression button.

    The Assignment form appears.

19. Select RV Batch Type Variable from the To Object column and PC Batch Type from the From Object/Literal column, and then click OK.

The Event Rules variable form reflects the event rule. You must set the variable equal to the previous value (rather than the current value) because of the way the report is processed.

20. Click the Save and Exit button.

▶ **To create a level-break header and hide objects**

In this sample report, the batch type and its description appear at the top of every level break, but do not appear in the body of the report itself. This process illustrates how to add and format a level-break header and how to hide report objects.

1. Click the columnar section.

2. From the Section menu, choose Create, and then choose Level Break Header.

   The Level Break form appears.

3. Choose *only existing sort columns,* and then choose the Batch Type column.

4. Opt to display the selected column as part of the section, and then click Finish.

   The level-break header appears in the columnar section of the report.

5. To display description text for the batch type, click the variable portion of the Batch Type control, and from the Edit menu choose Associate and then choose Description.

   When you move your cursor back into the level-break header section, the cursor indicates that you can place the constant.

   A *control* is to a group section (level-break headers are always group sections) as a *column* is to a columnar or tabular section.

6. Move the cursor to the right of the Batch Type control and click to place the constant field.

7. Double-click the level-break header section.

   The Group Section form appears.

8. Click the Font/Color tab, and then choose Bold from the Font Style field and 10 from the Size field.

9. Opt to apply settings to all objects and click OK.

   The system changes all the fields in the level-break header section to 10-point bold. You might need to reposition the fields to prevent overlap.

10. In the columnar section, double-click the Batch Type column.

    An appropriate properties form appears.

11. Click the Advanced tab, deselect the Visible option, and click OK.

    The column disappears.

    You can select either component of the column for this operation (the header or the variable); if you hide one component, the system automatically hides the other as well.

12. In the level-break footer section, double–click the variable that displays the batch type count.

    The Variable Properties form appears.

13. Click the Style tab, choose No Lines, and click OK.

▶ **Add text to the report and page headers**

In this sample report, the report header says "This report is confidential and proprietary to J.D. Edwards." Additionally, the page header displays "Listing by Batch Type" centered below the default text. This process illustrates how to add these phases to these two sections.

1. Click the Report Header and from the Insert column, choose Constant Field.

   When you move your cursor back into the report header section, the cursor indicates that you can place the constant.

2. Move the cursor to approximately the center of the section and click to place the constant.

3. Double-click the constant field.

   The Constant Properties form appears.

4. Click the Description tab and enter the following in the Variable Name field, and then click OK:

   • This report is confidential and proprietary to J.D. Edwards.

5. Use the same technique to add a constant to the page header and name it Listing by Batch Type.

6. Shift-click the two constants that you just added, and then click the two default constants in the middle of the page header.

   One of the two default constants should have a dark box around it; ensure that you click the constants you just created *first* to accomplish this. The formatting accomplished in the next steps occurs relative to the object with the dark box around it.

7. From the Layout menu, choose Align.

   The Align Objects form appears.

8. Click Center, then click Current Selection, and then click OK.

   The system centers the four constant fields.

9. In the page header section, click the variable component of the page number control and delete it.

10. From the Insert menu, select Runtime Field and then select Page n of Total.
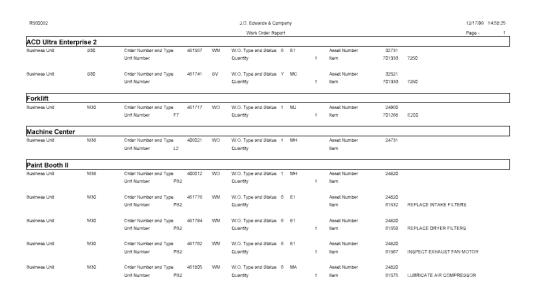
    When you move your cursor back into the page header section, the cursor indicates that you can place the run-time field.

11. Move the cursor to the right of the Page constant and click to place the run-time field.

    Note that this field is actually three fields placed closely together. If you want to reposition them, ensure that you select all three fields.

Printing a Work Order Report

This example illustrates a report that lists work orders and their status.

To create this report, complete the following tasks:

- Create a report that contains a group section
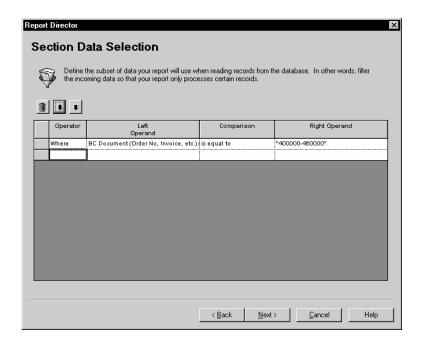
- Format the group section

- Create a level-break header and hide objects

▶ **To create a report that contains a group section**

1. In Report Design, create a new report object with the following parameters:

   - Report Name: R560002

   - Description: Work Order Report

   - Product Code: 56

2. Using the Director, create a report with the following parameters:

   - Include a page header and a group section.

   - Include the default page header information in the report.

   - Choose business view V1201JE.

   - Include the following business view columns in the following order:

     - Business Unit (MCU)

     - Document (DOCO)

     - Order Type (DCTO)

     - Type – W.O. (TYPS)

     - Status Code W.O. (SRST)

     - Asset ITem Number (NUMB)

     - Unit or Tag Number (APID)

     - Units – Order/Transaction Quantity (UORG)

     - Item Number – Short (ITM)

     - 2nd Item Number (LITM)

     - Description (DL01)

   - Sequence the data based on the following business view columns in the following order:

     - Description (DL01)

     - Document (DOCO)

   - Include a level break on Description.

   - Define criteria to display information for Documents between 400,00 and 460,000.

3. When you are finished defining the report parameters, opt to create a report version and click Finish on the director.

   The system displays the report.

▶ **To format the group section**

In this sample report, the format of the group section varies from the default layout in these ways:

- Placement of controls
- Constant text of some controls
- Spacing between lines

  A *control* is to a group section (level-break headers are always group sections) as a *column* is to a columnar or tabular section.

This process illustrates how to reformat the group section in these ways.

1. From the Layout menu, select Grid Alignment.

   The Alignment Grid form appears.

2. Set the Horizontal Spacing to 20, ensure that Snap To Grid is enabled, and click OK.

   With the snap to grid feature enabled, you can manually align report objects relative to the grid.

3. Click the Unit Number control and drag it out of the way.

   Note: In a group section, you can select and move a variable and its constant text independently of each other. Clicking in the middle of the control selects both fields simultaneously.

4. Move the Order Number control to the right of the Business Unit control.

5. Double-click the constant field of the Order Number control.

   The Constant Properties form appears.

6. Click Override Name and enter Order Number and Type in the Variable Name field, and then click OK.

   You might need to move the variable field of the Order Number control to avoid overlap.

7. Click the constant field of the Order Type control and from the Edit menu, select Disconnect.

8. Delete the Order Type constant and move the remaining variable field to the right of the Order Number and Type control.

   By disconnecting the constant from the variable, you can delete it without deleting the variable as well.

9. Repeat this process with the Type and Status controls, placing them to the right of the Order Number and Type control and changing the name of the Type control to W.O. Type and Status.

10. Move the Asset Number control to the right of the W.O. Type and Status control.

11. Move the Unit Number control directly below the Order Number and Type control.

12. Move the Quantity control directly below the W.O. Type and Status control.

13. Move the Item Number control directly below the Assent Number control, changing its name to Item.

14. Disconnect and delete the constant field of the 2nd Item Control, and then move it to the right of the Item control.

15. From the Insert column, choose Constant Field.

    When you move your cursor back into the group section, the cursor indicates that you can place the constant.

16. Place the constant and move the new control below the Unit Number control.

17. Double-click the constant control.

The Constant Properties form appears.

18. Click the Description tab, delete the text from the Variable Name, and enter five spaces.

    This empty constant field adds white space between each data set.

▶ **To create a level-break header and hide objects**

In this sample report, the description appears at the top of every level break, but does not appear in the body of the report itself. This process illustrates how to add and format a level-break header and how to hide report objects.

1. Click the columnar section.

2. From the Section menu, choose Create, and then choose Level Break Header.

    The Level Break form appears.

3. Choose *only existing sort columns,* and then choose the Description column.

4. Opt to display the selected column as part of the section, and then click Finish.

    The level-break header appears in the columnar section of the report.

5. Disconnect and delete the constant field of the Description control.

6. Move the Description control to the upper left corner of the level–break header, and then double-click the control.

    The Variable Properties form appears.

7. Click the Font/Color tab, and then choose Bold from the Font Style field and 10 from the Size field.

8. Click the Style tab and click No Lines. Then choose Single Rectangle.

9. Click the Display tab and change the Display Length to 110. Then click OK.

10. In the columnar section, double-click the variable field of the Description control.
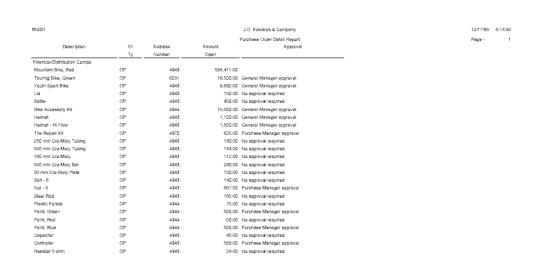
    The Variable Properties form appears.

11. Click the Advanced tab, deselect the Visible option, and click OK.

    The control disappears.

Printing Outstanding Balance by Company

This example illustrates a report that displays amounts, by company, that are still outstanding. A grand total amount open for all companies appears at the end of the report.

R5501				J.D. Edwards & Company	12/17/99 8:14:50
				Purchase Order Detail Report	Page - 1
Description	Or Ty	Address Number	Amount Open	Approval	
Financial/Distribution Compa					
Mountain Bike, Red	OP	4343	588,411.00		
Touring Bike, Green	OP	6031	16,500.00	General Manager approval	
Youth Sport Bike	OP	4343	9,632.00	General Manager approval	
Lid	OP	4343	150.00	No approval required	
Bottle	OP	4343	450.00	No approval required	
Bike Accessory Kit	OP	4344	10,000.00	General Manager approval	
Helmet	OP	4343	1,100.00	General Manager approval	
Helmet - Hi Flow	OP	4343	1,800.00	General Manager approval	
Tire Repair Kit	OP	4370	625.00	Purchase Manager approval	
250 mm Cro-Moly Tubing	OP	4343	140.00	No approval required	
500 mm Cro-Moly Tubing	OP	4343	144.00	No approval required	
160 mm Cro-Moly	OP	4343	112.00	No approval required	
500 mm Cro-Moly Bar	OP	4343	240.00	No approval required	
80 mm Cro-Moly Plate	OP	4343	150.00	No approval required	
Bolt - 6	OP	4343	140.00	No approval required	
Nut - 6	OP	4343	857.50	Purchase Manager approval	
Steel Rod	OP	4343	165.00	No approval required	
Plastic Pellets	OP	4344	75.00	No approval required	
Paint, Green	OP	4344	500.00	Purchase Manager approval	
Paint, Red	OP	4344	50.00	No approval required	
Paint, Blue	OP	4344	500.00	Purchase Manager approval	
Capacitor	OP	4343	46.00	No approval required	
Controller	OP	4343	588.00	Purchase Manager approval	
Resistor 5 ohm	OP	4343	24.00	No approval required	

To create this report, complete the following tasks:

- Create a report that contains a tabular section
- Rename a column
- Add an approval column
- Suppress printing columns at totals
- Define and add event rules

▶ **To create a report that contains a tabular section**
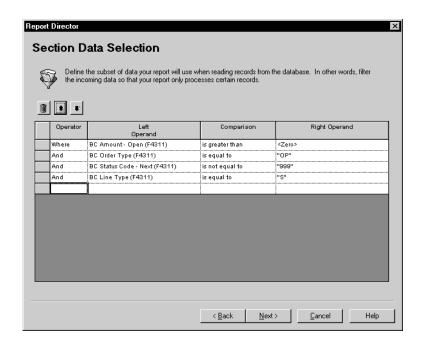
1. In Report Design, create a new report object with the following parameters:
   - Report Name: R5501
   - Description: Purchase Order Detail Report
   - Product Code: 55

2. Using the Director, create a report with the following parameters:
   - Include a page header and a tabular section.
   - Include the default page header information in the report.

- Choose business view V4311A.

- After the Description column, include the following business view columns in the following order:
  - Order Type (DTCO)
  - Address Number (AN8)
  - Amount Open (AOPN)

- Sequence the data based on the following business view columns in the following order:
  - Order Company (KCOO)
  - 2nd Item Number (LITM)

- Include a level break on Order Company and 2nd Item Number.

  Level breaks are critical to the appearance of tabular reports. The lowest level break defines the detail on the report. The higher level break defines subtotaling.

- Define the following data selection criteria (join each criterion with an AND operator):
  - Amount Open is greater than 0
  - Order Type is equal to OP
  - Status Code – Next is not equal to 999
  - Line Type is equal to S

Report Director

Section Data Selection

Define the subset of data your report will use when reading records from the database. In other words, filter the incoming data so that your report only processes certain records.

	Operator	Left Operand	Comparison	Right Operand
	Where	BC Amount - Open (F4311)	is greater than	<Zero>
	And	BC Order Type (F4311)	is equal to	"OP"
	And	BC Status Code - Next (F4311)	is not equal to	"999"
	And	BC Line Type (F4311)	is equal to	"S"

[< Back] [Next >] [Cancel] [Help]

3. When you are finished defining the report parameters, opt to create a report version and click Finish on the director.

The system displays the report.

▶ To rename a column

The sample report does not include an Address Number column, but it does include a Supplier Number column. In actuality, the data is the address number, but it has been renamed for clarity. This procedure illustrates how to change a column's name.

1. Double-click the Address Number column heading.

   The Column Heading Properties form appears.

2. Change the text in the Variable Name field to Supplier Number.

3. Change the text in the Heading 1 field to Supplier and the text in the Heading 2 field to Number.

4. Click OK.

▶ To add an approval column

This sample report includes a column that indicates whether manager approval is required. The content of the column is assigned by an event rule. The first step in including this column in the report is to create the column itself.

1. Click the Amount Open column.

2. From the Column menu, choose Create, then Alpha Variable.

   The system adds the new column to the right of the Amount Open column.

3. Double–click the heading of the new column.

   The Column Heading Properties form appears.

4. Change the text in the Variable Name and Heading 1 fields to Approval.

5. Delete the text in the Heading 2 field and click OK.

6. Double-click the variable portion (the body beneath the heading) of the Approval column.

   The Column Variable Properties form appears.

7. Change the text in the Variable Name field to Approval and click OK.

J.D. Edwards recommends that you change the variable names of both column components as it simplifies identifying the column in later processes.

▶ **To suppress printing columns at totals**

Tabular sections automatically total all their columns. Non-numeric fields display the last business view value unless their data dictionary definitions instruct them to suppress totaling. In this sample report, only the Amounts column displays a total value. This process illustrates how to keep a total value from appearing for a column.

1. Double-click the variable portion (the body beneath the heading) of the Description column.

   The Column Variable Properties form appears.

2. Click the Advanced tab and choose the following options. Then click OK:
   - Visible (accept the default value)
   - Suppress At Totals

3. Use this technique to suppress printing at totals for all the columns except Amount Open.

▶ **To define and add event rules**

In this sample report, the Approvals column reads *General Manager approval* when the amount open exceeds 1000, *Purchase Manager approval* when the amount open is between 500 and 999, and *No approval required* when the amount open is less than 500. This process illustrates how to define and attach an event rule to display the appropriate text for each report line.
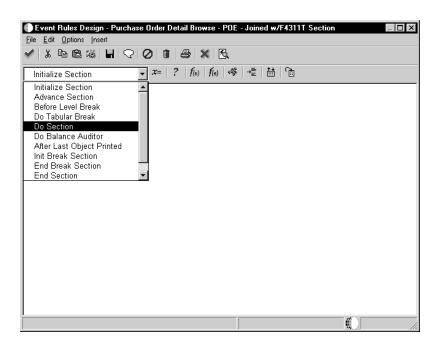
1. Click the Tabular Section and from the Section menu choose Text Variables.

   The Text Variables form appears.

2. Enter the three phrases indicated at the beginning of this process, and then click OK.

   Click Add between each phrase to move your cursor to the next grid line.

3. From the Report menu, select Save.

4. Click the Tabular Section (ensure that no column in the section is active) and from the Edit menu, choose Event Rules.

The Event Rules Design form appears.

5. Choose the Do Section event from the event drop-down menu.
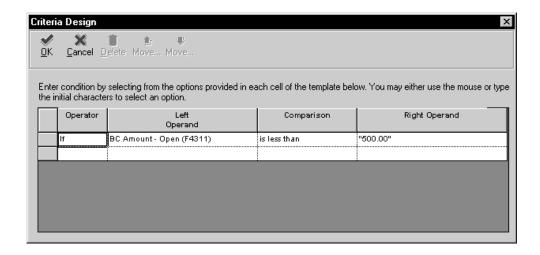
    The system must apply the logic created in the following steps to each report row before it appears on the report. Do Section events are processed immediately after each record is fetched, but before it is written to the report.

6. Click the If/While button.

    Hold your cursor for a few seconds over a button to see its title.

    The Criteria Design form appears.

7. Add the following event rule and click OK:
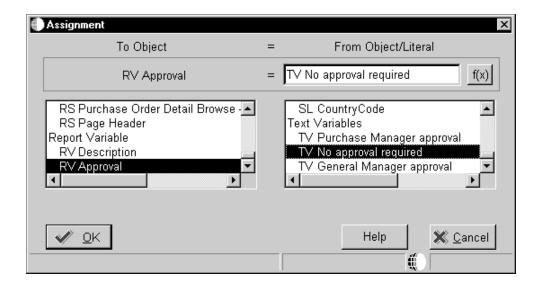
    •   If BC Amount – Open is less than 500

    BC stands for Business Column.

    The rule appears in the Event Rules Design form in an If/Then framework.

8. Click the line that says *If BC Amount – Open is less than "500"* and then click the Assignment/Expression button.

    The Assignment form appears.

9. From the To Object list, choose RV Approval. Then from the From Object/Literal list, choose TV No approval required.

   RV stands for Report Variable; TV stands for Text Variable. Ensure that you select RV Approval and not RC Approval (RC stands for Report Constant). *Constant* represents the header portion of the column; *variable* represents the body portion of the column.

10. Click OK.

    The system adds the appropriate Then clause to the event rule.

11. Click the line that says *Else* and then click the If/While button.

    The Criteria Design form appears.

12. Add the following event rule and click OK:
    - If BC Amount − Open is greater than or equal to 500
    - And BC Amount − Open is less than 1000

    The rule appears in the Event Rules Design form in an If/Then framework.

13. Click the line you just created and then click the Assignment/Expression button.

    The Assignment form appears.

14. From the To Object list, choose RV Approval. Then from the From Object/Literal list, choose TV Purchase manager approval.

15. Click OK.

The system adds the appropriate Then clause to the event rule.

16. Click the next line down that says *Else* and then click the If/While button.

17. Add the following event rule and click OK:

- If BC Amount – Open is greater than or equal to 1000
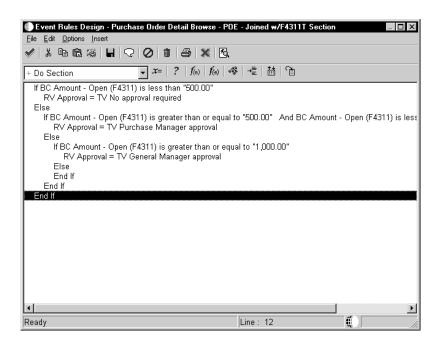
The rule appears in the Event Rules Design form in an If/Then framework.

18. Click the line that you just created and then click the Assignment/Expression button.

The Assignment form appears.

19. From the To Object list, choose RV Approval. Then from the From Object/Literal list, choose TV General manager approval.

20. Click OK.

The system adds the appropriate Then clause to the event rule.

21. Click the Save and Exit button.

Printing Lists of Information

The following examples illustrate types of reports that you could create to present lists of information:

- Printing all business units and descriptions for a company
- Printing a list of inventory items by stocking type
- Printing address book information in a card file format
- Printing an employee listing

▶ **To print all business units and descriptions for a company**

1. On Report Design, create a report object called Company/Business Units/Descriptions Listing.

2. Choose to create a group or columnar section.

   The advantage of using a group section is the ability to rearrange your fields. This lets you control the placement of fields as they appear on the report. If you choose a columnar section, you cannot change the format of the column headings over the data fields.

3. Attach business view V0006D - Business Unit Setup.

4. Choose to include the following data fields on your report:
   - Company
   - Business Unit
   - Description01

5. Sequence the report on the following fields:
   - Company
   - Business Unit

6. Determine through data selection the records to appear on your report. For example, if you want to display the business units for all companies less than Company 00050, your data selection would be "Where Company is less than 00050."

7. In Report Design, format your report to enhance the appearance.

▶ **To print a list of inventory items by stocking type**

1. On Report Design, create a report object called Inventory Item List.

2. Choose to create a group or columnar section.

3. Attach business view V4101A - Item Master Browse.

4. Choose to include the following data fields on your report:
   - Stocking Type
   - Description
   - 2nd Item Number

5. Sequence the report on the following fields:
   - Stocking Type
   - Description

6. Sort both of these fields in ascending order.

7. Determine through data selection the records to appear on your report.

▶ **To print address book information in a card file format**

1. On Report Design, create a report object called Address Book Information.

2. Choose to create a group section.

3. Attach business view V0101B - Address Book One-Line report.

4. Choose to include the following data fields on your report:
   - Name - Alpha
   - Address Line 1
   - City
   - State
   - Postal Code

5. Sequence the report on the following field:
   - Name - Alpha

6. Sort this field in ascending order.

7. Determine through data selection the records to appear on your report.

8. In Report Design, arrange the fields to print Name on the first line, Address on the second, and City, State, and Postal Code on the third.

9. Disconnect the Name, Address, City, State, and Zip Code constants from their variables, delete the constants, and print only the variable information on the report.

▶ **To print an employee listing**

1. On Report Design, create a report object called Employee Listing Information.

2. Choose to create a columnar section.

3. Attach business view V060116A - Employee Master.

4. Choose to include the following data fields on your report:
   - Name - Alpha
   - Business Unit - Home
   - Pay Class (H/S/P)

- Date - Original Employment
- Rate - Salary, Annual

5. Sequence the report on the following fields:

- Business Unit - Home
- Name - Alpha

6. Determine through data selection the records to appear on your report. For example, to list all employees on your report, your data selection could be "Where Search Type is equal to E."

