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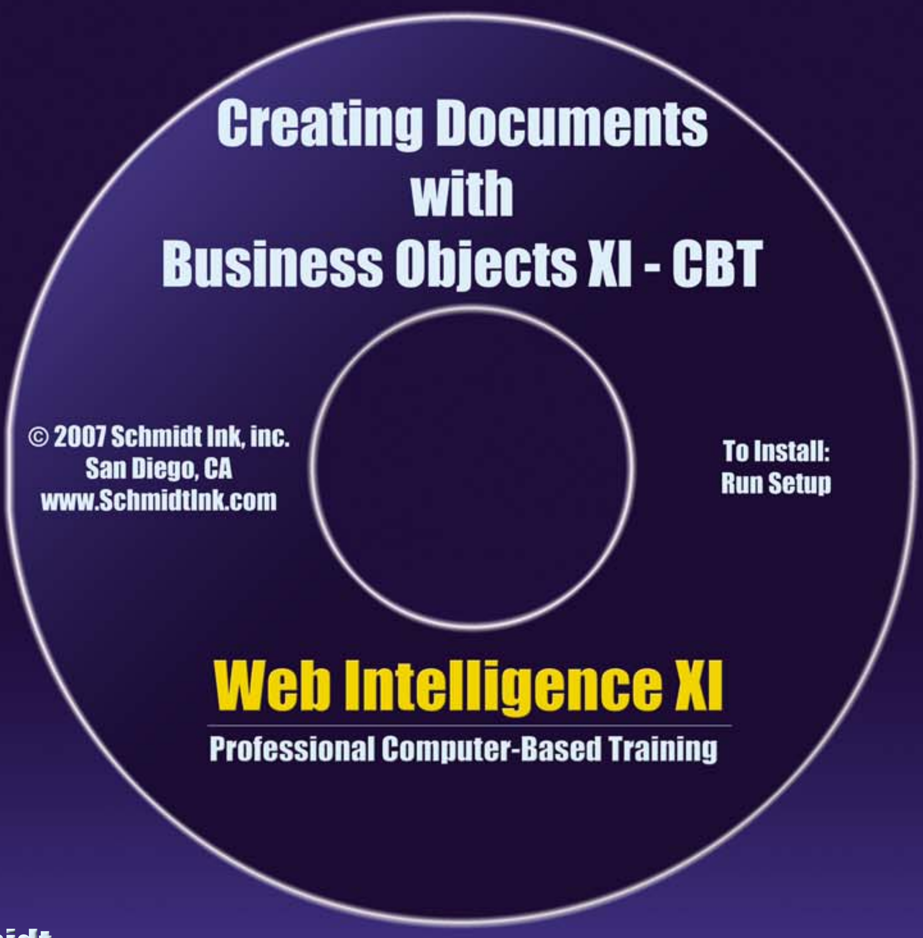
Creating Documents with Business Objects XI - CBT

Web Intelligence XI



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Web Intelligence XI - CBT
The Ultimate Training Course for Web Intelligence XI

Published by
Schmidt Ink, Inc.
San Diego, CA 92122

Printed in USA

Schmidt Ink, Inc.
Phone: (858) 546-4968
www.schmidtink.com

Other Schmidt Ink, Inc. Publications:

Creating Documents with BusinessObjects
Creating Documents with BusinessObjects: Report Writing Course
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ISBN 0-9722636-4-0 (978-0-9722636-4-1)

I dedicate this book to my family. I also dedicate this book to all who believe that regardless of their backgrounds and education levels that they can rise up and learn what others have made seem so far away and difficult. Those that believe that if others can do it, then why can’t they. Those that look at a new subject and say, “let’s get stated.”

BusinessObjects™ Web Intelligence XI CBT

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Thank you for purchasing the Web Intelligence XI CBT. This is one of the most contemporary instructional courses for learning how to use Web Intelligence XI to create documents. It is also the most unique, because it focuses on many real-life examples and situations.

To do the examples in the course the data and universe will have to be configured for use within your WEB Intelligence system. This configuration will have to be completed by a Business Objects professional that is managing your system.

a. This course is supported by the SIEQUITY universe and database, which are found on the System Files directory on the CD.
b. The database that is on the CD is a MS Access database, which should be imported into your database server. Please make sure that the table names remain the same as in the Access database. (If you like, you could just copy the Access database to the WEB Intelligence server.)
c. After importing the data to a database (or copying it to the server), create an OBDC data source with a system DSN named SIEQUITY. Create this data source on the WEB Intelligence server. The universe will look for this DSN.
d. Open the universe in Designer and export it to the Universe repository. If you plan on editing the universe or examining the data in the tables, then you will have to create an ODBC data source, on your local machine, that points to the SIEQUITY data.
e. After the database is imported, the ODBC data source is created, and the universe is exported, then you will be able to use WEB Intelligence to perform the examples in the course.

You may not have access to a Web Intelligence server, if this is the case, please email me at RSchmidt@SchmidtInk.com and I may be able to schedule some time for you on my server. There may be a small fee to cover expenses.