Printing Lists of Information Grouped by a Specific Field

The following examples illustrate types of reports you could create to present lists of information grouped by a specific field:

- Grouping a list of inventory items by stocking type
- Totaling the number of business units per company

▶ **To group a list of inventory items by stocking type**

Printing lists of information on a report might be more meaningful to the reader if a specific field, for example, Stocking Type, grouped the information. Adding a level-break header to a group or columnar section enables you to group information by a specific field.

1. On Report Design, open your existing report called Inventory Item List.

2. Click the detail section to which you want to attach a level-break header.

3. From the Section menu, choose Create.

4. From Create, choose Level Break Header.

   If the Level Break Header selection is grayed out on the Section menu, you did not click on the detail section.

   The Level Break form appears.

5. Under the Show heading, choose the following option:

   - only existing sort columns

      This option displays the fields you chose as your data sequencing fields when you created the detail section.

6. Choose the Stocking Type field to designate it as the level-break field.

You can designate another field as a level-break field by modifying the section properties of the level-break header.

7. Turn the *Display selected column as part of this section* option on.

8. Click Finish.

9. Click the variable portion of the level-break header field.

10. From the Edit menu, choose Associate, and then choose Description.

    The cursor changes, allowing you to add the description to the level-break header.

11. Place the Description field anywhere within the level-break header. As with any field, you can drag it to a new location.

12. To change the properties of this field, double-click the field.

    The Associated Description Properties form appears. Change options as required.

13. In the detail section, double-click the variable or column variable portion of the level-break field.

    The Variable or Column Variable Properties form appears.

14. On the Advanced tab, turn the Visible option off.

    If you ever need to make this field visible again, you can turn the Visible option on.

See Also

- *Creating a Level-Break Header* for additional information about level breaks

- *Associating a Description with a Level-Break Header* for additional information about adding a description field to a level-break header

- *Hiding the Level-Break Field in the Detail Section* for information about hiding the level-break field to prevent it from showing in both sections

▶ **To total the number of business units per company**

Printing lists of information might be more meaningful if the lists could be totaled to give critical information. For example, you might want to print out all business units and their descriptions for your companies and total the number of business units that exist for a specific company. Adding a level-break footer to a group or columnar section gives you this capability.

1. On Report Design, open your existing report called Company/Business Units/Descriptions Listing.

2. Click the detail section to which you want to attach a level-break footer.

3. From the Section menu, choose Create.

4. From Create, choose Level Break Footer.

    If the Level Break Footer selection is grayed out on the Section menu, you did not click the detail section.

    The Level Break Footer form appears.

5. From Level Break Footer, click the following options, and then click OK:

    *   Group Section

    The Level Break form appears.

6. Under the Show heading, choose the following options:

    *   only existing sort columns

        This option displays the fields you chose as your data sequencing fields when you created the detail section.

7. Choose the Company field to designate it as the level-break field.
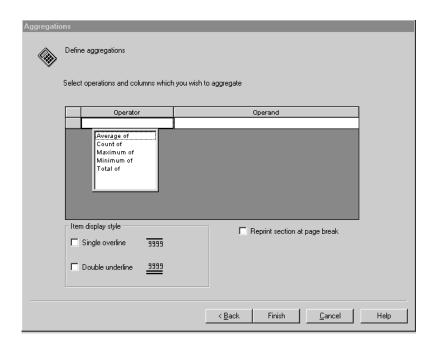
    You can designate another field as a level-break field by modifying the section properties of the level-break footer.

8. Make sure the *Display selected column as part of this section* option is turned off.

9. Click Next.

    The Aggregations form appears.

    An *aggregate object* is one that holds the result of a calculation on the values in other fields. For example, you might want to know the total of business units for a specific company.

10. Choose the following option for the Operator:

   • Count of

11. Choose the following option for the Operand:

   • Business Unit

12. Click one of the following options under the Item display style heading:

      • Single overline

      • Double underline

13. Click *Reprint section at page break,* if necessary.

    This option causes the last line from the previous page to be reprinted as the first line of the next page.

14. Click Finish.

    At any time in the future, you can modify the aggregate object by clicking the level-break footer and choosing Add Aggregates from the Section menu.

15. Click the level-break footer section.

16. From the Insert menu, choose Constant Field.

17. Insert the constant field by clicking the level-break footer where you want the object to appear.

18. Double-click the constant field to open the Constant Properties form.

19. Change the Name field to a meaningful description.

See Also

• *Creating a Level-Break Footer* for additional information about adding a level-break footer to a report

• *Inserting a Description into a Level-Break Footer* for additional information about making a level-break footer more meaningful with a description

Printing Totals and Auditing Numeric Data

Suppose a report is needed to help put a new sales commission structure into place in your company. This report needs to show projected sales commissions to be paid on all current sales orders. The standard commission is 5% of the extended price. An additional 1% bonus is paid for high volume orders. The following example illustrates a report you could create with a tabular section to present totals and audit numeric data:

▶ **To print totals and audit numeric data**

1. On Report Design, create a report object called Sales Order Detail.

2. Choose to create a tabular section.
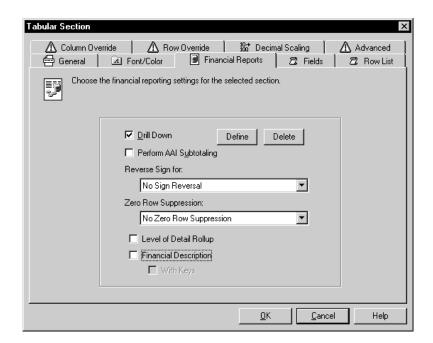
Tabular sections provide automatic totaling for any field with a numeric value. If the total is meaningless, you might need to use the advanced options on a variable to suppress the totals. In addition to totaling, tabular sections let you drill into the application to view the source of any questionable data in your report.

3. Attach business view V4201C - Sales Order Header to Sales Order Detail - All.

4. Choose to include the following data fields on your report:

    - Description field (automatically added)

      This field prints a description for each field selected as a level-break item.

    - Date - Order/Transaction

    - Quantity Shipped

    - Amount - Extended Price

5. Sequence the report on the following fields and select these fields as level-break items:

    - Original Order Number

    - 2nd Item Number

6. Determine through data selection the records to appear on your report. For example, apply to each of the fields used for column selection the condition "greater than Zero."

7. In Report Design, insert three Numeric Variables to the report to create columns to hold the calculations you are going to create.

8. Name the columns the following:

    - 5% Commission

    - High Volume 1% Bonus

    - Total Commission

9. Attach event rules to define 5% commission, High Volume 1% Bonus, and Total Commission.

10. Focus on the tabular report section for which you want to activate the drill down feature.

11. Do one of the following:

    - Double-click the report section.

    - From the Section menu, choose Section Properties.

    The Tabular Section form appears.

12. Click the Financial tab or the tab that relates to the director template, for example, Financial Reports.

13. Click the following, and then click Define:

    • Drill Down

    The Work With Applications form appears.

14. On Work With Applications, click Find.

    This form displays a list of all available applications. You can limit your search by entering search criteria in the QBE line.

15. Choose an application, and then click Select.

    Choose an application to be called from the report. This is the application that you want to *drill* into to investigate balances. For this example, choose P4210 Sales Order Entry.

    The Work With Forms form appears.

16. On Work With Forms, choose a form, and then click Select.

    Many OneWorld applications consist of multiple forms. Choose the form to open when you drill into the application. For this example, choose W4210A Sales Order Detail Revisions.

    If there are versions for a given form and application, the Work With Versions form appears.

17. On Work With Versions, do one of the following:

    - Choose a version, and then click Select.

      For this example, choose ZJDE0001 Sales Order Entry -SO Order Type.

    - Click Close to avoid choosing a specific version.

    The Form Interconnections form appears.

18. On Form Interconnections, from the Available Objects column, double-click the object in the Available Objects list that you want to pass to the Value column.

    The values to be passed are determined by the form you have specified in the drill down. If you access the form you will see what fields need to be populated in order to display data in the grid. These are the values you need to include in your form interconnection data structure.

19. Click the Directional arrow until it toggles to the right arrow icon (indicating that the data flows from the source or report to the target or application). Then click OK.

20. From Tabular Section, click OK to return to J.D. Edwards Report Design form.

21. Sequence the report on the following fields:

    - Company
    - Business Unit

22. Determine through data selection the records to appear on your report. For example, if you want to display the business units for all companies less than Company 00050, your data selection would be *Where Company is less than or equal to 00050.*

23. In Report Design, format your report to enhance the appearance.

See Also

- *Reviewing an Audit Trail* for information about viewing the detail about the data on the report

Creating Journal Entries with Report Design

With Report Design, you can create a report that will create journal entries that can then be posted to the general ledger using the General Accounting system. For example, you might generate journal entries for budgeting purposes.

You can submit a version of your report in proof or final mode. Both modes will produce a report. If applicable, Work Center error messages will be created as well. In final mode, if there are no errors, F0911 records will be created that can be posted to the general ledger. Prior to posting, these journal entries can be deleted through the General Accounting system if necessary.

Perform the following tasks:

- Creating journal entries with Report Design
- Entering journal entry specifications

▶   **To create journal entries with Report Design**

1. Create a financial report to perform the required calculations; ensure that you create a version of the report.

2. On Report Design, choose the tabular section of the report and from the Column menu choose Create and then choose Smart Field.

   If you have clicked one of the existing columns, the new smart field column will be placed to the right of that column. Otherwise, the new smart field column will appear to the right of the last column in the report.

   The Create New Smart Field form appears.

3. Choose the data item FINRPTJE – Create Journal Entry and click Next.

   The Smart Field Name form appears.

4. From the drop-down menu in the Select Report Variable field, select the column in the report upon which you want to base the journal entry on and click Next.

   The journal entry column must be based on another column. Because of this, the journal entry column is often hidden so that it will not appear on the report.

   The Smart Field Parameters form appears.

5. This director leads you through the steps required for setting up the smart field. Enter your choices as appropriate and click Next to move to the next task.

   The report has two results based on the variable in the column you choose to be the balance column; the originating account is debited the balance amount, and the target account is credited the balance amount. For example, due to a clerk input error, you might want to transfer 100 U.S. dollars from the revenue account 61.5100 to the account 63.5100. The resulting journal entry would show values similar to the following:

61.5100	63.5100

100.00	0.00

100.00DB

100.00CR

0.00	100.00

6. On the final screen, click Finish.

   Any values appearing on the Finish form have no effect on how the smart field functions.

   The column you just created appears in the tabular section.

7. Save and close the report.

▶ **To enter journal entry specifications**

1. Access the processing options for your version and click the JE Creation tab.

2. Complete the following fields and click OK:

   - Report Journal Entry Creation Mode

     Both modes create a report and any applicable Work Center errors. In final mode, F0911 records are created if no errors are detected.

   - JE G/L Date

     This value can be different from the date that is used to base the report on.

   - Reverse Journal Entries

   - JE Document Type

     You should use a specific user-defined document type for Report Writer-created journal entires. In this way, journal entries created by Report Writer can be easily identified.

   - JE Name – Alpha Explanation

3. Submit the report either in proof or final mode.

When Report Writer creates journal entries, they must then be posted to the general journal using the General Accounting system. The journal entries can be deleted from the system before they are posted.

4. If you submit the report in final mode, you can examine the journal entries by checking the Report Writer JE Batches folder in your Workflow Center.

Field	Explanation
Report Journal Entry Creation Mode	Specifies whether to process the report in preliminary or final mode. Valid values are: Blank – Edits the journal entries and sends any errors to the work center. Does not create the journal entries. Default value. 1 - Creates the journal entries and sends the batch number created to the work center.
JE G/L Date	Enter the G/L date to assign to the journal entries created. If this field is left blank, the current financial reporting date will be used based on the company being processed.
Reverse Journal Entries	Determines whether reversing journal entries are created. When used, this creates a reversing journal entry for the next period. Values are: R Journal entries are reversing Blank Journal entries are not reversing
JE Document Type	Specifies the document type that will be used to create journal entries for this report.
JE Name – Alpha Explanation	The explanation used when journal entries are created. If you leave this field left blank, the text "Created by Report Writer" is used.

Appendix D – J.D. Edwards Reports

J.D. Edwards provides many reports with OneWorld, including reports for:

- General Accounting
- HR and Payroll Foundation
- Inventory Management
- Product Data Management

You can use these reports as they are or you can modify them. Refer to the *Reports Guide* for examples of the output from these reports. The following lists contain some of the reports that J.D. Edwards provides.

General Accounting

R00640 Supplemental Data by Data Type

R00650 Supplemental Data by Business Unit

R007011 Unposted Batches

R007021 Transactions To Batch Headers

R007031 Batch To Detail/Out Of Balance

R09131 Refresh Reconciliation File

R09301 General Journal by Batch Report, Unposted

R093021 Indexed Allocations Compute and Print

R093022 Variable Numerator Compute and Print

R09311 General Journal by Account

R09321 Transaction Journal

R09410 Trial Balance Report

R094121 Trial Balance By Object Report

R09415 Monetary Account Valuation

R09420 G/L by Business Unit

R09421 G/L by Object Account

R09470 General Ledger by Category Code

R09472 Debit/Credit T/B by Category Code

R097001 Companies in Balance

R097011 Intercompany Account Balance Integrity Report

R097021 Transaction w/o Account Master

R097031 Account Balance w/o Account Master

R09705 Compare Account Balances to Transactions

HR and Payroll Foundation

R051450 Job Evaluation Factor Data

R05229 Journal Batch Proof

R053001 Time and Pay Entry Register

R058515 EE0–1 Employment Data

R064011 Employee Roster

R064021 Employee Roster with Rate

R080400 Employee Data by Data Type

R080410A Employee Supplemental Data

R080423 Employee History Log

R080424A Employee Salary History Analysis

R080430 Employee Turnover

R080435 Workforce Analysis

Inventory Management

R094121 Trial Balance by Object Account

R09421 General Ledger by Object Account

R41410A Print Cycle Count Sheets

R41411 Select Items for Count

R41510 Price Book

R4152 Buyers Guide

R41530 Stock Status

R41543 Item Ledger/Account Integrity

R41544 Item Balance/Ledger Integrity

R41560 Item Master Directory

R41580 Cost Analysis (Unit Cost Warnings)

R41590 Inventory Valuation Analysis

R4164 ABC Analysis

R41700 Margin Analysis (Inventory Cost/Price Comparison)

Product Data Management

R30450 Kanban Size Calculation

R30460 Single Level Bill of Material

R30520 Where Used Update

Appendix E – Smart Fields

Smart Fields are data dictionary items with attached business functions. The business functions include a named mapping that maps the source for each parameter of the business function data structure. This simplifies selecting a data item with particular capability. Instead of needing to know which business function to use and what parameters to pass, the user merely selects a data item that inherently has this information. Smart fields can be used for deriving column headings or to populate a value in a report section using the Report Design tool.

Smart fields are reusable objects that simplify using business functions in event rules. They are data dictionary items (group K) with business functions attached. The business function performs a specific task for the smart field such as a calculation.

For example, you can create a smart field to add sales values for period 1, period 2, and period 3 to calculate a First Quarter column in a report. This calculation will be performed by the business function for each row of data fetched into the report. Every time you use this smart field, it will perform this calculation. Report Design uses the smart field to do the calculation automatically.

With the use of this smart field, you will require only one column in your report that displays First Quarter sales. Without this smart field, your report would require four columns: one for each period and a quarterly amount column for the total. Additionally, you would need to write an event rule to add each period to populate the quarterly amount column. If you wanted to display a total for each quarter, you would need to write four event rules.

Smart fields can be created for any detail section. Each business function can be placed on any event that is valid at that point. In addition to defining the smart field, you must also define a column heading and data selection.

When the appropriate smart fields exist, you can create a smart field template to organize your smart fields. For example, existing J.D. Edwards smart field templates are organized by usage in Financial Reports, Fixed Assets, and 52Period Accounting.

After the smart field is organized into an appropriate smart field template, a configurable director is created for all smart fields located in that template. You can use the configurable director to define report processing options, business views, and even the drill down feature in a tabular reporting section. Information included in this configurable director leads the report creator through the process of creating a report using this group of associated smart fields. The smart

field template and configurable director allow you to organize and present your smart fields for ease of use in Report Design.

This topic uses the Quarter scenario described above to demonstrate the following:

❑ Creating a smart field

❑ Creating a smart field template

❑ Creating a report director template

❑ Creating a new report using smart fields

❑ Understanding the report

The result is an application report you can use in Report Design to create a report with quarterly total columns.

Creating a Smart Field

The first step in making a smart field available to a user through the Director is to create the smart field. This topic demonstrates creating a smart field that will total sales values for period 1, period 2, and period 3 to calculate a First Quarter column in a report. The smart field will be named Quarterly Amount.

The basic components of a smart field are:

- A data dictionary item (user prompt)
- A data structure
- A named mapping
- A business function or named event rule
- A smart field data item

Complete the following tasks:

- Creating the data dictionary item
- Defining the data structure
- Defining named mapping
- Performing calculations with business functions and named event rules
- Creating a data dictionary smart field item

Creating the Data Dictionary Item

The first component required for a smart field is a data dictionary item to be used as a user prompt. This item must be a standard data dictionary item using a D glossary group. This data item serves as a prompt for the report creator. When using the Quarterly Amount smart field, the report creator will be prompted for a value, which will represent the quarter for which sales totals should be displayed.

Therefore, if the report creator wanted to show a column for the first quarter, the smart field would then add period 1, period 2, and period 3 sales to display a total for the first quarter. If the report creator added a second sales column and chooses to use the Quarterly Amount smart field again for the second quarter, the smart field would then add period 4, period 5, and period 6 sales together to display a total for the second quarter.

This data dictionary item prompts the user for a value while creating the report with the Director. The form used to prompt the user in Report Design is called Smart Field Parameters. The name of the prompt appears on this form as well as in the help entered in the glossary.
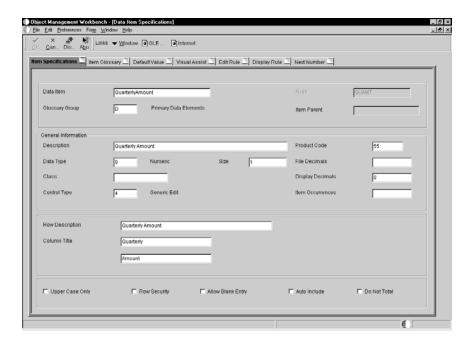
When you create or copy and modify a data item to be used as a user prompt, be sure to enter the glossary text. The text should explain the purpose of the data item and will appear on the Smart Field Parameters form in Report Design. This text will assist the user in determining which value to enter in the user prompt.

▶ **To create the data dictionary item**
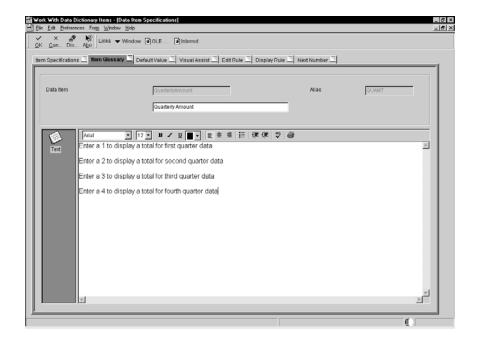
1. Create a new data dictionary item and define its item specifications as follows:

   - DataItem: QuarterlyAmount
   - Alias: QUAMT
   - Glossary Group: D
   - Description: Quarterly Amount
   - Product Code: 55
   - Data Type: 9
   - Size: 1
   - Display Decimals: 0
   - Control Type: 4
   - Row Description: Quarterly Amount
   - Column Title (top field): Quarterly

- Column Title (bottom field): Amount

2. Click the Item Glossary tab and enter the following four text lines:

Enter a 1 to display a total for first quarter data.

Enter a 2 to display a total for second quarter data.

Enter a 3 to display a total for third quarter data.

Enter a 4 to display a total for fourth quarter data.

This is the text that appears on the Smart Field Parameters form in Report Design to tell the report creator what the valid input values are.

See Also

- *Defining a Data Item* in the *OneWorld Development Tools* guide for detailed instructions on creating a data item

Defining the Data Structure

The second component required for a smart field is a data structure. A data structure is a list of parameters used to pass values between your report and the database tables, and it contains all data items required to complete the function of the smart field. The Quarterly Amount smart field requires twelve periods for use in calculating each quarter. It also requires a return value to hold the value that the smart field calculates for each quarter. Each of these data items must be added to the data structure for the smart field.

All data items added to this data structure must reside in the same business view. If you find that you need to add data items that are not included in single business view, you will need to create a business view with all of the required data items.

See Also
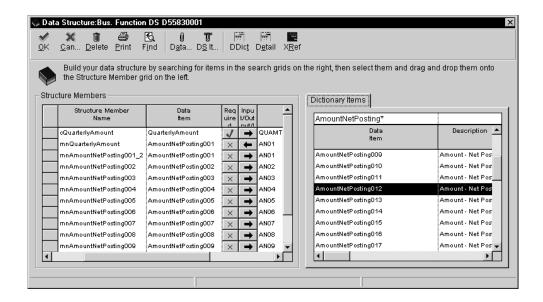
- *Business View Design* in the *OneWorld Development Tools* guide for information about creating business views
- *Data Structures* in the *OneWorld Development Tools* guide for detailed information about creating data structures

▶ **To define the data structure**

1. Create a new data structure named D55830001 and in Data Structure Design, search for the data dictionary item QuarterlyAmount.
2. Drag the data dictionary item QuarterlyAmount to the left, and then rename the Structure Member Name to cQuarterlyAmount.
3. Make cQuarterlyAmount a required field and place a right-pointing arrow in its Input/Output column.
4. Search for the dictionary item AmountNetPosting*. (Be sure to use the asterisk.)
5. Drag the dictionary item AmountNetPosting001 to the left, and then rename the Structure Member Name to mnQuarterlyAmount.
6. Place a left-pointing arrow in the Input/Output column.

7. Drag the dictionary items AmountNetPosting001 through AmountNetPosting012 to the left and place a right-pointing arrow in the Input/Output column for each item.

Notice how the Required field displays a check mark for the Quarterly Amount data item. This is the user prompt.

Notice that there are two AmountNetPosting001 data items. The Structure Member Name has been changed on the first AmountNetPosting001 so that this data item can be used as the return value to hold the Quarterly Amount after it is calculated. The remaining AmountNetPosting data items represent each of the twelve months or periods needed to calculate each quarterly sales figure.

Defining Named Mapping

The named mapping is a part of the data structure and is used only for smart fields. The named mapping defines each of the data items included in the data structure. It can also hold default values to be used for the business function so that the values do not need to be passed in the Report Design Tool.

The named mapping is used to map the source for each parameter (or data item) of the data structure. For example, source values are determined for the prompts, tables, and return values. Data structure data items can originate from one of several sources:

Literal	A literal is used to assign a specific value to the data item. If your calculation will need to use a tax rate for instance, enter the tax rate, in the value field.
Prompt	Specify the data item to be used as the prompt. In our example the Quarterly Amount data item is the prompt. In Report Design, the report creator will be prompted to enter the quarter to calculate for the report.
Table	Specify the data items that originate from a table. Browse to locate the table name and associate the data item in the data structure with a data item from the table.
Data Dictionary Item	Use this option if you will need to pass values from a processing option into your data structure. Some values used in smart fields might be known to a business function without requiring user input. For example, the desired fiscal year or period might already be specified in a processing option that can be passed into the data structure. If this is the case, the data item needs to be defined as a data dictionary item and a processing option in the named mapping.
System Value	Associate system value as the origin of the data item and browse for the appropriate system value. These system values, such as system date, are used throughout the system. System values are fetched from the F98VAR table.
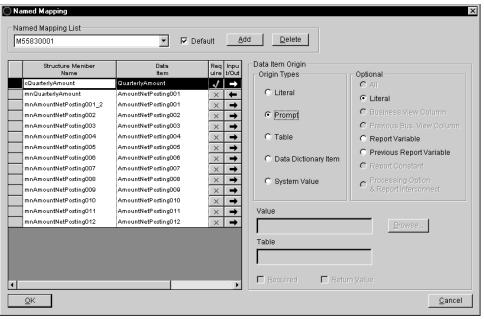
▶ **To define named mapping**

1. Launch the named mapping form by choosing Named Map from the data structure Form menu or exit bar.

2. Click Add and add the Quarter scenario's data structure (M5583001) to the Named Mapping List.

3. Select cQuarterlyAmount and click the Prompt radio button under Origin Types.

   In the Quarter scenario's named mapping, the first data item in the data structure, Quarterly Amount, is a user prompt. In the named mapping, it
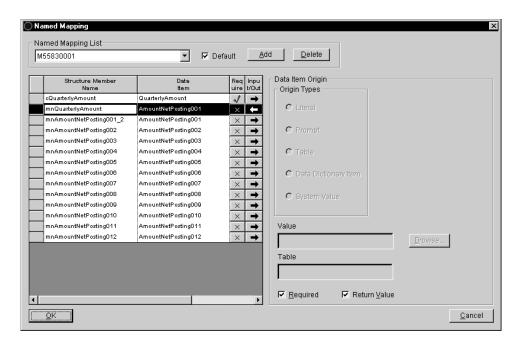
must be defined as a prompt by performing this step. The user prompt should have been set as a required item in the actual data structure.

4. Select mnQuarterlyAmount and indicate that it is a returned value by clicking the Return Value checkbox.

    Note: The Required checkbox is selected automatically. You cannot inactivate the Required checkbox for a Return Value.
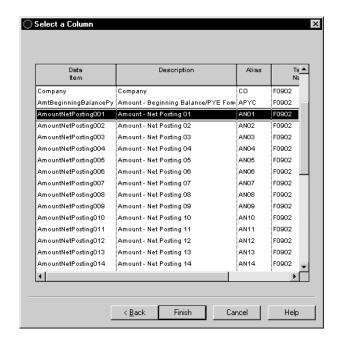
5. Select mnAmountNetPosting001_2 and click the Required checkbox.

6. Define mnAmountNetPosting001_2 as originating from a table by selecting the data item and then clicking the Table radio button in Origin Types.

7. Click Browse to bring up the Select a Table form, search for the table F0902, and click Next.

    This is how you indicate the table where the data item can be located. The last twelve data items in the Quarter scenario happen to reside in the F0902 table.

8. Select AmountNetPosting001 and click Finish.
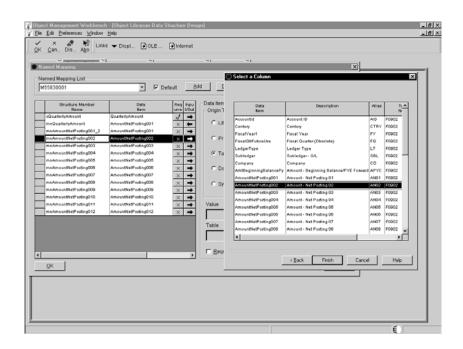
The Select a Column form is where you indicate which data item in the table should be the basis for the data item in the data structure. These data items must be defined as required using the Required checkbox at the bottom of the form for your smart field to function properly.

9. Repeat steps 5–8 for the remaining 11 data items, mapping structure item mnAmountNetPosting002 to table item AmountNetPosting002, structure item mnAmountNetPosting003 to table item AmountNetPosting003, and so forth.

    Hint: If you position the Select a Column form as shown below, you can reference which data item you are currently associating.

Performing Calculations with Business Functions and Named Event Rules

You can use either a business function or a named event rule to set up the criteria for the smart field. Business functions are written in C language, while named event rules are written in scripting language using the OneWorld toolset.

The advantage of using a business function or named event rule is that they are reusable. The code is written once and can be used in multiple events and reports. In the Quarter scenario, without the named event rule, you would require four columns in your report, one column for each period and a total column for the quarterly amount. You would then need to write an event rule to add each period to populate the quarterly amount column. If you wished to display a total for each quarter you would need to write four different event rules. Instead, with the use of the named event rule, you will write the criteria once and reuse it for each of the four columns displaying quarterly amounts. This same named event rule can be used in other reports as well.

The next step in the Quarter scenario is to create a named event rule to perform the smart field's calculations. When a named event rule is created, a data structure is associated with it. For the Quarter scenario, you will need to associate the Quarterly Amount data structure to this named event rule.

▶ **To perform calculations with a named event rule**

1. Create a named event rule.

2. Create a function called QuarterlyAmount and associate the Quarterly Amount data structure with it.

QuarterlyAmount will become the name of the event rule.

3. Edit the function and enter the event rule as discussed below.

   In the Quarter scenario, the named event rule will perform the following calculation to accumulate quarterly amounts:

```
Sales for Period 1 + Sales for Period 2 + Sales for Period 3
```

   One item to define in the named event rule is what to do with the value that the user inputs. For example, if a user inputs a 1 in the user prompt, the user expects to see sales totals for the first quarter. Therefore, the named event rule must set up an If/While statement to that effect. An If statement will be added to the named event rule as follows:

```
If <user prompt> is equal to a 1
     Sales for Period 1 + Sales for Period 2 + Sales for Period 3
     Else
```
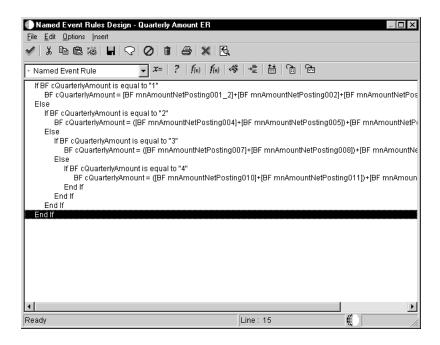
   Related information for each option for displaying data needs to be available to the user. Therefore, the following information must be included in the named event rule as well:

```
 If <user prompt> is equal to a 2
     Sales for Period 4 + Sales for Period 5 + Sales for Period 6
     Else
 If <user prompt> is equal to a 3
     Sales for Period 7 + Sales for Period 8 + Sales for Period 9
     Else
 If <user prompt> is equal to a 4
     Sales for Period 10 + Sales for Period 11 + Sales for Period 12
     End If
     End If
     End If
     End If
```

   When you are finished typing it, the event rule should appear as follows:

4. Save the event rule and click OK.

5. On Object Librarian Business Function Design, click the Design Tools tab, and then click Build Business Function.

See Also

- *Business Functions* and *Creating Business Function Event Rules* in the *OneWorld Development Tools* guide for detailed information about creating business functions and named event rules

Creating a Data Dictionary Smart Field Item

The last component required for a smart field is a data dictionary smart field item. This data item defines the business function or named event rule and named mapping associated with the smart field. Smart field data dictionary items and any other data dictionary item differ in two ways: glossary group K and information in the Smart Field tab.

Before You Begin

❑ Check in the data structure before creating the smart field data dictionary item so that the system can locate the named mapping.

▶ **To create the data dictionary smart field item**

1. Create a new data dictionary item and define its item specifications as follows:

- DataItem: QuarterlySales

- Alias: QSALES

- Glossary Group: K

- Description: Quarterly Sales

- Product Code: 55

- Data Type: 9

- Size: 15
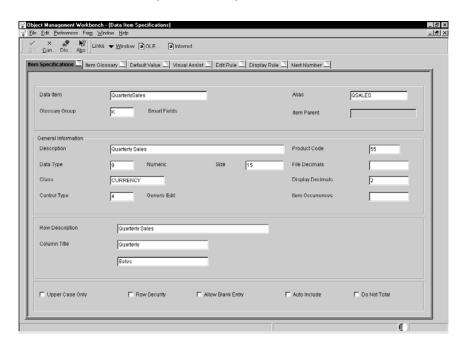
- Class: CURRENCY

- Display Decimals: 2

- Control Type: 4

- Row Description: Quarterly Sales

- Column Title (top field): Quarterly

- Column Title (bottom field): Sales

2. From the Form menu, select Smart Field to launch the Smart Field Criteria form.

3. Associate the QuarterlyAmount business function (the named event rule that you created in the last topic) with the smart field.

4. In the Event Name column, indicate from which event the smart field can be called.

    The Quarterly Amount smart field in the Quarter scenario will probably be used in financial reporting, which generally uses a tabular section. Therefore, the column inclusion event is a good choice for this smart field.

5. In the Named Mapping column, associate the named mapping you set up earlier with the smart field.

   The last step on this form is to associate the named mapping that this smart field will use.

6. As you did with the user prompt data dictionary item, enter help text using the Item Glossary tab for this smart field data item.

See Also

- *Defining a Data Item* in the *OneWorld Development Tools* guide for detailed instructions about creating data items

Creating a Smart Field Template
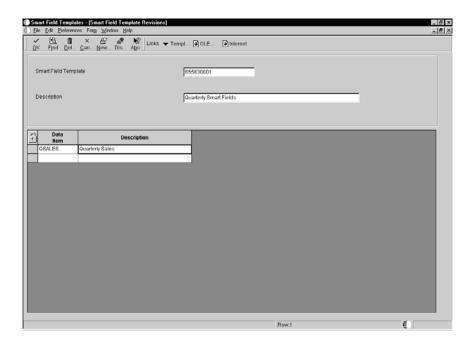
The smart field template is used to group smart fields that will be included in a single configurable director that prompts the report creator for data. Because you will define a business view and other reporting and processing components in this configurable director, the smart fields in a given template must be alike. For example: the Financial Report smart fields included in smart field template S09001 all use the same business view, processing options, and data sequencing and use the same configurable director.

▶   **To create a smart field template**
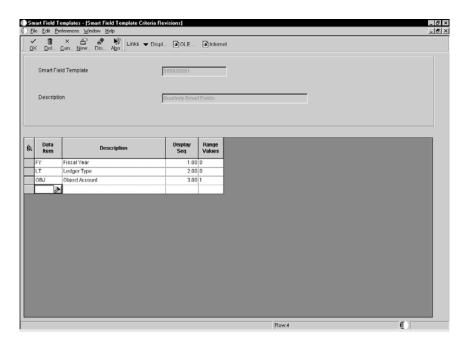
1. From the Advanced Report Setup menu (GH9141), choose Smart Fields Templates.

2. Create a new smart field template called S55830001 with the description: Quarterly Smart Fields.

3. Associate the QSALES data dictionary item with the template, and then click OK.

The Smart Field Template Criteria Revisions form appears.

4. Indicate smart field data selection prompts by selecting the following three data items: Fiscal Year (FY), Ledger Type (LT), and Object Account (OBJ).

In the Quarter scenario, the report creator must be prompted to enter values for Fiscal Year, Ledger Type, and Object Account. Since Fiscal Year and Ledger Type do not require a range of values, the Range Values field can be set to 0. However, Object Account may include a range of accounts, so the Range Values Field must be set to 1.

The system will prompt the report creator for these three values in the sequence shown via Smart Field Data Selection forms. Note that pre-determined data selection can be overridden in Report Design.

5. Click OK to save your changes.

See Also

- *Working with Smart Field Templates* for more information about creating smart field templates

Creating a Report Director Template

The report director template is used to create a director that leads the report creator through the steps of using the smart field. This director is similar to the Director you are familiar with using when you create a simple columnar or group report template.

▶ **To create a report director template**
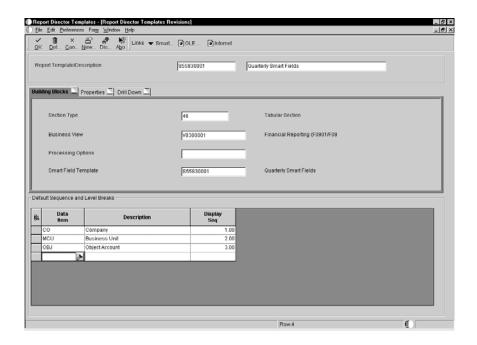
1. From the Advanced Report Setup menu (GH9141), choose Report Director Templates.

2. Create a new report director template called S55830001 with the description: Quarterly Smart Fields.

   The J.D. Edwards naming convention is for the report director template to share the same name as the smart field template. This report director name appears in the Application Report drop-down list on the Report Design Director's Welcome form when creating the report in Report Design. The description appears on the Business View Selection Options form when creating a report template.

3. Click the Building Blocks tab and enter 46 in the Section Type field to instruct the director that this smart field will be used in a tabular section.

   Although you can use any detail section when setting up a report director template, the Quarter scenario uses a tabular section.

4. Attach business view V8300001 with no processing options.

   The business view you select must include all of the data items used in the data structure associated with the smart field. It is this business view that is used when the report creator selects the option, *I'll use the pre-defined business view* when using the Director in Report Design.

5. Enter S55830001 in the Smart Field Template field.

6. Enter Company (CO), Business Unit (MCU), and Object Account (OBJ) in the Default Sequence and Level Breaks grid.
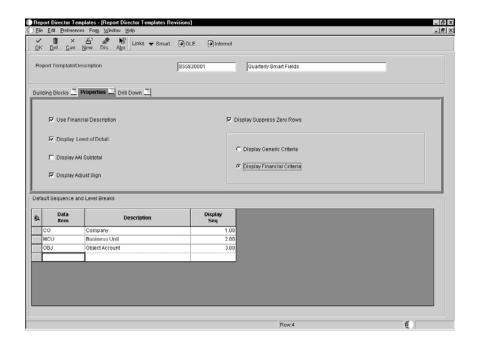
    The data items on this grid appear on the Director's Data Sequencing Help form. The first two data items entered in this grid are used as Level Break fields when using a tabular section. The remaining fields are used to sequence the data in the report. These choices can be overridden.

    The Quarter scenario report template uses Company, Business Unit, and Object Account to sequence the data. Company and Business Unit are the level breaks.

7. Click the Properties tab and select the following:

    - Use Financial Description
    - Display Level of Detail
    - Display Adjust Sign
    - Display Suppress Zero Rows
    - Display Financial Criteria
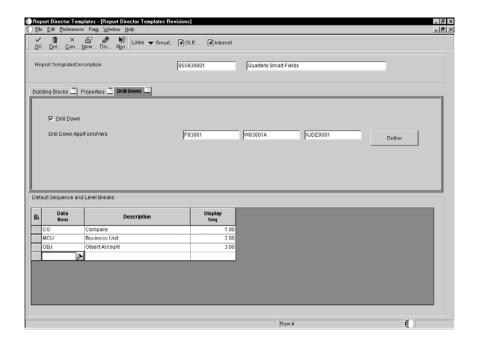
Many of these choices are specific to financial reporting. Even if you are creating a financial report director template, you might not want the report creator to have some of these options available to them. If you turn off the Display Level of Detail, for example, the report creator will be unable to choose that option when moving through the Director. The option in the section properties will be grayed out as well. Therefore, the report creator will be unable to control the level of detail in the report.

This tab is only available in conjunction with a tabular section.

8. Click the Drill Down tab and select Drill Down. Use the P83001 application, the W83001A form, and the XJDE0001 version.

Remember that the drill down feature takes time and resources to process. The report creator is not required to enable drill down when creating the report. If drill down is requested, however, these settings become the default drill down values.

The Define button leads you through search and select forms to complete your application, form, and version choices. The actual form interconnect mapping must be accomplished when creating the report template itself.

This tab is only available in conjunction with a tabular section.

9. Click OK.

See Also

- *Working with Smart Field Templates* for more information about creating smart field templates
- *Financial Report Writing Guide* for more information about financial reporting topics
- *Working with the Drill Down Feature* for more information about using drill down

Creating a New Report Using Smart Fields
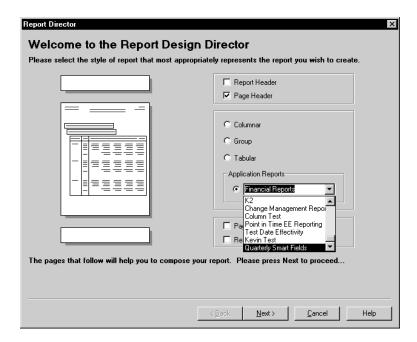
As the final step in this process, you should test the template. For this example, it is useful to look at how the Director displays all the information to the report creator so that you can see precisely from where the data originates and how the

choices you made when setting up all of the objects to this point affect what the report creator sees.

▶ **To create a new report using smart fields**

1. Create a new report and launch the Director.
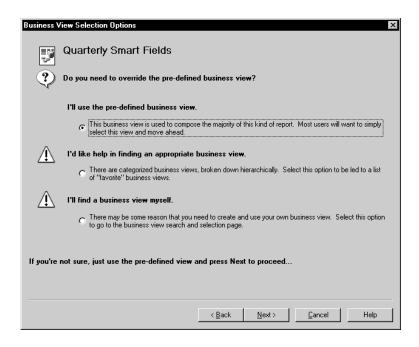
2. Create an application report, select Quarterly Smart Fields, and click Next.

    The last item in the list is the Quarterly Smart Fields report director template you created. The name comes from the description you entered when you created the report director template.

    The Page Header Details form appears.

3. Accept the page header defaults and click Next.
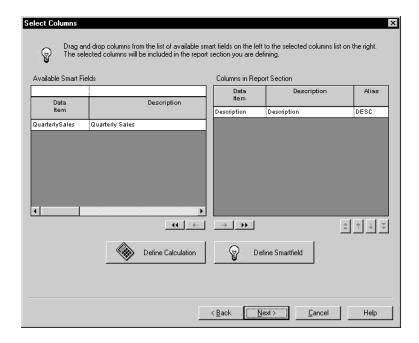
4. On Business View Selection Options, choose to accept the pre-defined business view and click Next.

    The name of the report director template that you created appears at the top of the Business View Selection Options form.

    Displayed are three options for choosing a business view, one of which is to use the pre-defined business view. This is the business view V830001 that you entered on the Building Blocks tab of the report director template. It is set as the default but you can choose one of the other two options to override this default.

    If the report creator accepts the pre-defined business view, the Director uses the business view V830001 that you indicated when you created the report director template. Of course, the report creator can select a different business view.
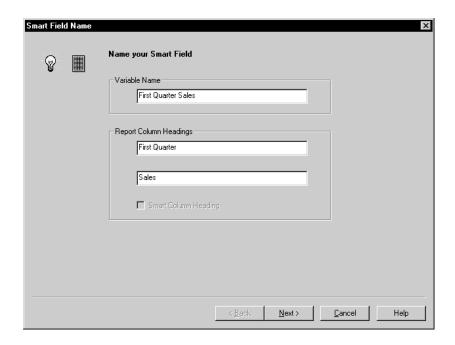
5. On Select Columns, drag the QuarterlySales smart field from the Available Smart Fields section to the Columns in Report Section.

    This list comes from the smart field template you associated with the report director template. QuarterlySales is the name of the smart field you created and associated with the template. Because you created only the one smart field, Quarterly Sales is the only smart field displayed.

    The smart field director launches and displays a set of forms beginning with the Smart Field Name form.

6. Change the Variable Name field to First Quarter Sales and the first Report Column Headings field to First Quarter.

You set the default variable name and the names of the column when you created the smart field.

The Smart Field Parameters form appears, prompting you to enter the quarter for the column.

7. Enter a 1 in the field and click Next.

    This prompt exists because of the data dictionary item QuarterlyAmount that you created. This is the data dictionary item created as a user prompt for the first component of this smart field. Furthermore, notice the item glossary text you entered when you created the data dictionary item appears here to tell the report creator what the applicable values are.

    The Smart Field Data Selection form appears.

8. To display results for the year 2005 with a ledger type of actual amounts of the two accounts that hold sales data (Sales – Product Class 1 and Sales Product Class 2), enter 05 in the Fiscal Year field, AA in the Ledger Type field, 5100 in the Object Account: From field, and 5200 in the Object Account: To field. Then click Finish.

    The items on this form come from the Smart Field Template where you attached the smart field data dictionary item and defined the data selection fields. In the smart field template you can include up to five data items. Object Account was set up as a range of values, so it takes up the space of two data items on this form.

    An alternate way to use this smart field is to show trend information. For example, instead of having four columns, in your report each representing
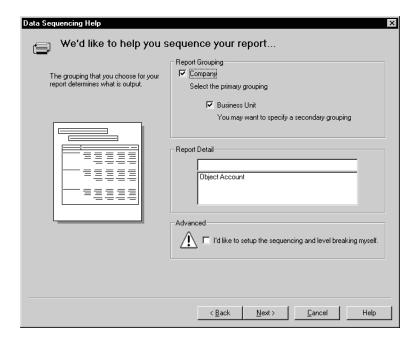
a quarter of the current year, you could have four columns where each column represents the first quarter of four consecutive years in order.

Note: If you intend to have the same data selection on each smart field column, you can leave this form blank and just fill in the data selection for the entire report.

Defining data selection for the columns might be unnecessary. For an income statement, if you set up only one smart field column, or if all of the smart field columns of this type use the same data selection (such as when you display a column for each quarter for the same year, ledger type, and account), it is more efficient to leave data selection blank at this point and then define data selection for the entire report later on.

The Select Columns form reappears. You can add additional Quarterly Sales columns to the report by repeating steps 6 through 8 for each new smart field column.