I hope that this training course allows you to reach your Web Intelligence XI reporting goals. It has been carefully designed to allow you to reach your goals and, perhaps, even exceed them. Please have patience and try to relax, as there is a lot of information to assimilate.

If you need help with a problem, please email me at rschmidt@schmidtink.com. You can also visit http://www.forumtopics.com/busobj/viewforum.php?f=35. This is a great web site, where you can have many of your questions answered.

Good luck, and please let me know your comments on the course, as it is written with you in mind.

Very Sincerely,
Robert D. Schmidt

Creating Documents with Web Intelligence XI

Creating Queries
(Java Report Panel)

Introduction

- We are going to start with creating queries, because we will need basic reports to work with throughout the course. By the end of this course, we will create dozens of documents and reports. This should help us to become more confident in our workplace when confronted with the task of creating documents.
- Queries supply a document with data and every document needs data to be useful. In BusinessObjects, we create a query to retrieve data, and then we format the data into useful information.
- In some companies, it is very easy to retrieve data. In others, it can be a bit trickier. The data we use in this course is not super easy, but not as tricky as some.

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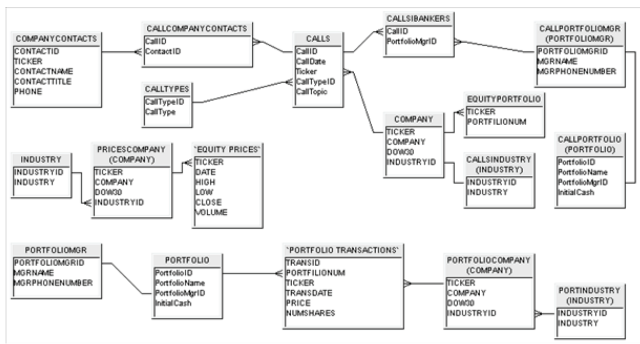
Many people say data is not useful and cannot be called information, until it is properly formatted to emphasize the impact that the data has on our business. This is probably one of the only general statements that I believe can be applied to most instances. Nobody wants to look at a page of data that is not organized to highlight the purpose of the data. In this chapter and a few of the following, we are going to work on bringing data into a document. Then, later in the course, we are going to discuss how to format this data into useful information.

Put on your seatbelt, because after this course, you will never look at data, information and reports as you have in the past. We are going to learn how to be data analysts and document creators. Not just employees that create reports that people have asked us to create.

BusinessObjects Universes

- In Web Intelligence, we retrieve data for our reports through a Universe. BusinessObjects universes are logical mappings of data in a database.
- Universes are generally targeted towards certain aspects of a business. For example, a company may have a universe for Sales, Inventory, Shipping, Human Relations, and so forth.



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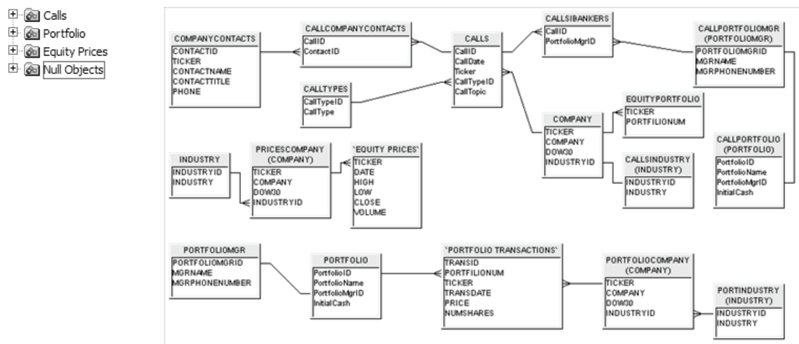
Most report developers do not usually have to create universes. This is usually done by specialists that understand how the data is related and how the data is to be used.

In most cases, you do not have to know the structure of a universe to create documents. However, some universes are very complicated and it behooves us to know how the tables are related in the database. With such knowledge, we can make our queries much more efficient.

If we plan on developing reports for a career, it is also probably a very good idea to learn SQL. It is a good skill and usually beneficial to those trying to become professional report developers.

BusinessObjects Universe Contexts

- Universe contexts define logical groups of tables that cannot be directly related in a universe. In SI Equity there are three contexts
  - Calls, Portfolio, and Equity Prices
- Not all universes contain contexts, but if they do, developers usually identify them with folders, as we have done below.



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Contexts allow us to have more than one fact table in our universe. A fact table is a table that contains the transactions of a certain aspect of our business. For example, contact calls, marketing, sells, shipping, inventory, equity transactions, and so forth.

We usually can not directly relate two different fact tables, because the relationship may cause the measures in a report to become artificially inflated due to a multiplying effect from the relationship. Therefore, in order to have two different fact tables in a universe, contexts are usually defined to keep the fact tables independent of one another.

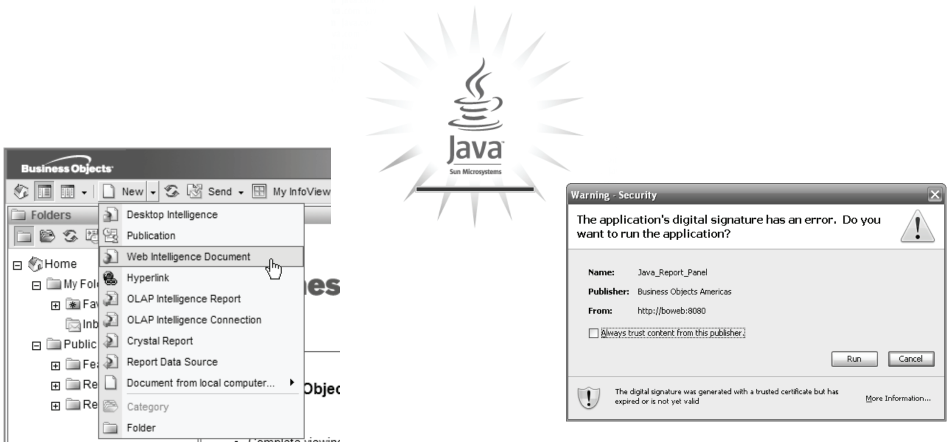
In SI Equity, we have three contexts:

- Calls: This context allows us to get information on any meetings that our portfolio managers have had with our clients.
- Portfolio: This context allows us to get all of the information on our portfolios and the transactions that each has made.
- Equity Prices: This is for the price history for the stocks that are represented in our different portfolios.

Unfortunately, we usually can not create queries using objects from more than one context. For example, we can not create a simple query that returns objects from both Calls and Portfolio. However, as we become more advanced BusinessObjects developers, we will learn how to use these different contexts to combined information in a report.

Start a New Web Intelligence Document

- To start a new Web Intelligence Document, select Web Intelligence Document from the New drop-down menu.
- You may see the Java logo as it loads the Web Intelligence application. If this is your first time, you may also be prompted to allow the Java plug-in to be installed.



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In this manual, I will not tell you how to start InfoView, because many companies have different methods of accessing the application. If you are unsure of how to open InfoView, then please ask your BusinessObjects' manager for instructions.

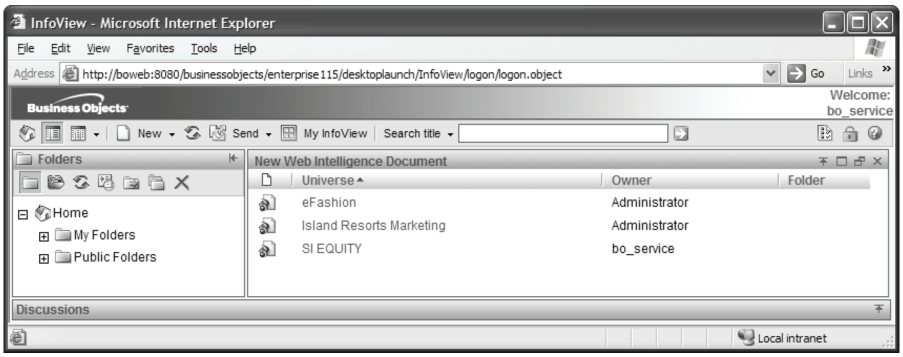
In the screen above, there are many applications to choose from. You may only have one, several, or even more applications than I.

Start a New Document

1. Start InfoView.
2. Select Web Intelligence Document from the New drop-down menu.
3. If the Warning –Security dialog is displayed. Ask your administrator, if you can click the Run button.

Selecting a Universe

- The first step to creating a Web Intelligence document is to select a universe for the document.
  - This example displays three universes. The top two (eFashion and Island Resorts Marketing) ship with the BusinessObjects application. The SI EQUITY universe is supplied on the CD accompanying this course. We will use this universe for the examples in course.
  - To select a universe, simply click on it to start your document.



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Universes are designed to allow us to access the data needed for our documents. Some departments may only have one or two, and some departments may have dozens. Some universes are very targeted and simple. Others are very convoluted and difficult to navigate. In any case, boldly stepping into a universe is the best policy. You cannot hurt it, so select one and explore what is available.

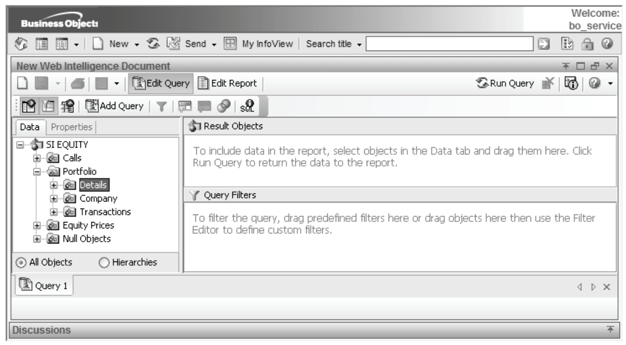
After selecting a universe, BusinessObjects will pop-up their logo while it loads. You may also be prompted to allow plug-ins to install. Plug-ins are programs that allow applications to work within the Internet Explorer environment.

Select the SI Equity Universe

1. Click on the SI EQUITY universe.

Edit Query Environment

- This is the environment where we create and edit our document's queries. There are three major sections
  - The Data and Properties pane
    - All objects available in the universe are located in this pane. We browse the class folders to find objects of interest.
  - The Result Objects pane
    - This is where we place the objects that are to return information to our document.
  - The Query Filters pane
    - Objects in this pane, define filters that are placed on our queries.