9. When finished adding columns to the report, click Next.

10. On the Data Sequencing Help form, click Next.

The Data Sequencing Help form displays the data sequence and level breaks that you defined in the report director template. Company and Business Unit were the first two fields entered into the grid in the report director template and will be the level breaks in this report. The third field, Object Account, was included in the report director template and will also be used for sequencing. You can define Object Account as a level break by clicking the text so that it will display in the field directly above the box where it currently resides.

If you would like to override the pre-defined data sequencing and level breaks, click the checkbox *I'd like to setup the sequencing and level breaking myself* located in the Advanced box. The Section Data Sequencing form appears so that you can set up your own data sequencing and level breaks. The fields listed in the Available Columns section are fields from the pre-defined business view. In this example, the pre-defined business view is V8300001
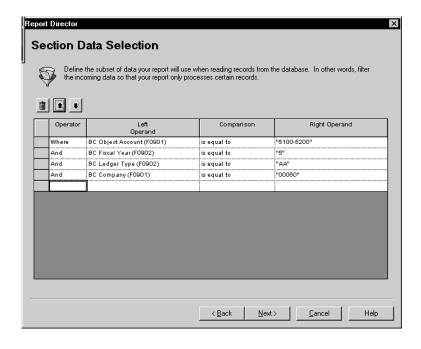
The Help with Section Data Selection form appears.

11. Choose to create an income statement and to add your own data selection, and click Next.

Because you chose in the Properties tab in the report director template to display Financial Criteria, the next form asks what financial data you would like to see.

The Section Data Selection form appears with one line of data selection.

12. Change the Right Operand on the existing line to read 5100–5200, and add the following lines:

- And Fiscal Year is equal to 5

- And Ledger Type is equal to AA

- And Company is equal to 60

As stated previously, data selection for each smart field column might be unnecessary when the same smart field columns each have the same data selection in an income statement. If you do not define data selection for each column in that case, you must define it here as this step

demonstrates. Defining data selection for the entire report as opposed to defining data selection for each smart field column is more efficient and might result in a faster-running report.

The Additional Properties form appears.

13. Choose to show Revenue+, Expense– in the Reverse Sign for field and click Next.

This setting suppresses negative signs on the sales data in your report.

The Finish form appears.

14. Click Finish, and then save and preview your report.

Understanding the Report

You can examine the smart field's event rules to see how the objects you created are implemented in the report. On Report Design, click the Report tab, and then click the variable portion of the smart field column. From the Edit menu, choose Event Rules, and then look at the Column Inclusion event rule. You wrote this event when you created the Quarterly Sales smart field data dictionary item.

Double-click the Quarterly Amount ER text to view the data structure. The named event rule information, as well as the data structure name, is displayed in the upper left corner of the Business Functions form. The data structure displays all of the mappings complete in the Data Structure section in the lower right section of the form.

Notice that the first data item, the Quarterly Amount, is the user prompt and is mapped to a 1. This is the number you input when you began creating your report and added the first smart field column. A 1 indicates that you wanted to display first quarter data.

The remainder of the parameters are passed according to the named mapping. None of these fields need to be mapped in Report Design by the report creator. Without the use of this smart field, the report creator would have to know which business function to use and how to pass the values.
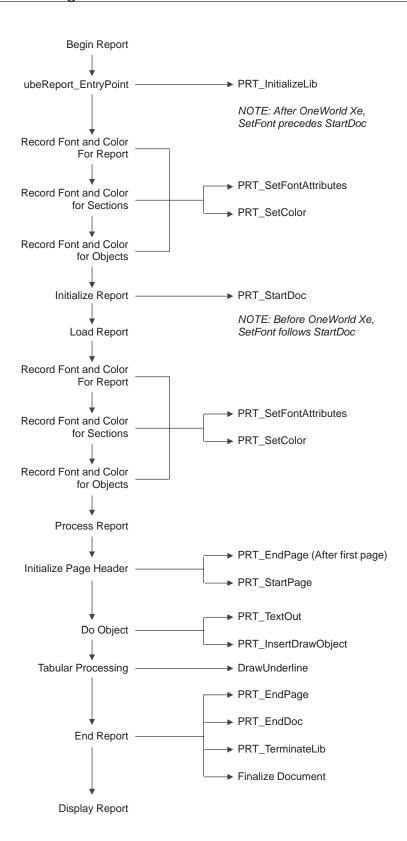
Appendix F – Output Stream Access

A UBE application processes its components in a specific order. At different points during its execution, you can trigger an event via the Output Stream Access (OSA) interface.

These execution points are illustrated in the diagram below.

Begin Report

ubeReport_EntryPoint —————————————▶ PRT_InitializeLib

NOTE: After OneWorld Xe,
SetFont precedes StartDoc

Record Font and Color
For Report

Record Font and Color —————————————▶ PRT_SetFontAttributes
for Sections
—————————————▶ PRT_SetColor

Record Font and Color
for Objects

Initialize Report —————————————▶ PRT_StartDoc

NOTE: Before OneWorld Xe,
SetFont follows StartDoc

Load Report

Record Font and Color
For Report

Record Font and Color —————————————▶ PRT_SetFontAttributes
for Sections
—————————————▶ PRT_SetColor

Record Font and Color
for Objects

Process Report

Initialize Page Header —————————————▶ PRT_EndPage (After first page)
—————————————▶ PRT_StartPage

Do Object —————————————▶ PRT_TextOut
—————————————▶ PRT_InsertDrawObject

Tabular Processing —————————————▶ DrawUnderline

—————————————▶ PRT_EndPage
—————————————▶ PRT_EndDoc
End Report
—————————————▶ PRT_TerminateLib
—————————————▶ Finalize Document

Display Report

At each of these execution points, with the exception of PRT_InitializeLib and PRT_TerminateLib, you can call an OSA function. You can create your own functions, or you can use existing XML libraries and their functions.

This topic describes the following:

❏ Creating and associating OSA Interfaces

❏ Creating an OSA library

Creating and Associating OSA Interfaces

Before a report can be output using OSA, you must define the interface. Typically, once designed, OSAs are associated with targeted reports or batch versions; a user can override the default OSA at submission, however. A user can also output a report with any defined OSA at submission, although the results might vary depending on the robustness of the selected OSA. OSAs can also be associated with environments, hosts, and users or groups, in the same way that default printers can be assigned. Associating an OSA interface with an object is optional.

Depending on your output needs, you might need to define multiple interfaces.

This topic describes:

- Creating an OSA interface definition
- Associating an OSA interface with an object

▶ **To create an OSA interface definition**

1. From the Printers menu (GH9013), choose Output Stream Access Setup.

   The Output Stream Access Setup form appears.

2. On Output Stream Access Setup, click Add or Modify the Output Stream Access Interface Definition.

   The Work with Output Stream Access Interface Definition form appears.

3. Click Add.

   The Output Stream Access Interface Definition Revisions form appears.

4. Enter a name for the OSA interface in the Output Stream Access Interface Name field.

> **Note:** J.D. Edwards OSA interfaces begin with the letters *JDE*. J.D. Edwards recommends that you do not begin your interface names with JDE.

5. For each execution point where you want to trigger an event, enter the name of the desired function in the associated row.

    Execution points with no associated function are ignored when the OSA interface executes.

6. When finished, click OK.

▶ To associate an OSA interface with an object

1. On Output Stream Access Setup, click Add or Modify the Output Stream Access Usage specification.

    The Work with Output Stream Access Interface Usage form appears.

2. Click Add.

    The Output Stream Access Interface Usage Revisions form appears.

3. Enter the OSA interface name that you want to associate in the Output Stream Access Interface Name field, or use the Visual Assist to find one.

4. Associate the interface with the desired objects, and then click OK.

    The following table shows how the system resolves priority conflicts when you associate the interface with more than one object.

Default OSA disambiguation, highest priority to lowest priority

User/ Group	Report	Version	Environment	Host Type
username	report	version	environment	hosttype
	report	version	environment	*ALL
	report	version	*ALL	hosttype
	report	version	*ALL	*ALL
	report	*ALL	environment	hosttype
	report	*ALL	environment	*ALL
	report	*ALL	*ALL	hosttype
	report	*ALL	*ALL	*ALL
	*ALL	*ALL	environment	hosttype
	*ALL	*ALL	environment	*ALL
	*ALL	*ALL	*ALL	hosttype
	*ALL	*ALL	*ALL	*ALL

group-name	report	version	environment	hosttype
	report	version	environment	*ALL
	report	version	*ALL	hosttype
	report	version	*ALL	*ALL
	report	*ALL	environment	hosttype
	report	*ALL	environment	*ALL
	report	*ALL	*ALL	hosttype
	report	*ALL	*ALL	*ALL
	*ALL	*ALL	environment	hosttype
	*ALL	*ALL	environment	*ALL
	*ALL	*ALL	*ALL	hosttype
	*ALL	*ALL	*ALL	*ALL
*PUBLIC	report	version	environment	hosttype
	report	version	environment	*ALL
	report	version	*ALL	hosttype
	report	version	*ALL	*ALL
	report	*ALL	environment	hosttype
	report	*ALL	environment	*ALL
	report	*ALL	*ALL	hosttype
	report	*ALL	*ALL	*ALL
	*ALL	*ALL	environment	hosttype
	*ALL	*ALL	environment	*ALL

Creating an OSA Library

A library is a collection of functions; a function must be included in a library before you can use the function. If necessary, you can create your own functions and libraries.

OneWorld includes an OSA library called OSASample. J.D. Edwards provides it, along with its source code, as an example of how to create an OSA library. The following reference information is provided for developers who need to create their own libraries.

This topic describes the following:

- Definition file Structures
- Function parameters
- Retrieving OSA documents
- Include file

- File locations and names
- Function signatures
- OSA file names
- OSASample source code

Definition File Structures

Definition file structures describes the following file structures:

- Report information structure
- Section information structure
- Item information structure
- Object information structure
- Font information structure
- Link information structure
- Page of information structure

Report Information Structure

This structure definition is available in a common header file so that external applications can make use of it. It is loaded at the beginning of report processing and is passed by pointer to all OSA functions. It includes an External Data Pointer member, which can be used by OSA functions to retain and pass report level data between function calls. External applications can also return a log message and message severity from each execution point, which will be sent on to the UBELogMessage function.

```
struct tagOSA_REPORT_INFO
{
  char                  szReport[11];
  char                  szVersion[11];
  char                  szMachineKey[16];
  char                  szEnhv[11];
  char                  szUser[21];
  char                  szOneWorldRelease[11];
  char                  szReportTime[12];
  char                  szDateToday[11];
  unsigned int           nLocalCodePage;
  unsigned int           nRemoteCodePage;
  int                   nLocalOperatingSystem;
  int                   nRemoteOperatingSystem;
  char                  szPrinter[256];
  unsigned long          ulPageSizeVertical;
  unsigned long          ulPageSizeHorizontal;
  ulong                 ulNumberOfCopies;
  ulong                 ulPaperSource;
  unsigned short         nPageOrientation;
  unsigned short         nPrinterLinesPerInch;
  unsigned short         nPrinterCharactersPerInch;
  unsigned short         nPrinterDefaultFontSize;
  char                  szPDLProgram[11];
  char                  szDecimalString[2];
  char                  cThousandsSeparator;
  char                  szDateFormat[5];
  char                  cDateSeparator;
  char                  *szReportTitle;
  char                  szCompanyName[31];
  unsigned long          ulJobNum;
  unsigned long          ulCurrentPageNumber;
  unsigned long          ulActualCurrentPageNumber;
  char                  szUBEFileName[300];
  char                  szOSAFileName[300];
  unsigned long          ulNumberOfSections;
  OSA_SECTION_INFO      *pOSASectionInfo;
  void                  *pExternalDataPointer;
  unsigned short         *pnLogMessageSeverity;
  char                  szLogMessage[256];
  char                  szFutureUse[256];
};
```

```
struct tagOSA_REPORT_INFO
{
  char                  szReport[11];
  char                  szVersion[11];
  char                  szMachineKey[16];
  char                  szEnhv[11];
  char                  szUser[21];
  char                  szOneWorldRelease[11];
  char                  szReportTime[12];
  char                  szDateToday[11];
  unsigned int          nLocalCodePage;
  unsigned int          nRemoteCodePage;
  int                   nLocalOperatingSystem;
  int                   nRemoteOperatingSystem;
  char                  szPrinter[256];
  unsigned long         ulPageSizeVertical;
  unsigned long         ulPageSizeHorizontal;
  ulong                 ulNumberOfCopies;
  ulong                 ulPaperSource;
  unsigned short        nPageOrientation;
  unsigned short        nPrinterLinesPerInch;
  unsigned short        nPrinterCharactersPerInch;
  unsigned short        nPrinterDefaultFontSize;
  char                  szPDLProgram[11];
  char                  szDecimalString[2];
  char                  cThousandsSeparator;
  char                  szDateFormat[5];
  char                  cDateSeparator;
  char                  *szReportTitle;
  char                  szCompanyName[31];
  unsigned long         ulJobNum;
  unsigned long         ulCurrentPageNumber;
  unsigned long         ulActualCurrentPageNumber;
  char                  szUBEFileName[300];
  char                  szOSAFileName[300];
  unsigned long         ulNumberOfSections;
  OSA_SECTION_INFO      *pOSASectionInfo;
  void                  *pExternalDataPointer;
  unsigned short        *pnLogMessageSeverity;
  char                  szLogMessage[256];
  char                  szFutureUse[256];
};
```

Section Information Structure

This structure definition is available in a common header file so that external applications can make use of it. An array of these structures is loaded at the beginning of report processing and the array pointer and counter is stored as part of the OSAReportInfo structure. This structure also includes an External Data Pointer member, which can be used by OSA functions to retain and pass section level data between function calls.

```
{
  char                 *szSectionName;
  char                 szSectionType[50];
  char                 szBusinessViewName[11];
  unsigned long         idSection;
  unsigned long         idParentSection;
  unsigned long         ulNumberOfObjects;
  OSA_OBJECT_INFO       *pOSAObjectInfo;
  void                 *pExternalDataPointer;
  char                 szFutureUse[256];
};
```

Item Information Structure

This structure definition is available in a common header file so that external applications can make use of it. For each OSAObjectInfo structure, one OSAItemInfo structure is loaded prior to object level execution points, such as Text Out and Insert Draw Object.

Object Information Structure

This structure definition is available in a common header file so that external applications can make use of it. For each section, an array of these structures is loaded at the beginning of report processing. Each SectionInfo structure contains a pointer to an array of ObjectInfo structures as well as a member indicating the number of elements contained in the array. However, for some execution points, an individual ObjectInfo structure is passed by pointer to the associated OSA function. Each OSAObjectInfo structure contains an OSAItemInfo structure which encapsulates the more dynamic pieces of object level data. This structure also includes an External Data Pointer member, which can be used by OSA functions to retain and pass object level data between function calls.

```
struct tagOSA_ITEM_INFO
{
  unsigned long        ulOccurenceCount;
  unsigned long        ulRecordFetchCount;
  unsigned long        ulNumPDFLines;
  unsigned short       nReprinting;
  unsigned short       nUnderlineThickness;
  unsigned short       nUnderlineMargin;
  unsigned long int    ColorRef;
  OSA_FONT_INFO        zFontInfo;
  unsigned short       nPointSize;
  unsigned short       nDisplayStyle;
  float                fObjectHorizontalPosition;
  float                fObjectVerticalPosition;
  float                fValueHorizontalPosition;
  float                fValueVerticalPosition;
  float                fValueEndingHorizontalPosition;
  float                fValueEndingVerticalPosition;
  char                 *szValue;
  char                 *szFullText;
};
```

```
struct tagOSA_OBJECT_INFO
{
  char                szDataDictionaryAlias[41];
  char                szObjectName[31];
  unsigned long        idObject;
  unsigned long        idSection;
  unsigned long        idRow;
  char                szObjectType[3];
  unsigned short       nLength;
  unsigned short       idEverestType;
  char                cDataType;
  OSA_ITEM_INFO        zOSAItemInfo;
  POSA_SECTION_INFO     pOSASectionInfo;
  void               *pExternalDataPointer;
  char                 szFutureUse[256];
};
```

Font Information Structure

This structure definition is available in a common header file so that external applications can make use of it. This structure is loaded prior to execution of the appropriate OSA functions, as described below, and passed by pointer to such functions.

```
struct tagOSA_FONT_INFO
{
  long int        lfHeight;
  long int        lfWidth;
  long int        lfEscapement;
  long int        lfOrientation;
  long int        lfWeight;
  unsigned char   lfItalic;
  unsigned char   lfUnderline;
  unsigned char   lfStrikeOut;
  unsigned char   lfCharSet;
  unsigned char   lfOutPrecision;
  unsigned char   lfClipPrecision;
  unsigned char   lfQuality;
  unsigned char   lfPitchAndFamily;
  unsigned char   lfFaceName[32];
  unsigned short  nPointSize;
  char            szAdobeFontName[100];
};
```

Link Information Structure

This structure definition is available in a common header file so that external applications can make use of it. An array of these structures is populated and sent at the End Page execution point whenever applicable.

```
struct tagOSA_LINK_INFO
{
  float      fLowerLeftHorizontal;
  float      fLowerLeftVertical;
  float      fUpperRightHorizontal;
  float      fUpperRightVertical;
  char       szApplication[11];
  char       szForm[11];
  char       *szParms;
};
```

Page Of Information Structure

This structure definition is available in a common header file so that external applications can make use of it. An array of these structures is populated and sent at the End Document execution point.

```
struct tagOSA_PAGEOF_INFO
{
  unsigned long  ulBeginPage;
  unsigned long  ulEndPage;
  unsigned long  ulTotalPage;
};
```

Function Parameters

Function parameters describes the following function parameters:

- Start document parameters
- Set font parameters
- Set color parameters
- Start page parameters
- Text out parameters
- Insert draw object parameters
- Draw underline parameters
- End page parameters
- End document parameters
- Finalize document parameters

Start Document Parameters

The OSA function associated with the Start Document execution point is called with the following parameter:

```
OSA_REPORT_INFO        *pOSAReportInfo
OSA_REPORT_INFO        *pOSAReportInfo
```

Set Font Parameters

The OSA function associated with the Set Font execution point is called with the following parameters:

```
OSA_REPORT_INFO          *pOSAReportInfo,
OSA_FONT_INFO            *pOSAFontInfo
```

Set Color Parameters

The OSA function associated with the Set Color execution point is called with the following parameters:

```
OSA_REPORT_INFO          *pOSAReportInfo,
unsigned long int        zColorRef
```

Start Page Parameters

The OSA function associated with the Start Page execution point is called with the following parameter:

```
OSA_REPORT_INFO          *pOSAReportInfo
```

Text Out Parameters

The OSA function associated with the Text Out execution point is called with the following parameters:

```
OSA_REPORT_INFO          *pOSAReportInfo,
OSA_OBJECT_INFO          *pOSAObjectInfo
```

Insert Draw Object Parameters

The OSA function associated with the Draw Lines execution point is called with the following parameters:

```
OSA_REPORT_INFO          *pOSAReportInfo,
OSA_OBJECT_INFO          *pOSAObjectInfo
```

Draw Underline Parameters

The OSA function associated with the Draw Lines execution point is called with the following parameters:

```
OSA_REPORT_INFO           *pOSAReportInfo,
OSA_OBJECT_INFO           *pOSAObjectInfo
```

End Page Parameters

The OSA function associated with the End Page execution point is called with the following parameter:

```
OSA_REPORT_INFO           pOSAReportInfo,
OSA_LINK_INFO             *pOSALinkInfo,
unsigned long             ulNumberOfLinks
```

End Document Parameters

The OSA function associated with the End Document execution point is called with the following parameters:

```
OSA_REPORT_INFO           *pOSAReportInfo,
OSA_PAGEOF_INFO           *pOSAPageOfInfo,
unsigned long             ulNumberOfPageOf
```

Finalize Document Parameters

The OSA function associated with the Finalize Document execution point is called with the following parameter:

```
OSA_REPORT_INFO           *pOSAReportInfo
```

Retrieving OSA Documents

Within the OSAReportInfo structure, the szOSAFileName member allows external applications to specify the name of a file created by OSA functions. A member of the same name is added to the UBEVar structure. After the End Document execution point has been processed, any value that exists in the OSAReportInfo member for szOSAFileName is copied to the corresponding UBEVar member. When a job has finished processing, the UBEVar structure is updated into the F986110 record for the job.