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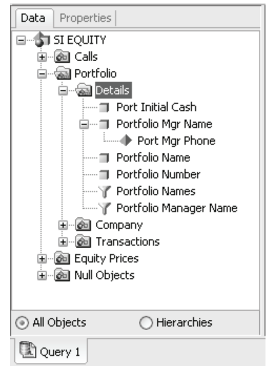
The query environment allows us to define and edit queries in our document. It is very simple to navigate. We use queries to instruct Web Intelligence to retrieve data of interest. To create a query, we simply create combinations of objects from the Data tab in the Result Objects pane.

Data Types



- **Class**
  - Used to organize objects by category or group.
- **Dimension Object**
  - Usually identify information, such as Client ID's, stock ticker symbols, and locations. Since, dimensions identify information, they are used to synchronize data providers, define sections in Master-Detail reports, and define rankings in a report.
- **Detail Object**
  - Usually describe some attribute of a dimension. They usually contain information, such as weight, phone numbers, employee names, and so forth.
- **Measure Object**
  - Usually are aggregates that conform to the dimensions in a report. They will usually sum, count, min, max, or average numerical information to a context defined by dimension values.

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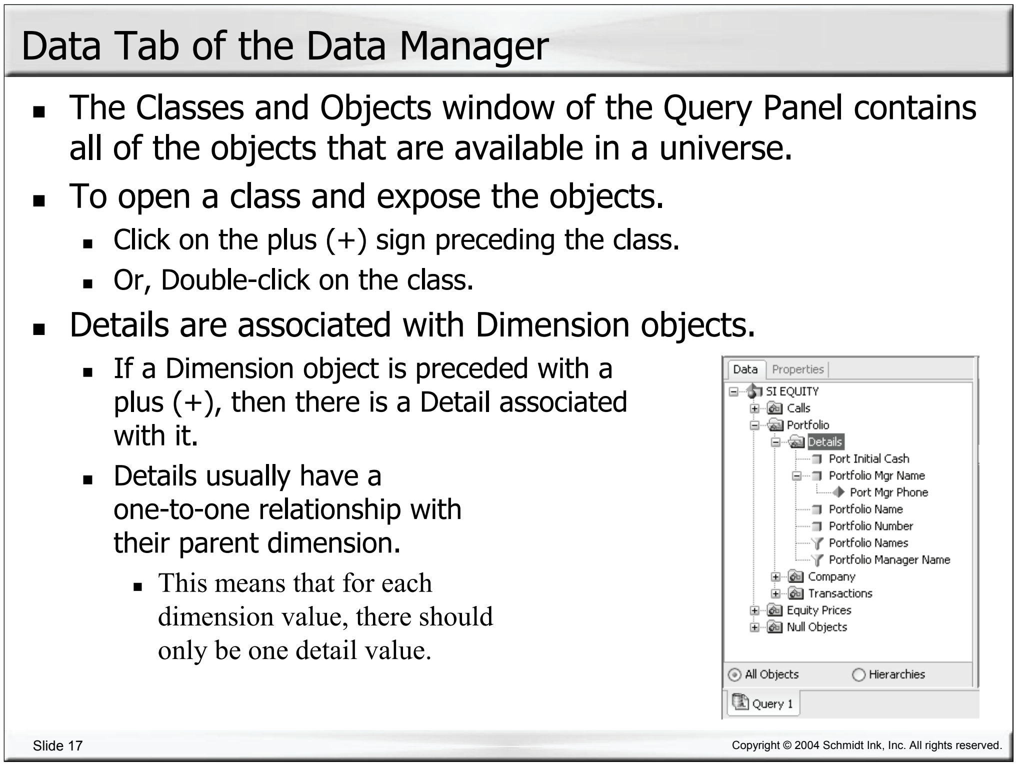
It is important to know what the different data provider object types represent and how they will behave in our reports. As we become more advanced, knowledge of these different types will allow us to create more and more powerful reports.

We will talk about the condition types in the next chapter. For right now, we are only interested in the behavior of the objects that will populate our report with data.

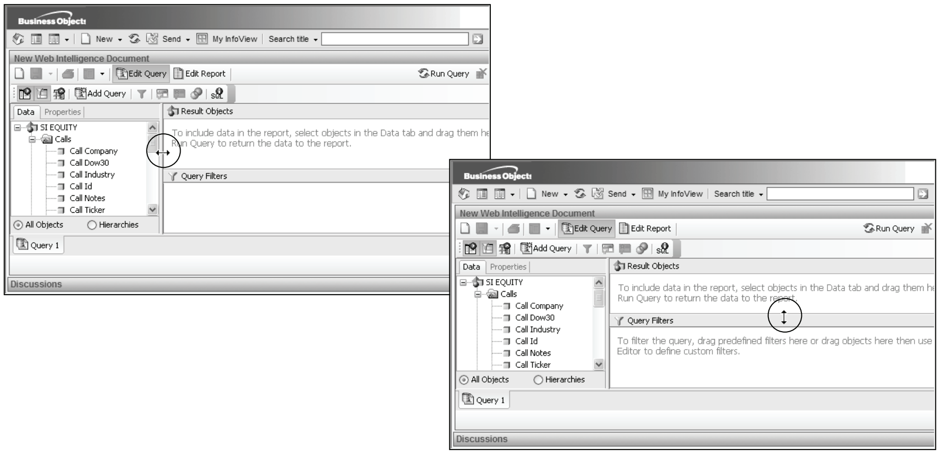


All of the data objects in BusinessObjects are organized into classes – the ultimate class being the name of the universe. Many times classes are just used to help categorize available objects, and objects from any class can be used with objects from other classes. However, this is not always the case. For example, in the SI Equity universe, there are three main classes – Calls, Portfolio, and Equity Prices. Objects from these folders can not be combined with objects from the other classes in the list. For example, if an object from the Calls class is placed in the Result Objects pane, then an object form Portfolio class cannot be placed in the pane. These classes are known as incompatible.

Details are used to associate some attribute to a dimension. For example, a product may have weight, color, or a description. An employee dimension may have a name detail object associated with it. Many people use name as a dimension, but this cannot always be the case, since names do not uniquely identify an employee. For this reason, designers usually make the employee number a dimension and the name of the employee a detail of the employee number dimension.

Resizing the Frames

- It is convenient to resize the border of the frames to accommodate the objects in your query.



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It is important to know that you can resize the frames within the Edit Query Environment. This allows you to see the entire object names in the Data pane and to see as many objects as possible in the Result Objects pane.

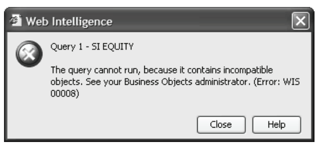
Resizing the Panes in the Query Environment

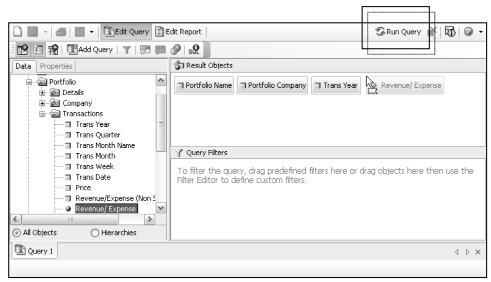
1. Move your cursor over a border in the Edit Query window.
2. When it turns into a drag cursor, click and drag the border to a new width.

Selecting Objects for a Query

- To create a query, we simply place objects from the Data tab into the Result Objects pane. To place objects in the Result Objects window, we can
  - Double-click objects on the Data tab.
  - Drag and drop objects into the Result Objects pane.
    - When dragging objects, they will be placed preceding the object that they are dropped on.
  - Drag and drop entire classes into the window.

Be sure not to select objects from different contexts. If you do, you may get the following error.





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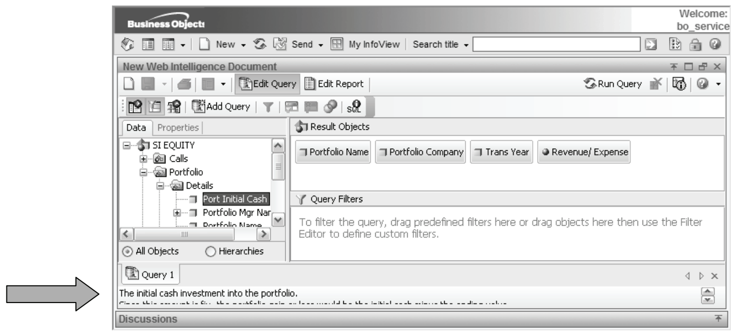
Objects placed in the Result Objects section will define the data set that is to be retrieved by the query. This data set may also define the default table in a new report.

Selecting Objects for a Query

1. Open the Portfolio Class on the Data tab of the Data Manager.
2. Open the Details folder.
3. Drag the Portfolio Name object to the Result Objects window.
4. Open the Company folder.
5. Double-click on the Portfolio Company object.
6. Open the Transactions folder.
7. Double-click on Trans Year and Revenue/Expense.
8. Click the Run Query button.

Query Environment Help Section

- The Help section of the Edit Query Environment displays any description that a universe designer has assigned to an object.
  - Some universes have extensive descriptions, while others have none. It is probably a good idea if your universe has no descriptions, to request descriptions to help eliminate any confusion that may arise about an object's purpose.



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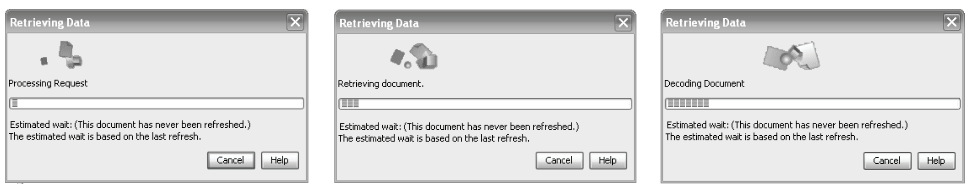
The Help section can be very helpful when trying to determine the purpose for various objects in the panel. However, the universe designers must assign descriptions to the objects in order for there to be help text.