Include File

The structure and function definitions required for functions interfacing through OSA are contained in the JDEOSA.H file, which is located in the system\include directory for OneWorld. The current contents of this file are as follows:

```
/*********************************************************
Header File Description
*  JDEOSA.H  Header file to support Output Stream Access functions
*
*********************************************************
*
Copyright (c) 1999 - 1999
J.D. Edwards & Company
*
This material is proprietary to J.D. Edwards & Company.
All  rights  reserved.  The  methods  and  techniques  described  herein  are
considered trade secrets and/or confidential. Reproduction or distribution, in
whole or in part, is forbidden except by express written permission of J.D.
Edwards & Company.
*
*********************************************************/
```

```
#ifndef JDEOSA_H
#define JDEOSA_H
/** Page Of Information Structure **/
struct tagOSA_PAGEOF_INFO
{
  unsigned long ulBeginPage;
  unsigned long ulEndPage;
  unsigned long ulTotalPage;
};
typedef struct tagOSA_PAGEOF_INFO  OSA_PAGEOF_INFO, *POSA_PAGEOF_INFO;
/** Link Information Structure **/
struct tagOSA_LINK_INFO
{
  float          fLowerLeftHorizontal;
  float          fLowerLeftVertical;
  float          fUpperRightHorizontal;
  float          fUpperRightVertical;
  char           szApplication[11];
  char           szForm[11];
  char          *szParms;
};
typedef struct tagOSA_LINK_INFO  OSA_LINK_INFO, * POSA_LINK_INFO;
/** Font Information **/
struct tagOSA_FONT_INFO
{
  long int        lfHeight;
  long int        lfWidth;
  long int        lfEscapement;
  long int        lfOrientation;
  long int        lfWeight;
  unsigned char   lfItalic;
  unsigned char   lfUnderline;
  unsigned char   lfStrikeOut;
  unsigned char   lfCharSet;
  unsigned char   lfOutPrecision;
  unsigned char   lfClipPrecision;
  unsigned char   lfQuality;
  unsigned char   lfPitchAndFamily;
  char            lfFaceName[32];
  unsigned short  nPointSize;
  char            szAdobeFontName[100];
};
typedef struct tagOSA_FONT_INFO  OSA_FONT_INFO, * POSA_FONT_INFO;
/** Item Information **/
struct tagOSA_ITEM_INFO
{
  unsigned long       ulOccurenceCount;
  unsigned long       ulRecordFetchCount;
  unsigned long       ulNumPDFLines;
  unsigned short      nReprinting;
  unsigned short      nUnderlineThickness;
  unsigned short      nUnderlineMargin;
  unsigned long int   ColorRef;
  OSA_FONT_INFO       zFontInfo;
  unsigned short      nDisplayStyle;
  float          fObjectHorizontalPosition;
  float          fObjectVerticalPosition;
  float          fObjectEndingHorizontalPosition;
  float          fObjectEndingVerticalPosition;
  float          fValueHorizontalPosition;
  float          fValueVerticalPosition;
  float          fValueEndingHorizontalPosition;
  float          fValueEndingVerticalPosition;
  char          *szValue;
  char          *szFullText;
};
```

```
typedef struct tagOSA_ITEM_INFO  OSA_ITEM_INFO, * POSA_ITEM_INFO;
/** Object Information **/
struct tagOSA_OBJECT_INFO
{
  char          szDataDictionaryAlias[41];
  char          szObjectName[31];
  unsigned long     idObject;
  unsigned long     idSection;
  unsigned long     idRow;
  char          szObjectType[3];
  unsigned short    nLength;
  unsigned long     idEverestType;
  char          cDataType;
  OSA_ITEM_INFO     zOSAItemInfo;
  void          *pOSASectionInfo;
  void          *pExternalDataPointer;
  char          szFutureUse[256];
};
typedef struct tagOSA_OBJECT_INFO  OSA_OBJECT_INFO, * POSA_OBJECT_INFO;
/** Section Information Structure **/
struct tagOSA_SECTION_INFO
{
  char          *szSectionName;
  char          szSectionType[50];
  char          szBusinessViewName[11];
  unsigned long     idSection;
  unsigned long     idParentSection;
  unsigned long     ulNumberOfObjects;
  unsigned long     ulRecordFetchCount;
  OSA_OBJECT_INFO   *pOSAObjectInfo;
  void          *pExternalDataPointer;
  char          szFutureUse[256];
};
typedef struct tagOSA_SECTION_INFO  OSA_SECTION_INFO, * POSA_SECTION_INFO;
/*** Report Information Structure ***/
struct tagOSA_REPORT_INFO
{
  char          szReport[11];
  char          szVersion[11];
  char          szMachineKey[16];
  char          szEnhv[11];
  char          szUser[21];
  char          szOneWorldRelease[11];
  char          szReportTime[12];
  char          szDateToday[11];
  unsigned int      nLocalCodePage;
  unsigned int      nRemoteCodePage;
  int           nLocalOperatingSystem;
  int           nRemoteOperatingSystem;
  char          szPrinter[256];
  unsigned long     ulPageSizeVertical;
  unsigned long     ulPageSizeHorizontal;
  unsigned long     ulNumberOfCopies;
  unsigned long     ulPaperSource;
  unsigned short    nPageOrientation;
  unsigned short    nPrinterLinesPerInch;
  unsigned short    nPrinterCharactersPerInch;
  unsigned short    nPrinterDefaultFontSize;
  char          szPDLProgram[11];
```

```
    char         szDecimalString[2];
    char         cThousandsSeparator;
    char         szDateFormat[5];
    char         cDateSeparator;
    char         *szReportTitle;
    char         szCompanyName[31];
    unsigned long    ulJobNum;
    unsigned long    ulCurrentPageNumber;
    unsigned long    ulActualCurrentPageNumber;
    char         szUBEFileName[300];
    char         szOSAFileName[300];
    unsigned long    ulNumberOfSections;
    OSA_SECTION_INFO    *pOSASectionInfo;
    void         *pExternalDataPointer;
    unsigned short    *pnLogMessageSeverity;
    char         szLogMessage[256];
    char         szFutureUse[256];
};
typedef struct tagOSA_REPORT_INFO  OSA_REPORT_INFO, * POSA_REPORT_INFO;
/** Execution Point Identification Numbers **/
#define  OSA_EXPN_START_DOC       1
#define  OSA_EXPN_SET_FONT        2
#define  OSA_EXPN_SET_COLOR        3
#define  OSA_EXPN_START_PAGE       4
#define  OSA_EXPN_TEXT_OUT       5
#define  OSA_EXPN_DRAW_OBJECT       6
#define  OSA_EXPN_UNDERLINE        7
#define  OSA_EXPN_END_PAGE       8
#define  OSA_EXPN_END_DOC       9
#define  OSA_EXPN_FINALIZE_DOC      10
/** OSA Function Prototypes **/
typedef void (*FP_OSA_START_DOC)    (POSA_REPORT_INFO);
typedef void (*FP_OSA_SET_FONT)    (POSA_REPORT_INFO, POSA_FONT_INFO);
typedef void (*FP_OSA_SET_COLOR)    (POSA_REPORT_INFO, unsigned long int);
typedef void (*FP_OSA_START_PAGE)    (POSA_REPORT_INFO);
typedef void (*FP_OSA_TEXT_OUT)    (POSA_REPORT_INFO, POSA_OBJECT_INFO);
typedef void (*FP_OSA_DRAW_OBJECT)   (POSA_REPORT_INFO, POSA_OBJECT_INFO);
typedef void (*FP_OSA_UNDERLINE)    (POSA_REPORT_INFO, POSA_OBJECT_INFO);
typedef void (*FP_OSA_END_PAGE)     (POSA_REPORT_INFO, POSA_LINK_INFO, unsigned
long);
typedef  void  (*FP_OSA_END_DOC)        (POSA_REPORT_INFO,  POSA_PAGEOF_INFO,
unsigned long);
typedef void (*FP_OSA_FINALIZE_DOC)  (POSA_REPORT_INFO);
#endif
```

File Locations And Names

UBE performs the following steps to load an OSA Library:

If the library name, as defined in F986169, contains a period (.) character, UBE ignores the period and any characters that follow.

UBE adds prefixes, extensions, or both according to the platform on which UBE is executing:

PLATFORM	EXTENDED LIBRARY NAME
PC	libname + ".dll"
HPUX	"lib" + libname + ".sl"
AIX, SUN	"lib" + libname + ".so"
AS/400	libname

UBE passes the resulting library name to the LoadLibrary function, which in turn uses a standard search strategy to locate the desired library.

Function Signatures

OSA functions are called using the function pointers defined in the JDEOSA file. Therefore, OSA functions should be defined using the same parameters and return values, as in the following example set of function prototypes:ttt

```
void MyStartDoc (POSA_REPORT_INFO);
void MySetFont (POSA_REPORT_INFO, POSA_FONT_INFO);
void MySetColor (POSA_REPORT_INFO, unsigned long int);
void MyStartPage (POSA_REPORT_INFO);
void MyTextOut (POSA_REPORT_INFO, POSA_OBJECT_INFO);
void MyDrawObject (POSA_REPORT_INFO, POSA_OBJECT_INFO);
void MyUnderline (POSA_REPORT_INFO, POSA_OBJECT_INFO);
void MyEndPage (POSA_REPORT_INFO, POSA_LINK_INFO, unsigned long);
void MyEndDoc (POSA_REPORT_INFO, POSA_PAGEOF_INFO, unsigned long);
void MyFinalize (POSA_REPORT_INFO);
void MyStartDoc (POSA_REPORT_INFO);
void MySetFont (POSA_REPORT_INFO, POSA_FONT_INFO);
void MySetColor (POSA_REPORT_INFO, unsigned long int);
void MyStartPage (POSA_REPORT_INFO);
void MyTextOut (POSA_REPORT_INFO, POSA_OBJECT_INFO);
void MyDrawObject (POSA_REPORT_INFO, POSA_OBJECT_INFO);
void MyUnderline (POSA_REPORT_INFO, POSA_OBJECT_INFO);
void MyEndPage (POSA_REPORT_INFO, POSA_LINK_INFO, unsigned long);
void MyEndDoc (POSA_REPORT_INFO, POSA_PAGEOF_INFO, unsigned long);
void MyFinalize (POSA_REPORT_INFO);
```

OSA File Names

When OneWorld is retrieving an OSA file from the server, it makes some assumptions about the format of the OSA file name. For AS/400, it assumes that the file name will be stored in the format "LIBRARY/FILE(MEMBER)" and it will store the file on the client machine using the name "MEMBER.FILE". For NT servers, OneWorld will assume that the file name is stored in the format "DIRECTORY\FILE.EXT". For all other platforms, OneWorld will expect the file name in the format "DIRECTORY/FILE.EXT".

OSASample Source Code

OSASample has three components:

- OSAStruct.h
- OSASample.h
- OSASample.c

OSAStruct.h

```
#ifndef OSASAMPLE_DEF_HPP
#define OSASAMPLE_DEF_HPP
#define chAmpersand       '&'
#define chOpenAngle       '<'
#define chCloseAngle      '>'
#define chDoubleQuote      '"'
#define PAGEOF_TYPE        "TP"
typedef struct tagOSASAMPLE_STRUCT
{
  unsigned short   nCount;
  FILE           *fpOutput;
} OSASAMPLE_STRUCT, *POSASAMPLE_STRUCT;
#endif
```

OSASample.h

```
#ifndef __OSASAMPLE_H__
#define __OSASAMPLE_H__
#include <string.h>
#include <assert.h>
#include <stdio.h>
#include <stdlib.h>
#include <jdeosa.h>
#if defined (_WIN32)
  #undef CDECL
  #define CDECL _cdecl
  #if defined(IAMOSASAMPLE)
    #define APIEXPORT _declspec(dllexport)
  #else
    #define APIEXPORT _declspec(dllimport)
  #endif
#else
  #define CDECL
  #define APIEXPORT
#endif
#define CLASSEXPORT APIEXPORT
#undef EXTERNC
#if defined(__cplusplus)
  #define EXTERNC extern "C"
#else
  #define EXTERNC
#endif
EXTERNC APIEXPORT void CDECL OSASample_StartDoc(POSA_REPORT_INFO pOSAReportInfo);
EXTERNC APIEXPORT void CDECL OSASample_SetFont(POSA_REPORT_INFO pOSAReportInfo, POSA_FONT_INFO
pOSAFontInfo);
EXTERNC APIEXPORT void CDECL OSASample_SetColor(POSA_REPORT_INFO pOSAReportInfo, unsigned long int
zColorRef);
EXTERNC APIEXPORT void CDECL OSASample_EndDoc(POSA_REPORT_INFO    pOSAReportInfo,
                         POSA_PAGEOF_INFO   pOSAPageofInfo,
                         unsigned long      ulNumberOfStructs);
EXTERNC APIEXPORT void CDECL OSASample_StartPage(POSA_REPORT_INFO pOSAReportInfo);
EXTERNC APIEXPORT void CDECL OSASample_EndPage(POSA_REPORT_INFO   pOSAReportInfo,
                         POSA_LINK_INFO     pOsaLinkInfo,
                         unsigned long      ulNumberOfLinks);
EXTERNC    APIEXPORT    void    CDECL    OSASample_TextOut(POSA_REPORT_INFO    pOSAReportInfo,
POSA_OBJECT_INFO pOSAObjectInfo);
EXTERNC    APIEXPORT    void    CDECL    OSASample_DrawObject(POSA_REPORT_INFO    pOSAReportInfo,
POSA_OBJECT_INFO pOSAObjectInfo);
EXTERNC    APIEXPORT    void    CDECL    OSASample_DrawUnderLine(POSA_REPORT_INFO    pOSAReportInfo,
POSA_OBJECT_INFO pOSAObjectInfo);
EXTERNC APIEXPORT void CDECL OSASample_FinalizeDoc(POSA_REPORT_INFO pOSAReportInfo);
#endif
```