Running the Query

- When creating a new document, Web Intelligence must perform several tasks to complete the request.
- Each task will take a different amount of time.
- The first time a document is created, Web Intelligence will not know how long it may take to execute. However, after a document has been created, Web Intelligence will offer an estimated time based on the previous refresh.



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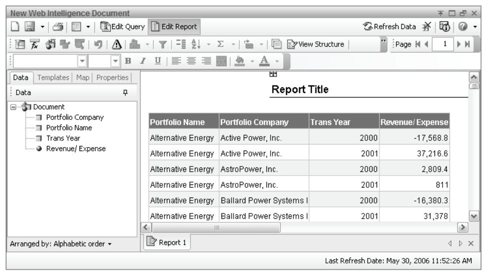
When a document is created with Web Intelligence, most of the processing takes place on the sever. This means that Web Intelligence sends the request to the server, and then waits for the processing to finish. Finally, a finished document is sent back to Web Intelligence to be displayed.

The following are the steps that probably take place on the server…

1. It must create SQL from the objects that you have selected. (SQL are the instructions that are sent to a database to retrieve a data set. We do not have to know how to create SQL, because BusinessObjects will do this for us)
2. We must wait for the database to collect the data. (This could be really quick or painfully slow. It all depends on the complexity of the query and the size of the data set)
3. The database must send the information to server application.
4. Once all of the data is received, the server must calculate all of the formulas in the report. Once this is done, it populates all of the cells in the report with the results. (This phase is usually relatively quick, but it can be slowed down by many complex calculations)
5. Then the web page is constructed and sent to your Web Intelligence.

The Default Report

- When a new document is created, Web Intelligence uses a default template to create a report with all the objects in the Query Results section. Throughout much of this course, we are going to modify and enhance this default table to create powerful reports.
- The column header titles are created from the object names.
  - To change a column header title, double-click on the header and type in a new title.



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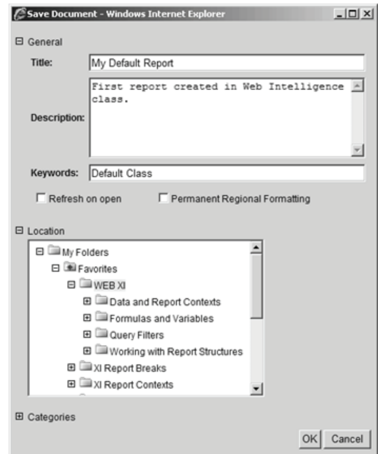
The default report is usually just a table with a report name header. This report is rarely used as is, so in this course we will usually modify the default table into an informative report.

Saving a Report

- Web Intelligence creates Web-based documents that are stored in a database on a server. Therefore, it does not create files that are stored on your local drive, such as other applications that you may have.
- We define the save attributes using the Save Document dialog, which is displayed when we click the Save button.
- We can assign a Name, Description, and Keywords that help locate the document.
- It is important to choose a proper location, because the document will inherit the security assigned to the location.
- Categories assign predefined keywords to a document that allow the documents to be easily found.



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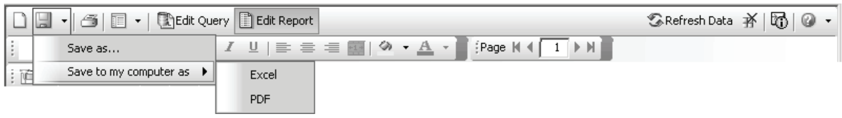
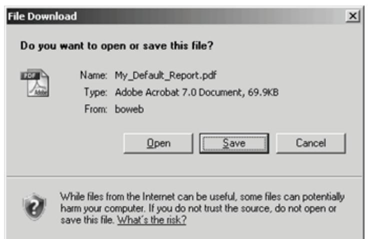
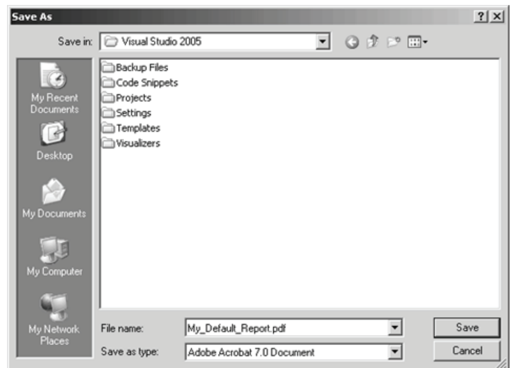
Many of us are used to saving documents to a drive on our system. Then, when we want to open them, we simply browse to that directory and open the document. However, Web Intelligence does not save documents to a system drive. It stores them in a secure database that is accessed through the Business Objects InfoView environment. This makes our document secure and accessible from any computer that has access to your Web Intelligence environment.

Saving as a PDF or MS Excel Report



- To save a document as a PDF or MS Excel file, click the small arrow to the right of the Save button, and then click the *Save to my computer as* item. Finally, select Excel or PDF.
- Select Save in the File Download dialog, and then select a location and name in the Save as dialog.





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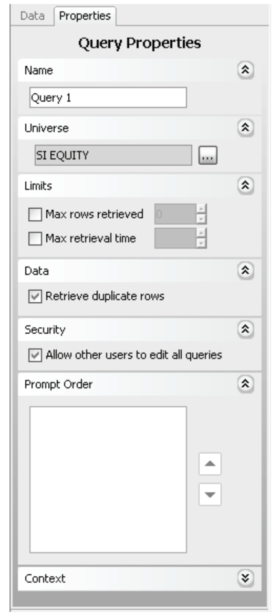
Sometimes we still need a hard file on our system drive that we can email or manipulate in some fashion. To save a document to your file system, select the *Save to my computer as*… menu item. Saving a document as PDF or Excel will cause that copy to loose all Business Objects attributes, therefore you will not be able to edit it in the Web Intelligence environment. However, you will still have the Web Intelligence version, since the *Save to my computer as* option only saves a copy of the original Web Intelligence document.

Query Properties

- We can set several options when we edit a query. The options are available on the Properties tab.
  - Name: If a document has more than one query, it is a good idea to name the queries.
  - Universe: This is the universe used to create the query. You can change it, the new universe must have the same named objects available.
  - Limits: Limits can be placed on the number of rows returned and the time it takes to retrieve them.
  - Data: Retrieve duplicate rows will retrieve all rows available in the database. However, if there is no measure in the query, it is probably a good idea to uncheck this option.
  - Security: The *Allow other users to edit all queries* option allows other people with rights to edit documents to edit your query. In most cases this may be okay, but sometimes you may want to disallow others from doing so.



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Query properties allow us to set several options for our query. Most of the time, we do not need to worry about these options, but there are times that we should always set some of them.

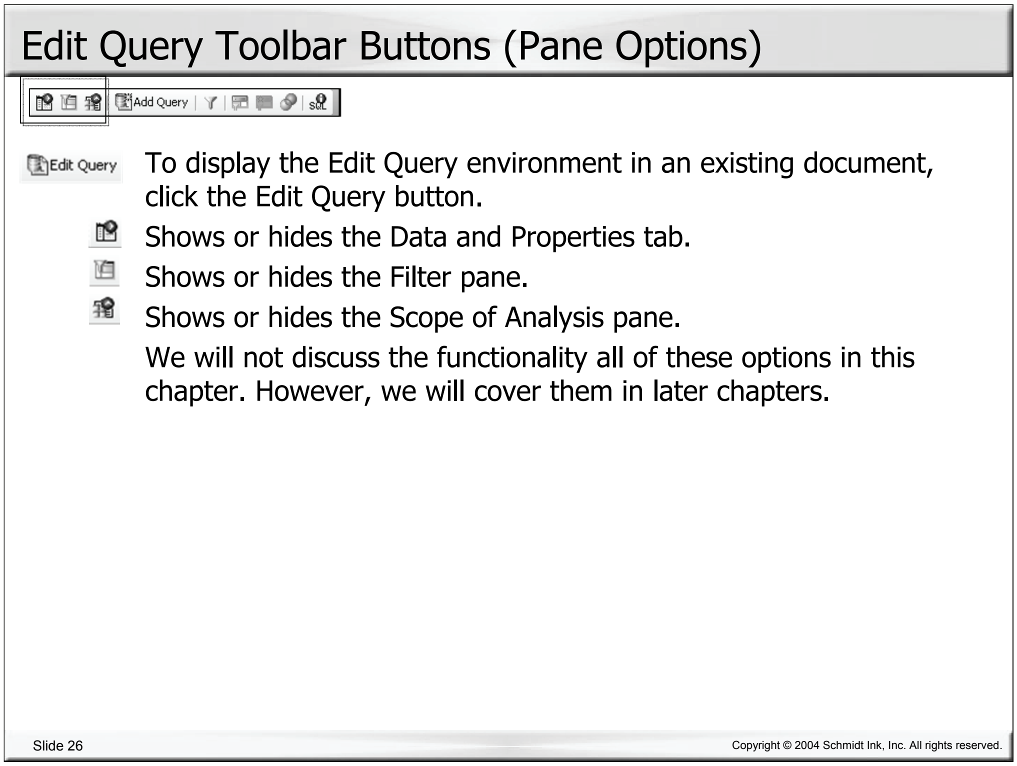
We should always name our queries, if we have more than one. This will allow others to know the purpose for each query and thus make it easier for others to work on existing documents

We should always uncheck the Retrieve Duplicate Rows option when our query has no measures. Measures cause the query to return unique combinations of dimensions that will have a total associated with them. For example, the total number of sales for each salesperson in each territory.

John	East	10,000
Terri	West	30,000

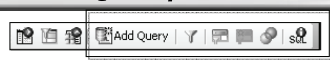
If the query has no measures, then the dimensions may not return unique combinations and may return many more rows than anticipated. Web Intelligence will roll these rows up on the report and display only unique combinations, even though the query may contain hundreds or even thousands of duplicate rows. This is why it is best to clear this option, if there are no measures in the query.