OSASAMPLE.c

```c
/* Author: Kevin Reitz    */
/* Date: 10/05/99         */
#include "OSASample.h"
#include "OSAStruct.h"
/*─────────────────────────────────────────────────────────────────
 * Function Name: OSA_ReportInfoOut
 * Parameters: OSASAMPLE_STRUCT *  Pointer to OSA Sample Structure
 *          OSA_REPORT_INFO *   Pointer to Report Info structure
 * Exceptions: None
 * Return Value: None
 * Description: Output data from the Report Info structure
 *────────────────────────────────────────────────────────────────*/
void  OSA_ReportInfoOut(POSASAMPLE_STRUCT pOSAStruct, POSA_REPORT_INFO pOSAReportInfo)
{
  /* Check for valid parameter values.  If pointers are void, return. */
  if (!pOSAStruct || !pOSAStruct–>fpOutput || !pOSAReportInfo)
  {
    return;
  }
  /* Print values to the output file */
    fprintf(pOSAStruct–>fpOutput, "****** REPORT INFO ******\n\n");
  fprintf(pOSAStruct–>fpOutput, "Report:            %s\n", pOSAReportInfo–>szReport);
  fprintf(pOSAStruct–>fpOutput, "Version:           %s\n", pOSAReportInfo–>szVersion);
  fprintf(pOSAStruct–>fpOutput, "MachineKey:           %s\n", pOSAReportInfo–>szMachineKey);
  fprintf(pOSAStruct–>fpOutput, "Environment:          %s\n", pOSAReportInfo–>szEnhv);
  fprintf(pOSAStruct–>fpOutput, "User:              %s\n", pOSAReportInfo–>szUser);
  fprintf(pOSAStruct–>fpOutput, "Release:            %s\n", pOSAReportInfo–>szOneWorldRelease);
  fprintf(pOSAStruct–>fpOutput, "Time:              %s\n", pOSAReportInfo–>szReportTime);
  fprintf(pOSAStruct–>fpOutput, "Date:              %s\n", pOSAReportInfo–>szDateToday);
  fprintf(pOSAStruct–>fpOutput, "Local Code Page:        %d\n", pOSAReportInfo–>nLocalCodePage);
  fprintf(pOSAStruct–>fpOutput, "Remote Code Page:       %d\n", pOSAReportInfo–>nRemoteCodePage);
  fprintf(pOSAStruct–>fpOutput, "Local Operating System:  %d\n", pOSAReportInfo–>nLocalOperatingSystem);
  fprintf(pOSAStruct–>fpOutput, "Remote Operating System:  %d\n", pOSAReportInfo–>nRemoteOperatingSystem);
  fprintf(pOSAStruct–>fpOutput, "Printer:            %s\n", pOSAReportInfo–>szPrinter);
  fprintf(pOSAStruct–>fpOutput, "Page Height:          %d\n", pOSAReportInfo–>ulPageSizeVertical);
  fprintf(pOSAStruct–>fpOutput, "Page Width:           %d\n", pOSAReportInfo–>ulPageSizeHorizontal);
  fprintf(pOSAStruct–>fpOutput, "Number Of Copies:       %d\n", pOSAReportInfo–>ulNumberOfCopies);
  fprintf(pOSAStruct–>fpOutput, "Paper Source:         %d\n", pOSAReportInfo–>ulPaperSource);
  fprintf(pOSAStruct–>fpOutput, "Orientation:         %d\n", pOSAReportInfo–>nPageOrientation);
  fprintf(pOSAStruct–>fpOutput, "Lines Per Inch:        %d\n", pOSAReportInfo–>nPrinterLinesPerInch);
  fprintf(pOSAStruct–>fpOutput, "Default Font Size:       %d\n", pOSAReportInfo–>nPrinterDefaultFontSize);
  fprintf(pOSAStruct–>fpOutput, "Printer Type:         %s\n", pOSAReportInfo–>szPDLProgram);
  fprintf(pOSAStruct–>fpOutput, "Decimal Separator:      %s\n", pOSAReportInfo–>szDecimalString);
  fprintf(pOSAStruct–>fpOutput, "Thousands Separator:     %c\n", pOSAReportInfo–>cThousandsSeparator);
  fprintf(pOSAStruct–>fpOutput, "Date Format:          %s\n", pOSAReportInfo–>szDateFormat);
  fprintf(pOSAStruct–>fpOutput, "Date Separator:        %c\n", pOSAReportInfo–>cDateSeparator);
  fprintf(pOSAStruct–>fpOutput, "Report Title:        %s\n", pOSAReportInfo–>szReportTitle);
  fprintf(pOSAStruct–>fpOutput, "Company Name:         %s\n", pOSAReportInfo–>szCompanyName);
  fprintf(pOSAStruct–>fpOutput, "Job Number:          %d\n", pOSAReportInfo–>ulJobNum);
  fprintf(pOSAStruct–>fpOutput, "Current Page Number:     %d\n", pOSAReportInfo–>ulCurrentPageNumber);
  fprintf(pOSAStruct–>fpOutput, "Actual Page Number:      %d\n", pOSAReportInfo–>ulActualCurrentPageNumber);
  fprintf(pOSAStruct–>fpOutput, "UBE File Name:        %s\n", pOSAReportInfo–>szUBEFileName);
  fprintf(pOSAStruct–>fpOutput, "OSA File Name:        %s\n", pOSAReportInfo–>szOSAFileName);
  fprintf(pOSAStruct–>fpOutput, "Number of Sections:     %d\n", pOSAReportInfo–>ulNumberOfSections);
  fprintf(pOSAStruct–>fpOutput, "\n****** END REPORT INFO ******\n");
  return;
}
/*─────────────────────────────────────────────────────────────
 * Function Name: OSA_SectionInfoOut
 * Parameters: OSASAMPLE_STRUCT *  Pointer to OSA Sample Structure
 *          OSA_SECTION_INFO *   Pointer to Section Info structure
 * Exceptions: None
 * Return Value: None
 * Description: Output data from the Section Info structure
```

```
*————————————————————————————————————————————————————*/
void  OSA_SectionInfoOut(POSASAMPLE_STRUCT pOSAStruct, POSA_SECTION_INFO pOSASectionInfo)
{
  /* Check for valid parameter values.  If pointers are void, return. */
  if (!pOSAStruct || !pOSAStruct–>fpOutput || !pOSASectionInfo)
  {
    return;
  }

  fprintf(pOSAStruct–>fpOutput, "\n\t****** SECTION INFO ******\n\n");
  fprintf(pOSAStruct–>fpOutput, "\tSection Name:         %s\n", pOSASectionInfo–>szSectionName);
  fprintf(pOSAStruct–>fpOutput, "\tSection Type:         %s\n", pOSASectionInfo–>szSectionType);
  fprintf(pOSAStruct–>fpOutput, "\tBusiness View Name:     %s\n", pOSASectionInfo–>szBusinessViewName);
  fprintf(pOSAStruct–>fpOutput, "\tSection ID:           %d\n", pOSASectionInfo–>idSection);
  fprintf(pOSAStruct–>fpOutput, "\tParent Section ID:      %d\n", pOSASectionInfo–>idParentSection);
  fprintf(pOSAStruct–>fpOutput, "\tNumber of Objects:      %d\n", pOSASectionInfo–>ulNumberOfObjects);
  fprintf(pOSAStruct–>fpOutput, "\tRecord Fetch Count:     %d\n", pOSASectionInfo–>ulRecordFetchCount);
  fprintf(pOSAStruct–>fpOutput, "\n\t****** END SECTION INFO ******\n");
  return;
}
/*————————————————————————————————————————————————————
 * Function Name: OSA_ObjectInfoOut
 * Parameters: OSASAMPLE_STRUCT *   Pointer to OSA Sample Structure
 *          OSA_OBJECT_INFO *    Pointer to Object Info structure
 *          unsigned short int   Flag to control output of Item Info
 * Exceptions: None
 * Return Value: None
 * Description: Output data from the Object Info and Item Info structures
 *————————————————————————————————————————————————————*/
void  OSA_ObjectInfoOut(POSASAMPLE_STRUCT    pOSAStruct,
               POSA_OBJECT_INFO    pOSAObjectInfo,
               unsigned short int   nPrintItemInfo)
{
  /* Check for valid parameter values.  If pointers are void, return. */
  if (!pOSAStruct || !pOSAStruct–>fpOutput || !pOSAObjectInfo)
  {
    return;
  }

  fprintf(pOSAStruct–>fpOutput, "\n\t\t****** OBJECT INFO ******\n\n");
  fprintf(pOSAStruct–>fpOutput, "\t\tData Dictionary Item:  %s\n", pOSAObjectInfo–>szDataDictionaryAlias);
  fprintf(pOSAStruct–>fpOutput, "\t\tObject Name:          %s\n", pOSAObjectInfo–>szObjectName);
  fprintf(pOSAStruct–>fpOutput, "\t\tObject ID:           %d\n", pOSAObjectInfo–>idObject);
  fprintf(pOSAStruct–>fpOutput, "\t\tSeciton ID:          %d\n", pOSAObjectInfo–>idSection);
  fprintf(pOSAStruct–>fpOutput, "\t\tRow ID:             %d\n", pOSAObjectInfo–>idRow);
  fprintf(pOSAStruct–>fpOutput, "\t\tObject Type:          %s\n", pOSAObjectInfo–>szObjectType);
  fprintf(pOSAStruct–>fpOutput, "\t\tObject Length:        %d\n", pOSAObjectInfo–>nLength);
  fprintf(pOSAStruct–>fpOutput, "\t\tOneWorld Data Type:     %d\n", pOSAObjectInfo–>idEverestType);
  fprintf(pOSAStruct–>fpOutput, "\t\tGeneral Data Type:      %c\n", pOSAObjectInfo–>cDataType);
  fprintf(pOSAStruct–>fpOutput, "\n\t\t****** END OBJECT INFO ******\n");
  /* Only output Item Info if the parameter indicates to do so */
  if (nPrintItemInfo)
  {
    POSA_ITEM_INFO  pOSAItemInfo  = &(pOSAObjectInfo–>zOSAItemInfo);
    fprintf(pOSAStruct–>fpOutput, "\n\t\t****** ITEM INFO ******\n\n");
    fprintf(pOSAStruct–>fpOutput, "\t\tOccurence Count:        %d\n", pOSAItemInfo–>ulOccurenceCount);
    fprintf(pOSAStruct–>fpOutput, "\t\tRecord Fetch Count:     %d\n", pOSAItemInfo–>ulRecordFetchCount);
    fprintf(pOSAStruct–>fpOutput, "\t\tNumber Of Lines:        %d\n", pOSAItemInfo–>ulNumPDFLines);
    fprintf(pOSAStruct–>fpOutput, "\t\tReprinting:           %d\n", pOSAItemInfo–>nReprinting);
    fprintf(pOSAStruct–>fpOutput, "\t\tUnderline Thickness:    %d\n", pOSAItemInfo–>nUnderlineThickness);
    fprintf(pOSAStruct–>fpOutput, "\t\tUnderline Margin:       %d\n", pOSAItemInfo–>nUnderlineMargin);
    fprintf(pOSAStruct–>fpOutput, "\t\tColor Reference:        %d\n", pOSAItemInfo–>ColorRef);
    fprintf(pOSAStruct–>fpOutput, "\t\tFont Face Name:         %s\n", pOSAItemInfo–>zFontInfo.lfFaceName);
```

```
            fprintf(pOSAStruct–>fpOutput, "\t\tFont Point Size:        %d\n", pOSAItemInfo–>zFontInfo.nPointSize);
            fprintf(pOSAStruct–>fpOutput, "\t\tAdobe Font Name:        %s\n", pOSAItemInfo–>zFontInfo.szAdobeFontName);
            fprintf(pOSAStruct–>fpOutput, "\t\tDisplay Style:          %d\n", pOSAItemInfo–>nDisplayStyle);
            fprintf(pOSAStruct–>fpOutput, "\t\tObject Start X:         %f\n", pOSAItemInfo–>fObjectHorizontalPosition);
            fprintf(pOSAStruct–>fpOutput, "\t\tObject Start Y:         %f\n", pOSAItemInfo–>fObjectVerticalPosition);
            fprintf(pOSAStruct–>fpOutput, "\t\tObject End X:           %f\n", pOSAItemInfo–>fObjectEndingHorizontalPosition);
            fprintf(pOSAStruct–>fpOutput, "\t\tObject End Y:           %f\n", pOSAItemInfo–>fObjectEndingVerticalPosition);
            fprintf(pOSAStruct–>fpOutput, "\t\tValue Start X:          %f\n", pOSAItemInfo–>fValueHorizontalPosition);
            fprintf(pOSAStruct–>fpOutput, "\t\tValue Start Y:          %f\n", pOSAItemInfo–>fValueVerticalPosition);
            fprintf(pOSAStruct–>fpOutput, "\t\tValue End X:            %f\n", pOSAItemInfo–>fValueEndingHorizontalPosition);
            fprintf(pOSAStruct–>fpOutput, "\t\tValue End Y:            %f\n", pOSAItemInfo–>fValueEndingVerticalPosition);
            fprintf(pOSAStruct–>fpOutput, "\t\tValue Text:             %s\n", pOSAItemInfo–>szValue);
            fprintf(pOSAStruct–>fpOutput, "\t\tFull Object Text:       %s\n", pOSAItemInfo–>szFullText);
            fprintf(pOSAStruct–>fpOutput, "\n\t\t****** END ITEM INFO ******\n");
        }
        else
        {
            fprintf(pOSAStruct–>fpOutput, "\n\t\t****** No Item Info At This Point ******\n");
        }
        return;
}
/*_____
 * Function Name: OSA_LinkInfoOut
 * Parameters: OSASAMPLE_STRUCT *   Pointer to OSA Sample Structure
 *          OSA_LINK_INFO *     Pointer to array of Link Info structures
 *          unsigned long       The number of elements in the Link Info array
 * Exceptions: None
 * Return Value: None
 * Description: Output data from the Link Info structures, if any.
 *_____*/
void  OSA_LinkInfoOut(POSASAMPLE_STRUCT   pOSAStruct,
                POSA_LINK_INFO      pOSALinkInfo,
                unsigned long       ulNumberOfLinks)
{
    unsigned short    i =0;
    /* Check for valid parameter values.  If pointers are void, return. */
    if (!pOSAStruct || !pOSAStruct–>fpOutput)
    {
        return;
    }
    /* Check for valid parameter values.  If pointer is void or array is empty,
       output a message and return.                          */
    if (!pOSALinkInfo || !ulNumberOfLinks)
    {
        fprintf(pOSAStruct–>fpOutput, "\n** No Link Information **\n");
        return;
    }
    fprintf(pOSAStruct–>fpOutput, "\n****** LINK INFO ******\n\n");
    for (i=0; i<ulNumberOfLinks; i++)
    {
        fprintf(pOSAStruct–>fpOutput, "Lower Left X:         %f\n", pOSALinkInfo[i].fLowerLeftHorizontal);
        fprintf(pOSAStruct–>fpOutput, "Lower Left Y:         %f\n", pOSALinkInfo[i].fLowerLeftVertical);
        fprintf(pOSAStruct–>fpOutput, "Upper Right X:        %f\n", pOSALinkInfo[i].fUpperRightHorizontal);
        fprintf(pOSAStruct–>fpOutput, "Upper Right Y:        %f\n", pOSALinkInfo[i].fUpperRightVertical);
        fprintf(pOSAStruct–>fpOutput, "Application Name:     %s\n", pOSALinkInfo[i].szApplication);
        fprintf(pOSAStruct–>fpOutput, "Form Name:            %s\n", pOSALinkInfo[i].szForm);
        fprintf(pOSAStruct–>fpOutput, "Parameter String:     %s\n\n", pOSALinkInfo[i].szParms);
    }
    fprintf(pOSAStruct–>fpOutput, "\n****** END LINK INFO ******\n");
    return;
}
/*_____
 * Function Name: OSA_FontInfoOut
 * Parameters: OSASAMPLE_STRUCT *   Pointer to OSA Sample Structure
 *          OSA_FONT_INFO *     Pointer to Font Info structure
 * Exceptions: None
```

```c
 * Return Value: None
 * Description: Output data from the Font Info structure
 *————————————————————————————————————————————————————————*/
void  OSA_FontInfoOut(POSASAMPLE_STRUCT   pOSAStruct,
              POSA_FONT_INFO      pFontInfo)
{
  /* Check for valid parameter values.  If pointers are void, return. */
  if (!pOSAStruct || !pOSAStruct–>fpOutput || !pFontInfo)
  {
    return;
  }

  fprintf(pOSAStruct–>fpOutput, "\n****** FONT INFO ******\n\n");
  fprintf(pOSAStruct–>fpOutput, "Font Face Name:        %s\n", pFontInfo–>lfFaceName);
  fprintf(pOSAStruct–>fpOutput, "Font Point Size:       %d\n", pFontInfo–>nPointSize);
  fprintf(pOSAStruct–>fpOutput, "Adobe Font Name:       %s\n", pFontInfo–>szAdobeFontName);
  fprintf(pOSAStruct–>fpOutput, "\n****** END FONT INFO ******\n");
  return;
}
/*————————————————————————————————————————————————————————
 * Function Name: OSA_OpenOutputFile
 * Parameters: OSA_REPORT_INFO *    Pointer to Report Info Structure
 *             OSASAMPLE_STRUCT *   Pointer to OSA Sample Structure
 * Exceptions: None
 * Return Value: None
 * Description: Create the file which will contain the sample output
 *————————————————————————————————————————————————————————*/
void OSA_OpenOutputFile (POSA_REPORT_INFO    pOSAReportInfo,
              POSASAMPLE_STRUCT   pOSAStruct)
{
  /* Formulate the output file name based on information from Report Info. */
  strcpy(pOSAReportInfo–>szOSAFileName, pOSAReportInfo–>szUBEFileName);
#if defined JDENV_AS400
  /*  On AS/400, the UBE file name is of the form LIBRARY/PRINTQUEUE(F99999),
      where 99999 is the job number.  We will just switch an O for the F to
      indicate an OSA file.                             */
  pStrPtr = strrchr( pOSAReportInfo–>szOSAFileName, 'F' );
  *pStrPtr = 'O';

#else
  /*  On platforms other than AS/400, just replace the PDF file extension with OSA.  */
  if( !strstr( pOSAReportInfo–>szOSAFileName, ".pdf" ) )
  {
    /* If there is no .pdf extension, just tack on a .osa extension */
                              strcat( pOSAReportInfo–>szOSAFileName, ".osa" );
  }
  else
  {
                              sprintf( strstr( pOSAReportInfo–>szOSAFileName, ".pdf" ), ".osa");
  }

#endif
  /*  Open the OSA file for output.  */
  pOSAStruct–>fpOutput= fopen(pOSAReportInfo–>szOSAFileName, "w+b");
  if (!pOSAStruct–>fpOutput)
  {
    /* If the file could not be opened, send an error message back to the UBE log */
    if (pOSAReportInfo–>pnLogMessageSeverity)
    {
      *(pOSAReportInfo–>pnLogMessageSeverity) = 1;
    }
    sprintf(pOSAReportInfo–>szLogMessage, "Could not open OSA file: %s\n", pOSAReportInfo–>szOSAFileName);
    return;
  }
  return;
}
/*————————————————————————————————————————————————————————*/
```

```
/* Name: OSASample_StartDoc                                    */
/* Parameters: OSA_REPORT_INFO*                                */
/* Exceptions: None                                            */
/* Return Value: None                                          */
/* Description: Open the output file,                          */
/*    Output Report, Section and Object                        */
/*    properties.                                              */
/*—————————————————————————————————————————————————————————————*/
EXTERNC APIEXPORT void CDECL OSASample_StartDoc(OSA_REPORT_INFO* pOSAReportInfo)

{
  POSASAMPLE_STRUCT   pOSAStruct       = NULL;
  POSA_SECTION_INFO   pOSASectionInfo  = NULL;
  POSA_OBJECT_INFO    pOSAObjectInfo   = NULL;
                char        *pStrPtr        = NULL;
  unsigned long       i            = 0;
  unsigned long       j            = 0;
  if(!pOSAReportInfo )
  {
    return;
  }

  /* Allocate memory to hold severity value.
     Deallocated in OSASample_EndDoc         */
  if (!pOSAReportInfo–>pnLogMessageSeverity)
  {
    pOSAReportInfo–>pnLogMessageSeverity = malloc(sizeof( unsigned short));
  }
  if (pOSAReportInfo–>pnLogMessageSeverity)
  {
    pOSAReportInfo–>pnLogMessageSeverity[0] = 0;
  }
  /*  Create the common structure for passing values between functions,
      if it has not been created before this point.            */
  if (!pOSAReportInfo–>pExternalDataPointer)
  {
    pOSAStruct = malloc(sizeof( OSASAMPLE_STRUCT));
    if (pOSAStruct)
    {
      memset(pOSAStruct, 0, sizeof(OSASAMPLE_STRUCT));
    }
    else
    {
      strcpy(pOSAReportInfo–>szLogMessage, ”OSA: Could not allocate External Data Pointer.\n”);
      /* Set the correct severity to error message severity */
      if (pOSAReportInfo–>pnLogMessageSeverity)
      {
        *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
      }
    }
    /* Record the pointer as the external data pointer in Report Info.  */
    pOSAReportInfo–>pExternalDataPointer=pOSAStruct;
  }
  /* If the external data pointer does not exist execution
     cannot go on. Set severity to the highest value, assign a message for the
     log and return                                           */
  if(!pOSAReportInfo–>pExternalDataPointer)
  {
    strcpy(pOSAReportInfo–>szLogMessage, ”OSA: No External Data Pointer at End Doc.\n”);
    /* Set the correct severity to error message severity */
    if (pOSAReportInfo–>pnLogMessageSeverity)
    {
      *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
    }
    return;
  }
  pOSAStruct=pOSAReportInfo–>pExternalDataPointer;
  /* Create output file if it has not been created yet */
```

```
  if (!pOSAStruct–>fpOutput)
  {
    OSA_OpenOutputFile (pOSAReportInfo, pOSAStruct);
    if (pOSAReportInfo–>pnLogMessageSeverity[0] > 0)
      return;
  }
  /*  Identify the Execution Point */
  fprintf(pOSAStruct–>fpOutput, "****** START DOC EXECUTION POINT ******\n\n");
  /*  Output Report Info to file.  */
  OSA_ReportInfoOut(pOSAStruct, pOSAReportInfo);
  /*  Output Section Info to file. */
  if (!pOSAReportInfo–>pOSASectionInfo || !pOSAReportInfo–>ulNumberOfSections)
  {
    if (pOSAReportInfo–>pnLogMessageSeverity)
    {
      *(pOSAReportInfo–>pnLogMessageSeverity) = 2;
    }
    sprintf(pOSAReportInfo–>szLogMessage, "No Section Info present.\n");
    return;
  }
  pOSASectionInfo   = pOSAReportInfo–>pOSASectionInfo;
  for (i=0; i<pOSAReportInfo–>ulNumberOfSections; i++)
  {
    OSA_SectionInfoOut(pOSAStruct, pOSASectionInfo);
    /*  Output Object Info to file. */
    if (!pOSASectionInfo–>pOSAObjectInfo || !pOSASectionInfo–>ulNumberOfObjects)
    {
      if (pOSAReportInfo–>pnLogMessageSeverity)
      {
        *(pOSAReportInfo–>pnLogMessageSeverity) = 3;
      }
      sprintf(pOSAReportInfo–>szLogMessage,
            "No Object Info present for Section %s.\n",
            pOSASectionInfo–>szSectionName);
      return;
    }
    pOSAObjectInfo     = pOSASectionInfo–>pOSAObjectInfo;
    for (j=0; j<pOSASectionInfo–>ulNumberOfObjects; j++)
    {
      OSA_ObjectInfoOut(pOSAStruct, pOSAObjectInfo, 0);  /* Do not print Item Info at this time. */
      pOSAObjectInfo++;
    }
    pOSASectionInfo++;
  }
}
/*—————————————————————————————————————————————————————————*/
/* Name: OSASample_EndDoc                                   */
/* Parameters: OSA_REPORT_INFO*, OSA_PAGEOF_INFO*, unsigned long        */
/* Exceptions: None                               */
/* Return Value: None                              */
/* Description: Open the output file,                   */
/*    Output Report, Section and Object                 */
/*    properties.                             */
/*—————————————————————————————————————————————————————————*/
EXTERNC APIEXPORT void CDECL OSASample_EndDoc(OSA_REPORT_INFO* pOSAReportInfo,
                        OSA_PAGEOF_INFO* pOSAPageofInfo,
                        unsigned long ulNumberOfStructs)
{
  POSASAMPLE_STRUCT   pOSAStruct   = NULL;
  /*  If OSA does not provide the needed parameter (Highly unlikely), then return */
  if(!pOSAReportInfo )
  {
    return;
  }
  /* If the external data pointer does not exist execution
     cannot go on. Set severity to the highest value, assign a message for the
     log and return                              */
```

```
  if(!pOSAReportInfo–>pExternalDataPointer)
  {
    strcpy(pOSAReportInfo–>szLogMessage, "OSA: No External Data Pointer at End Doc.\n");
     /* Set the correct severity to error message severity */
   if (pOSAReportInfo–>pnLogMessageSeverity)
  {
    *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
  }
    return;
  }

  /* Close Output File  */
  pOSAStruct=pOSAReportInfo–>pExternalDataPointer;
   /*  Identify the Execution Point */
  fprintf(pOSAStruct–>fpOutput, "\n****** END DOC EXECUTION POINT ******");
  if (pOSAStruct–>fpOutput)
  {
    fclose (pOSAStruct–>fpOutput);
  }
  /* Delete the structure created to hold the external data */
  free (pOSAStruct);
  if (pOSAReportInfo–>pnLogMessageSeverity)
    free(pOSAReportInfo–>pnLogMessageSeverity);
  pOSAReportInfo–>pExternalDataPointer = NULL;
  return;
}
/*——————————————————————————————————————————————————*/
/* Name: OSASample_StartPage                              */
/* Parameters: OSA_REPORT_INFO*                           */
/* Exceptions: None                               */
/* Return Value: None                              */
/* Description: Output Report Info to output file.           */
/*                                      */
/*——————————————————————————————————————————————————*/
EXTERNC APIEXPORT void CDECL OSASample_StartPage(OSA_REPORT_INFO* pOSAReportInfo)
{
  POSASAMPLE_STRUCT   pOSAStruct   = NULL;
  /* If OSA does not provide the needed parameter (Highly unlikely), then return */
  if(!pOSAReportInfo )
  {
    return;
  }
  /* If the external data pointer does not exist execution
     cannot go on. Set severity to the highest value, assign a message for the
     log and return                               */
  if(!pOSAReportInfo–>pExternalDataPointer)
  {
    strcpy(pOSAReportInfo–>szLogMessage, "OSA: No External Data Pointer at Start Page.\n");
     /* Set the correct severity to error message severity */
   if (pOSAReportInfo–>pnLogMessageSeverity)
  {
    *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
  }
    return;
  }

  /*  Output Report Info  */
  pOSAStruct=pOSAReportInfo–>pExternalDataPointer;
  /*  Check for valid file pointer */
  if (!pOSAStruct–>fpOutput)
  {
    strcpy(pOSAReportInfo–>szLogMessage, "OSA: No Output File pointer at Start Page.\n");
     /* Set the correct severity to error message severity */
   if (pOSAReportInfo–>pnLogMessageSeverity)
  {
    *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
  }
```

```
      return;
    }
    /*  Identify the Execution Point */
    fprintf(pOSAStruct–>fpOutput, "\n****** START PAGE EXECUTION POINT ******\n");
    OSA_ReportInfoOut(pOSAStruct, pOSAReportInfo);
    return;
}
/*————————————————————————————————————————————————————————————————*/
/* Name: OSASample_EndPage                              */
/* Parameters: OSA_REPORT_INFO*, OSA_LINK_INFO*, unsigned long       */
/* Exceptions: None                             */
/* Return Value: None                              */
/* Description: Output Report Info and Link Info            */
/*                                  */
/*————————————————————————————————————————————————————————————————*/
EXTERNC APIEXPORT void CDECL OSASample_EndPage(POSA_REPORT_INFO   pOSAReportInfo,
                            POSA_LINK_INFO    pOSALinkInfo,
                            unsigned long     ulNumberOfLinks)
{
  POSASAMPLE_STRUCT   pOSAStruct    = NULL;
  /* If OSA does not provide the needed parameter (Highly unlikely), then return */
  if(!pOSAReportInfo )
  {
    return;
  }
  /* If the external data pointer does not exist execution
     cannot go on. Set severity to the highest value, assign a message for the
     log and return                           */
  if(!pOSAReportInfo–>pExternalDataPointer)
  {
    strcpy(pOSAReportInfo–>szLogMessage, "OSA: No External Data Pointer at End Page.\n");
     /* Set the correct severity to error message severity */
   if (pOSAReportInfo–>pnLogMessageSeverity)
   {
    *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
   }
     return;
  }

  /*  Output Report Info  */
  pOSAStruct=pOSAReportInfo–>pExternalDataPointer;
  /*  Check for valid file pointer */
  if (!pOSAStruct–>fpOutput)
  {
    strcpy(pOSAReportInfo–>szLogMessage, "OSA: No Output File pointer at End Page.\n");
     /* Set the correct severity to error message severity */
   if (pOSAReportInfo–>pnLogMessageSeverity)
   {
    *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
   }
     return;
  }
  /*  Identify the Execution Point */
  fprintf(pOSAStruct–>fpOutput, "\n****** END PAGE EXECUTION POINT ******\n");
  OSA_ReportInfoOut(pOSAStruct, pOSAReportInfo);
  /* Output Link Info */
  OSA_LinkInfoOut(pOSAStruct, pOSALinkInfo, ulNumberOfLinks);
  return;
}
/*————————————————————————————————————————————————————————————————*/
/* Name: OSASample_SetFont                          */
/* Parameters: OSA_REPORT_INFO*, OSA_FONT_INFO*               */
/* Exceptions: None                         */
/* Return Value: None                              */
/* Description: Output Font Info                     */
/*                                  */
/*————————————————————————————————————————————————————————————————*/
```

```
EXTERNC APIEXPORT void CDECL OSASample_SetFont(POSA_REPORT_INFO   pOSAReportInfo,
                            POSA_FONT_INFO    pOSAFontInfo)
{
  POSASAMPLE_STRUCT   pOSAStruct   = NULL;
  /* If OSA does not provide the needed parameter (Highly unlikely), then return */
  if(!pOSAReportInfo )
  {
    return;
  }
  /* Allocate memory to hold severity value.
     Deallocated in OSASample_EndDoc         */
  if (!pOSAReportInfo–>pnLogMessageSeverity)
  {
    pOSAReportInfo–>pnLogMessageSeverity = malloc(sizeof( unsigned short));
  }
  if (pOSAReportInfo–>pnLogMessageSeverity)
  {
    pOSAReportInfo–>pnLogMessageSeverity[0] = 0;
  }
  /*  Create the common structure for passing values between functions,
     if it has not been created before this point.              */
  if (!pOSAReportInfo–>pExternalDataPointer)
  {
    pOSAStruct = malloc(sizeof( OSASAMPLE_STRUCT));
    if (pOSAStruct)
    {
      memset(pOSAStruct, 0, sizeof(OSASAMPLE_STRUCT));
    }
    else
    {
      strcpy(pOSAReportInfo–>szLogMessage, "OSA: Could not allocate External Data Pointer.\n");
      /* Set the correct severity to error message severity */
      if (pOSAReportInfo–>pnLogMessageSeverity)
      {
        *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
      }
    }
    /* Record the pointer as the external data pointer in Report Info.  */
    pOSAReportInfo–>pExternalDataPointer=pOSAStruct;
  }

  /*  Output Report Info  */
  pOSAStruct=pOSAReportInfo–>pExternalDataPointer;
  /* Create output file if it has not been created yet */
  if (!pOSAStruct–>fpOutput)
  {
    OSA_OpenOutputFile (pOSAReportInfo, pOSAStruct);
    if (pOSAReportInfo–>pnLogMessageSeverity[0] > 0)
      return;
  }
  /*  Check for valid file pointer */
  if (!pOSAStruct–>fpOutput)
  {
    strcpy(pOSAReportInfo–>szLogMessage, "OSA: No Output File pointer at Set Font.\n");
    /* Set the correct severity to error message severity */
  if (pOSAReportInfo–>pnLogMessageSeverity)
  {
    *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
  }
    return;
  }
  /*  Identify the Execution Point */
```

```
   fprintf(pOSAStruct–>fpOutput, "\n****** SET FONT EXECUTION POINT ******\n");
   OSA_FontInfoOut(pOSAStruct, pOSAFontInfo);
   return;
}
/*—————————————————————————————————————————————————————*/
/* Name: OSASample_SetColor                                          */
/* Parameters: OSA_REPORT_INFO*, unsigned long int                  */
/* Exceptions: None                                    */
/* Return Value: None                                       */
/* Description: Output Color Reference Number                    */
/*                                                  */
/*—————————————————————————————————————————————————————*/
EXTERNC APIEXPORT void CDECL OSASample_SetColor(POSA_REPORT_INFO  pOSAReportInfo,
                         unsigned long int  zColorRef)
{
   POSASAMPLE_STRUCT   pOSAStruct    = NULL;
   /* If OSA does not provide the needed parameter (Highly unlikely), then return */
   if(!pOSAReportInfo )
   {
     return;
   }
   /* If the external data pointer does not exist execution
      cannot go on. Set severity to the highest value, assign a message for the
      log and return                                 */
   if(!pOSAReportInfo–>pExternalDataPointer)
   {
     strcpy(pOSAReportInfo–>szLogMessage, "OSA: No External Data Pointer at Set Color.\n");
      /* Set the correct severity to error message severity */
    if (pOSAReportInfo–>pnLogMessageSeverity)
    {
      *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
    }
     return;
   }

   /*  Output Report Info  */
   pOSAStruct=pOSAReportInfo–>pExternalDataPointer;
   /*  Check for valid file pointer */
   if (!pOSAStruct–>fpOutput)
   {
     strcpy(pOSAReportInfo–>szLogMessage, "OSA: No Output File pointer at Set Color.\n");
      /* Set the correct severity to error message severity */
    if (pOSAReportInfo–>pnLogMessageSeverity)
    {
      *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
    }
     return;
   }
   /*  Identify the Execution Point */
   fprintf(pOSAStruct–>fpOutput, "\n****** SET COLOR: %d ******\n", zColorRef);
   return;
}
/*—————————————————————————————————————————————————————*/
/* Name: OSASample_TextOut                               */
/* Parameters: OSA_REPORT_INFO*, OSA_OBJECT_INFO*                */
/* Exceptions: None                                   */
/* Return Value: None                                     */
/* Description: Output Font Info                        */
/*                                                  */
/*—————————————————————————————————————————————————————*/
EXTERNC APIEXPORT void CDECL OSASample_TextOut(POSA_REPORT_INFO  pOSAReportInfo,
                         POSA_OBJECT_INFO   pOSAObjectInfo)
{
   POSASAMPLE_STRUCT   pOSAStruct    = NULL;
   /* If OSA does not provide the needed parameter (Highly unlikely), then return */
```

```
   if(!pOSAReportInfo )
   {
      return;
   }
   /* If the external data pointer does not exist execution
      cannot go on. Set severity to the highest value, assign a message for the
      log and return                                         */
   if(!pOSAReportInfo–>pExternalDataPointer)
   {
      strcpy(pOSAReportInfo–>szLogMessage, "OSA: No External Data Pointer at Text Out.\n");
       /* Set the correct severity to error message severity */
    if (pOSAReportInfo–>pnLogMessageSeverity)
    {
      *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
    }
      return;
   }

   /*  Output Report Info  */
   pOSAStruct=pOSAReportInfo–>pExternalDataPointer;
   /*  Check for valid file pointer */
   if (!pOSAStruct–>fpOutput)
   {
      strcpy(pOSAReportInfo–>szLogMessage, "OSA: No Output File pointer at Text Out.\n");
       /* Set the correct severity to error message severity */
    if (pOSAReportInfo–>pnLogMessageSeverity)
    {
      *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
    }
      return;
   }
   /*  Identify the Execution Point */
   fprintf(pOSAStruct–>fpOutput, "\n****** TEXT OUT EXECUTION POINT ******\n");
   OSA_ObjectInfoOut(pOSAStruct, pOSAObjectInfo, 1);
   return;
}
/*————————————————————————————————————————————————————————*/
/* Name: OSASample_Underline                          */
/* Parameters: OSA_REPORT_INFO*, OSA_OBJECT_INFO*                 */
/* Exceptions: None                              */
/* Return Value: None                              */
/* Description: Output Font Info                      */
/*                                          */
/*————————————————————————————————————————————————————————*/
EXTERNC APIEXPORT void CDECL OSASample_DrawUnderline(POSA_REPORT_INFO  pOSAReportInfo,
                              POSA_OBJECT_INFO   pOSAObjectInfo)

{
   POSASAMPLE_STRUCT   pOSAStruct   = NULL;
   /* If OSA does not provide the needed parameter (Highly unlikely), then return */
   if(!pOSAReportInfo )
   {
      return;
   }
   /* If the external data pointer does not exist execution
      cannot go on. Set severity to the highest value, assign a message for the
      log and return                                         */
   if(!pOSAReportInfo–>pExternalDataPointer)
   {
      strcpy(pOSAReportInfo–>szLogMessage, "OSA: No External Data Pointer at Draw Underline.\n");
       /* Set the correct severity to error message severity */
    if (pOSAReportInfo–>pnLogMessageSeverity)
    {
      *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
    }
      return;
   }
```

```
  /*  Output Report Info  */
  pOSAStruct=pOSAReportInfo–>pExternalDataPointer;
  /*  Check for valid file pointer */
  if (!pOSAStruct–>fpOutput)
  {
    strcpy(pOSAReportInfo–>szLogMessage, "OSA: No Output File pointer at Draw Underline.\n");
    /* Set the correct severity to error message severity */
   if (pOSAReportInfo–>pnLogMessageSeverity)
   {
    *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
   }
    return;
  }
  /*  Identify the Execution Point */
  fprintf(pOSAStruct–>fpOutput, "\n****** DRAW UNDERLINE EXECUTION POINT ******\n");
  OSA_ObjectInfoOut(pOSAStruct, pOSAObjectInfo, 1);
  return;
}
/*————————————————————————————————————————————————*/
/* Name: OSASample_DrawObject                            */
/* Parameters: OSA_REPORT_INFO*, OSA_OBJECT_INFO*              */
/* Exceptions: None                            */
/* Return Value: None                           */
/* Description: Output Font Info                     */
/*                              */
/*————————————————————————————————————————————————*/
EXTERNC APIEXPORT void CDECL OSASample_DrawObject(POSA_REPORT_INFO  pOSAReportInfo,
                      POSA_OBJECT_INFO   pOSAObjectInfo)
{
  POSASAMPLE_STRUCT   pOSAStruct   = NULL;
  /* If OSA does not provide the needed parameter (Highly unlikely), then return */
  if(!pOSAReportInfo )
  {
    return;
  }
  /* If the external data pointer does not exist execution
    cannot go on. Set severity to the highest value, assign a message for the
    log and return                          */
  if(!pOSAReportInfo–>pExternalDataPointer)
  {
    strcpy(pOSAReportInfo–>szLogMessage, "OSA: No External Data Pointer at Draw Object.\n");
    /* Set the correct severity to error message severity */
   if (pOSAReportInfo–>pnLogMessageSeverity)
   {
    *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
   }
    return;
  }

  /*  Output Report Info  */
  pOSAStruct=pOSAReportInfo–>pExternalDataPointer;
  /*  Check for valid file pointer */
  if (!pOSAStruct–>fpOutput)
  {
    strcpy(pOSAReportInfo–>szLogMessage, "OSA: No Output File pointer at Draw Object.\n");
    /* Set the correct severity to error message severity */
   if (pOSAReportInfo–>pnLogMessageSeverity)
   {
    *(pOSAReportInfo–>pnLogMessageSeverity) = (unsigned short)1;
   }
    return;
  }
  /*  Identify the Execution Point */
  fprintf(pOSAStruct–>fpOutput, "\n****** DRAW OBJECT EXECUTION POINT ******\n");
  OSA_ObjectInfoOut(pOSAStruct, pOSAObjectInfo, 1);
  return;
}
```

Glossary

Glossary

AAI. See automatic accounting instruction.

action message. With OneWorld, users can receive messages (system-generated or user-generated) that have shortcuts to OneWorld forms, applications, and appropriate data. For example, if the general ledger post sends an action error message to a user, that user can access the journal entry (or entries) in error directly from the message. This is a central feature of the OneWorld workflow strategy. Action messages can originate either from OneWorld or from a third-party e-mail system.

activator. In the Solution Explorer, a parent task with sequentially-arranged child tasks that are automated with a director.

ActiveX. A computing technology, based on object linking and embedding, that enables Java applet-style functionality for Web browsers as well as other applications. (Java is limited to Web browsers at this time.) The ActiveX equivalent of a Java applet is an ActiveX control. These controls bring computational, communications, and data manipulation power to programs that can "contain" them. For example, certain Web browsers, Microsoft Office programs, and anything developed with Visual Basic or Visual C++.

advance. A change in the status of a project in the Object Management Workbench. When you advance a project, the status change might trigger other actions and conditions such as moving objects from one server to another or preventing check-out of project objects.

alphanumeric character. A combination of letters, numbers, and symbols used to represent data. Contrast with numeric character and special character.

API. See application programming interface.

APPL. See application.

applet. A small application, such as a utility program or a limited-function spreadsheet. It is generally associated with the programming language Java, and in this context refers to

Internet-enabled applications that can be passed from a Web browser residing on a workstation.

application. In the computer industry, the same as an executable file. In OneWorld, an interactive or batch application is a DLL that contains programming for a set of related forms that can be run from a menu to perform a business task such as Accounts Payable and Sales Order Processing. Also known as system.

application developer. A programmer who develops OneWorld applications using the OneWorld toolset.

application programming interface (API). A software function call that can be made from a program to access functionality provided by another program.

application workspace. The area on a workstation display in which all related forms within an application appear.

audit trail. The detailed, verifiable history of a processed transaction. The history consists of the original documents, transaction entries, and posting of records, and usually concludes with a report.

automatic accounting instruction (AAI). A code that refers to an account in the chart of accounts. AAIs define rules for programs that automatically generate journal entries, including interfaces between Accounts Payable, Accounts Receivable, Financial Reporting, General Accounting systems. Each system that interfaces with the General Accounting system has AAIs. For example, AAIs can direct the General Ledger Post program to post a debit to a specific expense account and a credit to a specific accounts payable account.

batch header. The information that identifies and controls a batch of transactions or records.

batch job. A task or group of tasks you submit for processing that the system treats as a single unit during processing, for example, printing reports and purging files. The computer system

performs a batch job with little or no user interaction.

batch processing. A method by which the system selects jobs from the job queue, processes them, and sends output to the outqueue. Contrast with interactive processing.

batch server. A server on which OneWorld batch processing requests (also called UBEs) are run instead of on a client, an application server, or an enterprise server. A batch server typically does not contain a database nor does it run interactive applications.

batch type. A code assigned to a batch job that designates to which J.D. Edwards system the associated transactions pertain, thus controlling which records are selected for processing. For example, the Post General Journal program selects for posting only unposted transaction batches with a batch type of O.

batch-of-one immediate. A transaction method that allows a client application to perform work on a client workstation, then submit the work all at once to a server applicationfor further processing. As a batch process is running on the server, the client application can continue performing other tasks. See also direct connect, store and forward.

BDA. See Business View Design Aid.

binary string (BSTR). A length prefixed string used by OLE automation data manipulation functions. Binary Strings are wide, double-byte (Unicode) strings on 32-bit Windows platforms.

Boolean Logic Operand. In J.D. Edwards reporting programs, the parameter of the Relationship field. The Boolean logic operand instructs the system to compare certain records or parameters. Available options are:

EQ	Equal To.
LT	Less Than.
LE	Less Than or Equal To.
GT	Greater Than.
GE	Greater Than or Equal To.
NE	Not Equal To.
NL	Not Less Than.
NG	Not Greater Than.

browser. A client application that translates information sent by the World Wide Web. A client must use a browser to receive, manipulate, and display World Wide Web information on the desktop. Also known as a Web browser.

BSFN. See business function.

BSTR. See binary string.

BSVW. See business view.

business function. An encapsulated set of business rules and logic that can normally be reused by multiple applications. Business functions can execute a transaction or a subset of a transaction (check inventory, issue work orders, and so on). Business functions also contain the APIs that allow them to be called from a form, a database trigger, or a non-OneWorld application. Business functions can be combined with other business functions, forms, event rules, and other components to make up an application. Business functions can be created through event rules or third-generation languages, such as C. Examples of business functions include Credit Check and Item Availability.

business function event rule. See named event rule.

business view. Used by OneWorld applications to access data from database tables. A business view is a means for selecting specific columns from one or more tables whose data will be used in an application or report. It does not select specific rows and does not contain any physical data. It is strictly a view through which data can be handled.

Business View Design Aid (BDA). A OneWorld GUI ool for creating, modifying, copying, and printing business views. The tool uses a graphical user interface.

category code. In user defined codes, a temporary title for an undefined category. For example, if you are adding a code that designates different sales regions, you could change category code 4 to Sales Region, and define E (East), W (West), N (North), and S (South) as the valid codes. Sometimes referred to as reporting codes.

central objects. Objects that reside in a central location and consist of two parts: the central objects data source and central C components. The central objects data source contains OneWorld specifications, which are stored in a relational database. Central C components

contain business function source, header, object, library, and DLL files and are usually stored in directories on the deployment server. Together they make up central objects.

check-in location. The directory structure location for the package and its set of replicated objects. This is usually \\deploymentserver\release\path_code\packag e\ packagename. The sub-directories under this path are where the central C components (source, include, object, library, and DLL file) for business functions are stored.

child. See parent/child form.

client/server. A relationship between processes running on separate machines. The server process is a provider of software services. The client is a consumer of those services. In essence, client/server provides a clean separation of function based on the idea of service. A server can service many clients at the same time and regulate their access to shared resources. There is a many-to-one relationship between clients and a server, respectively. Clients always initiate the dialog by requesting a service. Servers passively wait for requests from clients.

CNC. See configurable network computing.

component. In the ActivEra Portal, an encapsulated object that appears inside a workspace. Portal components

configurable client engine. Allows user flexibility at the interface level. Users can easily move columns, set tabs for different data views, and size grids according to their needs. The configurable client engine also enables the incorporation of Web browsers in addition to the Windows 95- and Windows NT-based interfaces.

configurable network computing. An application architecture that allows interactive and batch applications, composed of a single code base, to run across a TCP/IP network of multiple server platforms and SQL databases. The applications consist of reusable business functions and associated data that can be configured across the network dynamically. The overall objective for businesses is to provide a future-proof environment that enables them to change organizational structures, business

processes, and technologies independently of each other.

constants. Parameters or codes that you set and the system uses to standardize information processing by associated programs. Some examples of constants are: validating bills of material online and including fixed labor overhead in costing.

control. Any data entry point allowing the user to interact with an application. For example, check boxes, pull-down lists, hyper-buttons, entry fields, and similar features are controls.

core. The central and foundation systems of J.D. Edwards software, including General Accounting, Accounts Payable, Accounts Receivable, Address Book, Financial Reporting, Financial Modeling and Allocations, and Back Office.

CRP. Conference Room Pilot.

custom gridlines. A grid row that does not come from the database, for example, totals. To display a total in a grid, sum the values and insert a custom gridline to display the total. Use the system function Insert Grid Row Buffer to accomplish this.

data dictionary. The OneWorld method for storing and managing data item definitions and specifications. J.D. Edwards has an active data dictionary, which means it is accessed at runtime.

data mart. Department-level decision support databases. They usually draw their data from an enterprise data warehouse that serves as a source of consolidated and reconciled data from around the organization. Data marts can be either relational or multidimensional databases.

data replication. In a replicated environment, multiple copies of data are maintained on multiple machines. There must be a single source that "owns" the data. This ensures that the latest copy of data can be applied to a primary place and then replicated as appropriate. This is in contrast to a simple copying of data, where the copy is not maintained from a central location, but exists independently of the source.

data source. A specific instance of a database management system running on a computer. Data source management is accomplished

through Object Configuration Manager (OCM) and Object Map (OM).

data structure. A group of data items that can be used for passing information between objects, for example, between two forms, between forms and business functions, or between reports and business functions.

data warehouse. A database used for reconciling and consolidating data from multiple databases before it is distributed to data marts for department-level decision support queries and reports. The data warehouse is generally a large relational database residing on a dedicated server between operational databases and the data marts.

data warehousing. Essentially, data warehousing involves off-loading operational data sources to target databases that will be used exclusively for decision support (reports and queries). There are a range of decision support environments, including duplicated database, enhanced analysis databases, and enterprise data warehouses.

database. A continuously updated collection of all information a system uses and stores. Databases make it possible to create, store, index, and cross-reference information online.

database driver. Software that connects an application to a specific database management system.

database server. A server that stores data. A database server does not have OneWorld logic.

DCE. See distributed computing environment.

DD. See data dictionary.

default. A code, number, or parameter value that is assumed when none is specified.

detail. The specific pieces of information and data that make up a record or transaction. Contrast with summary.

detail area. A control that is found in OneWorld applications and functions similarly to a spreadsheet grid for viewing, adding, or updating many rows of data at one time.

direct connect. A transaction method in which a client application communicates interactively and directly with a server application. See also batch-of-one immediate, store and forward.

director. An interactive utility that guides a user through the steps of a process to complete a task.

distributed computing environment (DCE). A set of integrated software services that allows software running on multiple computers to perform in a manner that is seamless and transparent to the end-users. DCE provides security, directory, time, remote procedure calls, and files across computers running on a network.

DLL. See dynamic link library.

DS. See data structure.

DSTR. See data structure.

duplicated database. A decision support database that contains a straightforward copy of operational data. The advantages involve improved performance for both operational and reporting environments. See also enhanced analysis database, enterprise data warehouse.

dynamic link library (DLL). A set of program modules that are designed to be invoked from executable files when the executable files are run, without having to be linked to the executable files. They typically contain commonly used functions.

dynamic partitioning. The ability to dynamically distribute logic or data to multiple tiers in a client/server architecture.

embedded event rule. An event rule that is specific to a particular table or application. Examples include form-to-form calls, hiding a field based on a processing option value, and calling a business function. Contrast with business function event rule. See also event rule.

employee work center. This is a central location for sending and receiving all OneWorld messages (system and user generated) regardless of the originating application or user. Each user has a mailbox that contains workflow and other messages, including Active Messages. With respect to workflow, the Message Center is MAPI compliant and supports drag and drop work reassignment, escalation, forward and reply, and workflow monitoring. All messages from the message center can be viewed through OneWorld messages or Microsoft Exchange.

encapsulation. The ability to confine access to and manipulation of data within an object to the

procedures that contribute to the definition of that object.

enhanced analysis database. A database containing a subset of operational data. The data on the enhanced analysis database performs calculations and provides summary data to speed generation of reports and query response times. This solution is appropriate when external data must be added to source data, or when historical data is necessary for trend analysis or regulatory reporting. See also duplicated database, enterprise data warehouse.

enterprise data warehouse. A complex solution that involves data from many areas of the enterprise. This environment requires a large relational database (the data warehouse) that is a central repository of enterprise data, which is clean, reconciled, and consolidated. From this repository, data marts retrieve data to provide department-level decisions. See also duplicated database, enhanced analysis database.

enterprise server. A database server and logic server. See database server. Also referred to as host.

ER. See event rule.

ERP. See enterprise resource planning.

event. An action that occurs when an interactive or batch application is running. Example events are tabbing out of an edit control, clicking a push button, initializing a form, or performing a page break on a report. The GUI operating system uses miniprograms to manage user activities within a form. Additional logic can be attached to these miniprograms and used to give greater functionality to any event within a OneWorld application or report using event rules.

event rule. Used to create complex business logic without the difficult syntax that comes with many programming languages. These logic statements can be attached to applications or database events and are executed when the defined event occurs, such as entering a form, selecting a menu bar option, page breaking on a report, or selecting a record. An event rule can validate data, send a message to a user, call a business function, as well as many other actions. There are two types of event rules:
1   Embedded event rules.
2   Named event rules.

executable file. A computer program that can be run from the computer's operating system. Equivalent terms are "application" and "program.".

exit. 1) To interrupt or leave a computer program by pressing a specific key or a sequence of keys. 2) An option or function key displayed on a form that allows you to access another form.

facility. 1) A separate entity within a business for which you want to track costs. For example, a facility might be a warehouse location, job, project, work center, or branch/plant. Sometimes referred to as a business unit. 2) In Home Builder and ECS, a facility is a collection of computer language statements or programs that provide a specialized function throughout a system or throughout all integrated systems. For example, DREAM Writer and FASTR are facilities.

FDA. See Form Design Aid.

find/browse. A type of form used to:
1   Search, view, and select multiple records in a detail area.
2   Delete records.
3   Exit to another form.
4   Serve as an entry point for most applications.

firewall. A set of technologies that allows an enterprise to test, filter, and route all incoming messages. Firewalls are used to keep an enterprise secure.

fix/inspect. A type of form used to view, add, or modify existing records. A fix/inspect form has no detail area.

form. An element of OneWorld's graphical user interface that contains controls by which a user can interact with an application. Forms allow the user to input, select, and view information. A OneWorld application might contain multiple forms. In Microsoft Windows terminology, a form is known as a dialog box.

Form Design Aid (FDA). The OneWorld GUI development tool for building interactive applications and forms.

form interconnection. Allows one form to access and pass data to another form. Form interconnections can be attached to any event; however, they are normally used when a button is clicked.

form type. The following form types are available in OneWorld:

1	Find/browse.
2	Fix/inspect.
3	Header detail.
4	Headerless detail.
5	Message.
6	Parent/child.
7	Search/select.

fourth generation language (4GL). A programming language that focuses on what you need to do and then determines how to do it. Structured Query Language is an example of a 4GL.

graphical user interface (GUI). A computer interface that is graphically based as opposed to being character-based. An example of a character-based interface is that of the AS/400. An example of a GUI is Microsoft Windows. Graphically based interfaces allow pictures and other graphic images to be used in order to give people clues on how to operate the computer.

grid. See detail area.

GUI. See graphical user interface.

header. Information at the beginning of a table or form. This information is used to identify or provide control information for the group of records that follows.

header/detail. A type of form used to add, modify, or delete records from two different tables. The tables usually have a parent/child relationship.

headerless detail. A type of form used to work with multiple records in a detail area. The detail area is capable of of receiving input.

hidden selections. Menu selections you cannot see until you enter HS in a menu's Selection field. Although you cannot see these selections, they are available from any menu. They include such items as Display Submitted Jobs (33), Display User Job Queue (42), and Display User Print Queue (43). The Hidden Selections window displays three categories of selections: user tools, operator tools, and programmer tools.

host. In the centralized computer model, a large timesharing computer system that terminals communicate with and rely on for processing. In contrasts with client/server in that those users work at computers that perform much of their own processing and access servers that provide services such as file management, security, and printer management.

HTML. See hypertext markup language.

hypertext markup language. A markup language used to specify the logical structure of a document rather than the physical layout. Specifying logical structure makes any HTML document platform independent. You can view an HTML document on any desktop capable of supporting a browser. HTML can include active links to other HTML documents anywhere on the Internet or on intranet sites.

index. Represents both an ordering of values and a uniqueness of values that provide efficient access to data in rows of a table. An index is made up of one or more columns in the table.

inheritance. The ability of a class to recieve all or parts of the data and procedure definitions from a parent class. Inheritance enhances developement through the reuse of classes and their related code.

install system code. See system code.

integrated toolset. Unique to OneWorld is an industrial-strength toolset embedded in the already comprehensive business applications. This toolset is the same toolset used by J.D. Edwards to build OneWorld interactive and batch applications. Much more than a development environment, however, the OneWorld integrated toolset handles reporting and other batch processes, change management, and basic data warehousing facilities.

interactive processing. Processing actions that occur in response to commands you enter directly into the system. During interactive processing, you are in direct communication with the system, and it might prompt you for additional information while processing your request. See also online. Contrast with batch processing.

interface. A link between two or more computer systems that allows these systems to send information to and receive information from one another.

Internet. The worldwide constellation of servers, applications, and information available

to a desktop client through a phone line or other type of remote access.

interoperability. The ability of different computer systems, networks, operating systems, and applications to work together and share information.

intranet. A small version of the Internet usually confined to one company or organization. An intranet uses the functionality of the Internet and places it at the disposal of a single enterprise.

IP. A connection-less communication protocol that by itself provides a datagram service. Datagrams are self-contained packets of information that are forwarded by routers based on their address and the routing table information contained in the routers. Every node on a TCP/IP network requires an address that identifies both a network and a local host or node on the network. In most cases the network administrator sets up these addresses when installing new workstations. In some cases, however, it is possible for a workstation, when booting up, to query a server for a dynamically assigned address.

IServer Service. Developed by J.D. Edwards, this internet server service resides on the web server, and is used to speed up delivery of the Java class files from the database to the client.

ISO 9000. A series of standards established by the International Organization for Standardization, designed as a measure of product and service quality.

J.D. Edwards Database. See JDEBASE Database Middleware.

Java. An Internet executable language that, like C, is designed to be highly portable across platforms. This programming language was developed by Sun Microsystems. Applets, or Java applications, can be accessed from a web browser and executed at the client, provided that the operating system or browser is Java-enabled. (Java is often described as a scaled-down C++). Java applications are platform independent.

Java Database Connectivity (JDBC). The standard way to access Java databases, set by Sun Microsystems. This standard allows you to use any JDBC driver database.

JavaScript. A scripting language related to Java. Unlike Java, however, JavaScript is not an object-oriented language and it is not compiled.

jde.ini. J.D. Edwards file (or member for AS/400) that provides the runtime settings required for OneWorld initialization. Specific versions of the file/member must reside on every machine running OneWorld. This includes workstations and servers.

JDEBASE Database Middleware. J.D. Edwards proprietary database middleware package that provides two primary benefits:
1. Platform-independent APIs for multidatabase access. These APIs are used in two ways:
   a. By the interactive and batch engines to dynamically generate platform-specific SQL, depending on the datasource request.
   b. As open APIs for advanced C business function writing. These APIs are then used by the engines to dynamically generate platform-specific SQL.
2. Client-to-server and server-to-server database access. To accomplish this OneWorld is integrated with a variety of third-party database drivers, such as Client Access 400 and open database connectivity (ODBC).

JDECallObject. An application programming interface used by business functions to invoke other business functions.

JDENET. J.D. Edwards proprietary middleware software. JDENET is a messaging software package.

JDENET communications middleware. J.D. Edwards proprietary communications middleware package for OneWorld. It is a peer-to-peer, message-based, socket based, multiprocess communications middleware solution. It handles client-to-server and server-to-server communications for all OneWorld supported platforms.

job queue. A group of jobs waiting to be batch processed. See also batch processing.

just in time installation (JITI). OneWorld's method of dynamically replicating objects from the central object location to a workstation.

just in time replication (JITR). OneWorld's method of replicating data to individual

workstations. OneWorld replicates new records (inserts) only at the time the user needs the data. Changes, deletes, and updates must be replicated using Pull Replication.

KEY. A column or combination of columns that identify one or more records in a database table.

leading zeros. A series of zeros that certain facilities in J.D. Edwards systems place in front of a value you enter. This normally occurs when you enter a value that is smaller than the specified length of the field. For example, if you enter 4567 in a field that accommodates eight numbers, the facility places four zeros in front of the four numbers you enter. The result appears as: 00004567.

level of detail. 1) The degree of difficulty of a menu in J.D. Edwards software. The levels of detail for menus are as follows:

A	Major Product Directories.
B	Product Groups.
1	Basic Operations.
2	Intermediate Operations.
3	Advanced Operations.
4	Computer Operations.
5	Programmers.
6	Advanced Programmers Also known as menu levels.

2) The degree to which account information in the General Accounting system is summarized. The highest level of detail is 1 (least detailed) and the lowest level of detail is 9 (most detailed).

MAPI. See Messaging Application Programming Interface.

master table. A database table used to store data and information that is permanent and necessary to the system's operation. Master tables might contain data such as paid tax amounts, supplier names, addresses, employee information, and job information.

menu. A menu that displays numbered selections. Each of these selections represents a program or another menu. To access a selection from a menu, type the selection number and then press Enter.

menu levels. See level of detail.

menu masking. A security feature of J.D. Edwards systems that lets you prevent individual users from accessing specified menus or menu selections. The system does not display the menus or menu selections to unauthorized users.

Messaging Application Programming Interface (MAPI). An architecture that defines the components of a messaging system and how they behave. It also defines the interface between the messaging system and the components.

middleware. A general term that covers all the distributed software needed to support interactions between clients and servers. Think of it as the software that's in the middle of the client/server system or the "glue" that lets the client obtain a service from a server.

modal. A restrictive or limiting interaction created by a given condition of operation. Modal often describes a secondary window that restricts a user's interaction with other windows. A secondary window can be modal with respect to it's primary window or to the entire system. A modal dialog box must be closed by the user before the application continues.

mode. In reference to forms in OneWorld, mode has two meanings:

- An operational qualifier that governs how the form interacts with tables and business views. OneWorld form modes are: add, copy, and update.
- An arbitrary setting that aids in organizing form generation for different environments. For example, you might set forms generated for a Windows environment to mode 1 and forms generated for a Web environment to mode 2.

modeless. Not restricting or limiting interaction. Modeless often describes a secondary window that does not restrict a user's interaction with other windows. A modeless dialog box stays on the screen and is available for use at any time but also permits other user activities.

multitier architecture. A client/server architecture that allows multiple levels of processing. A tier defines the number of computers that can be used to complete some defined task.

named event rule. Encapsulated, reusable business logic created using through event rules rather than C programming. Contrast with embedded event rule. See also event rule.

NER. See named event rule.

network computer. As opposed to the personal computer, the network computer offers (in theory) lower cost of purchase and ownership and less complexity. Basically, it is a scaled-down PC (very little memory or disk space) that can be used to access network-based applications (Java applets, ActiveX controls) via a network browser.

network computing. Often referred to as the next phase of computing after client/server. While its exact definition remains obscure, it generally encompasses issues such as transparent access to computing resources, browser-style front-ends, platform independence, and other similar concepts.

next numbers. A feature you use to control the automatic numbering of such items as new G/L accounts, vouchers, and addresses. It lets you specify a numbering system and provides a method to increment numbers to reduce transposition and typing errors.

non–object librarian object. An object that is not managed by the object librarian.

numeric character. Digits 0 through 9 that are used to represent data. Contrast with alphanumeric characters.

object. A self-sufficient entity that contains data as well as the structures and functions used to manipulate the data. For OneWorld purposes, an object is a reusable entity that is based on software specifications created by the OneWorld toolset. See also object librarian.

object configuration manager (OCM). OneWorld's Object Request Broker and the control center for the runtime environment. It keeps track of the runtime locations for business functions, data, and batch applications. When one of these objects is called, the Object Configuration Manager directs access to it using defaults and overrides for a given environment and user.

object embedding. When an object is embedded in another document, an association is maintained between the object and the application that created it; however, any changes made to the object are also only kept in the compound document. See also object linking.

object librarian. A repository of all versions, applications, and business functions reusable in building applications. You access these objects with the Object Management Workbench.

object librarian object. An object managed by the object librarian.

object linking. When an object is linked to another document, a reference is created with the file the object is stored in, as well as with the application that created it. When the object is modified, either from the compound document or directly through the file it is saved in, the change is reflected in that application as well as anywhere it has been linked. See also object embedding.

object linking and embedding (OLE). A way to integrate objects from diverse applications, such as graphics, charts, spreadsheets, text, or an audio clip from a sound program. See also object embedding, object linking.

object management workbench (OMW). An application that provides check-out and check-in capabilities for developers, and aids in the creation, modification, and use of OneWorld Objects. The OMW supports multiple environments (such as production and development).

object-based technology (OBT). A technology that supports some of the main principles of object-oriented technology: classes, polymorphism, inheritance, or encapsulation.

object-oriented technology (OOT). Brings software development past procedural programming into a world of reusable programming that simplifies development of applications. Object orientation is based on the following principles: classes, polymorphism, inheritance, and encapsulation.

OCM. See object configuration manager.

ODBC. See open database connectivity.

OLE. See object linking and embedding.

OMW. Object Management Workbench.

OneWorld. A combined suite of comprehensive, mission-critical business applications and an embedded toolset for configuring those applications to unique business and technology requirements. OneWorld is built on the Configurable Network

Computing technology- J.D. Edwards' own application architecture, which extends client/server functionality to new levels of configurability, adaptability, and stability.

OneWorld application. Interactive or batch processes that execute the business functionality of OneWorld. They consist of reusable business functions and associated data that are platform independent and can be dynamically configured across a TCP/IP network.

OneWorld object. A reusable piece of code that is used to build applications. Object types include tables, forms, business functions, data dictionary items, batch processes, business views, event rules, versions, data structures, and media objects. See also object.

OneWorld process. Allows OneWorld clients and servers to handle processing requests and execute transactions. A client runs one process, and servers can have multiple instances. OneWorld processes can also be dedicated to specific tasks (for example, workflow messages and data replication) to ensure that critical processes don't have to wait if the server is particularly busy.

OneWorld Web development computer. A standard OneWorld Windows developer computer with the additional components installed:
- JFC (0.5.1).
- Generator Package with Generator.Java and JDECOM.dll.
- R2 with interpretive and apllication controls/form.

online. Computer functions over which the system has continuous control. Users are online with the system when working with J.D. Edwards system provided forms.

open database connectivity (ODBC). Defines a standard interface for different technologies to process data between applications and different data sources. The ODBC interface is made up of a set of function calls, methods of connectivity, and representation of data types that define access to data sources.

open systems interconnection (OSI). The OSI model was developed by the International Standards Organization (ISO) in the early 1980s. It defines protocols and standards for the interconnection of computers and network equipment.

operand. See Boolean Logic Operand.

output. Information that the computer transfers from internal storage to an external device, such as a printer or a computer form.

output queue. See print queue.

package. OneWorld objects are installed to workstations in packages from the deployment server. A package can be compared to a bill of material or kit that indicates the necessary objects for that workstation and where on the deployment server the install program can find them. It is a point-in-time "snap shot" of the central objects on the deployment server.

package location. The directory structure location for the package and it's set of replicated objects. This is usually \\deployment server\release\path_code\package\ package name. The sub-directories under this path are where the replicated objects for the package will be placed. This is also referred to as where the package is built or stored.

parameter. A number, code, or character string you specify in association with a command or program. The computer uses parameters as additional input or to control the actions of the command or program.

parent/child form. A type of form that presents parent/child relationships in an application on one form. The left portion of the form presents a tree view that displays a visual representation of a parent/child relationship. The right portion of the form displays a detail area in browse mode. The detail area displays the records for the child item in the tree. The parent/child form supports drag and drop functionality.

partitioning. A technique for distributing data to local and remote sites to place data closer to the users who access. Portions of data can be copied to different database management systems.

path code. A pointer to a specific set of objects. A path code is used to locate:
1. Central Objects.
2. Replicated Objects.

platform independence. A benefit of open systems and Configurable Network Computing.

Applications that are composed of a single code base can be run across a TCP/IP network consisting of various server platforms and SQL databases.

polymorphism. A principle of object-oriented technology in which a single mnemonic name can be used to perform similar operations on software objects of different types.

portability. Allows the same application to run on different operating systems and hardware platforms.

portal. A configurable Web object that provides information and links to the Web. Portals can be used as home pages and are typically used in conjunction with a Web browser.

primary key. A column or combination of columns that uniquely identifies each row in a table.

print queue. A list of tables, such as reports, that you have submitted to be written to an output device, such as a printer. The computer spools the tables until it writes them. After the computer writes the table, the system removes the table identifier from the list.

processing option. A feature of the J.D. Edwards reporting system that allows you to supply parameters to direct the functions of a program. For example, processing options allow you to specify defaults for certain form displays, control the format in which information prints on reports, change how a form displays information, and enter beginning dates.

program temporary fix (PTF). A representation of changes to J.D. Edwards software that your organization receives on magnetic tapes or diskettes.

project. An Object Management Workbench object used to organize objects in development.

published table. Also called a "Master" table, this is the central copy to be replicated to other machines. Resides on the "Publisher" machine. the Data Replication Publisher Table (F98DRPUB) identifies all of the Published Tables and their associated Publishers in the enterprise.

publisher. The server that is responsible for the Published Table. The Data Replication Publisher Table (F98DRPUB) identifies all of the Published

Tables and their associated Publishers in the enterprise.

pull replication. One of the OneWorld methods for replicating data to individual workstations. Such machines are set up as Pull Subscribers using OneWorld's data replication tools. The only time Pull Subscribers are notified of changes, updates, and deletions is when they request such information. The request is in the form of a message that is sent, usually at startup, from the Pull Subscriber to the server machine that stores the Data Replication Pending Change Notification table (F98DRPCN).

purge. The process of removing records or data from a system table.

QBE. See query by example.

query by example (QBE). Located at the top of a detail area, it is used to search for data to be displayed in the detail area.

redundancy. Storing exact copies of data in multiple databases.

regenerable. Source code for OneWorld business functions can be regenerated from specifications (business function names). Regeneration occurs whenever an application is recompiled, eitherfor a new platform or when new functionality is added.

relationship. Links tables together and facilitates joining business views for use in an application or report. Relationships are created based on indexes.

release/release update. A "release" contains major new functionality, and a "release update" contains an accumulation of fixes and performance enhancements, but no new functionality.

replicated object. A copy or replicated set of the central objects must reside on each client and server that run OneWorld. The path code indicates the directory the directory where these objects are located.

run. To cause the computer system to perform a routine, process a batch of transactions, or carry out computer program instructions.

SAR. See software action request.

scalability. Allows software, architecture, network, or hardware growth that will support software as it grows in size or resource

requirements. The ability to reach higher levels of performance by adding microprocessors.

search/select. A type of form used to search for a value and return it to the calling field.

selection. Found on J.D. Edwards menus, selections represent functions that you can access from a menu. To make a selection, type the associated number in the Selection field and press Enter.

server. Provides the essential functions for furnishings services to network users (or clients) and provides management functions for network administrators. Some of these functions are storage of user programs and data and management functions for the file systems. It may not be possible for one server to support all users with the required services. Some examples of dedicated servers that handle specific tasks are backup and archive servers, application and database servers.

servlet. Servlets provide a Java-based solution used to address the problems currently associated with doing server-side programming, including inextensible scripting solutions. Servlets are objects that conform to a specific interface that can be plugged into a Java-based server. Servlets are to the server-side what applets are to the client-side.

software. The operating system and application programs that tell the computer how and what tasks to perform.

software action request (SAR). An entry in the AS/400 database used for requesting modifications to J.D. Edwards software.

special character. A symbol used to represent data. Some examples are *, &, #, and /. Contrast with alphanumeric character and numeric character.

specifications. A complete description of a OneWorld object. Each object has its own specification, or name, which is used to build applications.

Specs. See specifications.

spool. The function by which the system stores generated output to await printing and processing.

spooled table. A holding file for output data waiting to be printed or input data waiting to be processed.

SQL. See structured query language.

static text. Short, descriptive text that appears next to a control variable or field. When the variable or field is enabled, the static text is black; when the variable or field is disabled, the static text is gray.

store and forward. A transaction method that allows a client application to perform work and, at a later time, complete that work by connecting to a server application. This often involves uploading data residing on a client to a server.

structured query language (SQL). A fourth generation language used as an industry standard for relational database access. It can be used to create databases and to retrieve, add, modify, or deleta data from databases. SQL is not a complete programming language because it does not contain control flow logic.

subfile. See detail.

submit. See run.

subscriber. The server that is responsible for the replicated copy of a Published Table. Such servers are identified in the Subscriber Table.

subscriber table. The Subscriber Table (F98DRSUB), which is stored on the Publisher Server with the Data Replication Publisher Table (F98DRPUB) identifies all of the Subscriber machines for each Published Table.

subsystem job. Within OneWorld, subsystem jobs are batch processes that continually run independently of, but asynchronously with, OneWorld applications.

summary. The presentation of data or information in a cumulative or totaled manner in which most of the details have been removed. Many of the J.D. Edwards systems offer forms and reports that are summaries of the information stored in certain tables. Contrast with detail.

system. See application.

System Code. System codes are a numerical representation of J.D. Edwards and customer systems. For example, 01 is the system code for Address Book. System codes 55 through 59 are

reserved for customer development by customers. Use system codes to categorize within OneWorld. For example, when establishing user defined codes (UDCs), you must include the system code the best categorizes it. When naming objects such as applications, tables, and menus, the second and third characters in the object's name is the system code for that object. For example, G04 is the main menu for Acounts Payable, and 04 is its system code.

system function. A program module, provided by OneWorld, available to applications and reports for further processing.

table. A two-dimensional entity made up of rows and columns. All physical data in a database are stored in tables. A row in a table contains a record of related information. An example would be a record in an Employee table containing the Name, Address, Phone Number, Age, and Salary of an employee. Name is an example of a column in the employee table.

table design aid (TDA). A OneWorld GUI tool for creating, modifying, copying, and printing database tables.

table event rules. Use table event rules to attach database triggers (or programs) that automatically run whenever an action occurs against the table. An action against a table is referred to as an event. When you create a OneWorld database trigger, you must first determine which event will activate the trigger. Then, use Event Rules Design to create the trigger. Although OneWorld allows event rules to be attached to application events, this functionality is application specific. Table event rules provide embedded logic at the table level.

TAM. Table Access Management.

TBLE. See table.

TC. Table conversion.

TCP/IP. Transmission Control Protocol/Internet Protocol. The original TCP protocol was developed as a way to interconnect networks using many different types of transmission methods. TCP provides a way to establish a connection between end systems for the reliable delivery of messages and data.

TCP/IP services port. Used by a particular server application to provide whatever service the server is designed to provide. The port number must be readily known so that an application programmer can request it by name.

TDA. See table design aid.

TER. See table event rules.

Terminal Identification. The workstation ID number.Terminal number of a specific terminal or IBM user ID of a particular person for whom this is a valid profile.Header Field: Use the Skip to Terminal/User ID field in the upper portion of the form as an inquiry field in which you can enter the number of a terminal or the IBM user ID of a specific person whose profile you want the system to display at the top of the list. When you first access this form, the system automatically enters the user ID of the person signed on to the system.Detail Field: The Terminal/User ID field in the lower portion of the form contains the user ID of the person whose profile appears on the same line.A code identifying the user or terminal for which you accessed this window.

third generation language (3GL). A programming language that requires detailed information about how to complete a task. Examples of 3GLs are COBOL, C, Pascal and FORTRAN.

token. A referent to an object used to determine ownership of that object and to prevent non-owners from checking the object out in Object Management Workbench. An object holds its own token until the object is checked out, at which time the object passes its token to the project in which the object is placed.

trigger. Allow you to attach default processing to a data item in the data dictionary. When that data item is used on an application or report, the trigger is invoked by an event associated with the data item. OneWorld also has three visual assist triggers: calculator, calendar and search form.

UBE. Universal batch engine.

UDC Edit Control. Use a User-Defined Code (UDC) Edit Control for a field that accepts only specific values defined in a UDC table. Associate a UDC edit control with a database item or dictionary item. The visual assist Flashlight automatically appears adjacent to the UDC edit

control field. When you click on the visual assist Flashlight, the attached search and select form displays valid values for the field. To create a UDC Edit Control, you must:

- Associate the data item with a specific UDC table in the Data Dictionary.
- Create a search and select form for displaying valid values from the UDC table.

uniform resource identifier (URI). A character string that references an internet object by name or location. A URL is a type of URI.

uniform resource locator (URL). Names the address (location) of a document on the Internet or an intranet. A URL includes the document's protocol and server name. The path to the document might be included as well. The following is an example of a URL: http://www.jdedwards.com. This is J.D. Edwards Internet address.

URI. See uniform resource identifier.

URL. See uniform resource locator.

user defined code (type). The identifier for a table of codes with a meaning you define for the system, such as ST for the Search Type codes table in Address Book. J.D. Edwards systems provide a number of these tables and allow you to create and define tables of your own. User defined codes were formerly known as descriptive titles.

user defined codes (UDC). Codes within software that users can define, relate to code descriptions, and assign valid values. Sometimes user defined codes are referred to as a generic code table. Examples of such codes are unit-of-measure codes, state names, and employee type codes.

UTB. Universal Table Browser.

valid codes. The allowed codes, amounts, or types of data that you can enter in a field. The system verifies the information you enter against the list of valid codes.

visual assist. Forms that can be invoked from a control to assist the user in determining what data belongs in the control.

vocabulary overrides. A feature you can use to override field, row, or column title text on forms and reports.

wchar_t. Internal type of a wide character. Used for writing portable programs for international markets.

web client. Any workstation that contains an internet browser. The web client communicates with the web server for OneWorld data.

web server. Any workstation that contains the IServer service, SQL server, Java menus and applications, and Internet middleware. The web server receives data from the web client, and passes the request to the enterprise server. When the enterprise server processes the information, it sends it back to the web server, and the web server sends it back to the web client.

WF. See workflow.

window. See form.

workflow. According to the Workflow Management Coalition, worlflow means "the automation of a business process, in whole or part, during which documents, information, or tasks are passed from one participant to another for action, according to a set of procedural rules.".

workgroup server. A remote database server usually containing subsets of data replicated from a master database server. This server does not performance an application or batch processing. It may or may not have OneWorld running (in order to replicate data).

workspace. In the ActivEra Portal, the main section of the Portal. A user might have access to several workspaces, each one configured differently and containing its own components.

worldwide web. A part of the Internet that can transmit text, graphics, audio, and video. The World Wide Web allows clients to launch local or remote applications.

z file. For store and forward (network disconnected) user, OneWorld store and forward applications perform edits on static data and other critical information that must be valid to process an order. After the initial edits are complete, OneWorld stores the transactions in work tables on the workstation. These work table are called Z files. When a network connection is established, Z files are uploaded to the enterprise server and the transactions are

edited again by a master business function. The
master business function will then update the
records in your transaction files.

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