John	East
John	East
John	East
John	East
Terri	West
Terri	West
Terri	West



The Edit Query environment is very dynamic. We can work with several different panes within the window. We can hide the Data and Properties pane, when it is of no value to the current task. We can show or hide the filter pane. We can display the Scope of Analysis pane to help us define the drilling capability of our document. We can also add another query using the Add Query button. We will talk about each of these tasks as the course goes on.

Edit Query Toolbar Buttons (Query Options)



- Edit Query — To display the Edit Query pane in an existing document, click the Edit Query button.
- Add Query — Adds another query to the document, by adding another Query tab to the Edit Query environment.
- Places a Quick Filter on an object that is associated with a list of values (Usually a Dimension Object).
- Allows the creation of a subquery. (Discussed in a later chapter)
- Allows the application of a database ranking. Only available for universes of certain databases.
- Used to create combination queries, such as union, intersect, or minus.
- Used to view or modify SQL in a query.
- We will not discuss the functionality all of these options in this chapter. However, we will cover them in later chapters.

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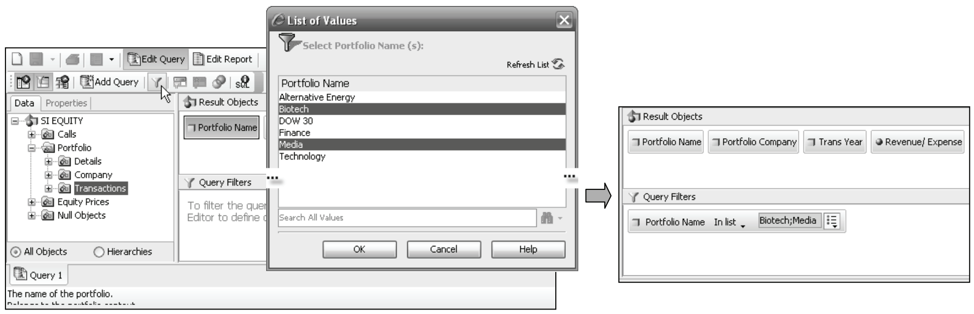
The Query Option buttons allow us to modify the logic of our queries. They allow us to develop more complex queries.

Add Quick Filter

- Quick Filters allow us to select the values of a dimension or detail in our Result Objects window.
  - Select a dimension or detail in the Result Objects window.
  - Click the Add Quick Filter button.
  - Select the needed values from the list. Hold [Ctrl] or [Shift] key to select more than one value.
  - Click OK and a new filter will appear in the Query Filters window.



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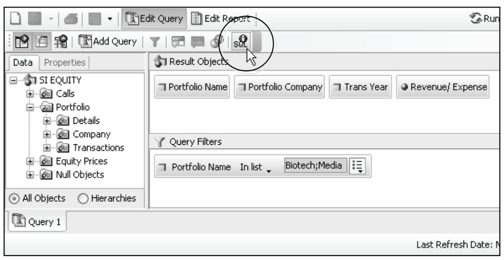
We can place quick filters on dimensions and details in the Result Objects section of the panel, only if they have a list of values associated with them. This means that some objects may not be compatible with the Add Quick Filter button. When the object is not compatible, the Add Quick Filter button will be disabled.

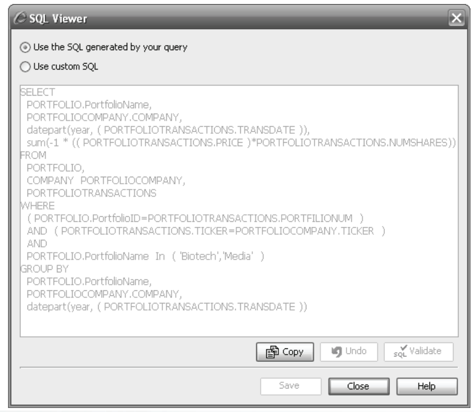
Place a Quick Filter on an Object

1. Click the New toolbar button to create a new Web Intelligence document.
2. Select the SI Equity universe.
3. Open the Portfolio class and double-click Portfolio Name, Company Name, Trans Year, and Revenue/ Expense.
4. Click on the Revenue/ Expense object in the Result Objects window.
   - Notice that the Add Quick Filter button is disabled.
5. Click on the Portfolio Name object in the Result Objects window.
6. Click the Add Quick Filter button.
7. Click on Biotech in the list.
8. Hold down the [Ctrl] button and click on Media.
9. Click the OK button.
   - Notice the Filter in the Query Filters window.
10. Click the Run Query button to create the document.
    - The report should have information for both Biotech and Media. Later in this course, we will learn how to format this type of report using breaks or sections.

Viewing the SQL Generated by a Query

- Web Intelligence creates instructions that allow the server to return the proper data set. These instructions are called SQL.
  - SQL code helps us to understand what data Web Intelligence will retrieve.
  - If we click the Use Custom SQL option, we can make subtle changes to the SQL. After making changes, click the Validate button to see if the changes are acceptable.





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When first becoming familiar with a universe, it may be helpful to view the SQL generated by the Query. If you do not understand SQL, don't worry, you will still be able to create reports. The SQL just helps you to understand more.

View SQL of a Query

Click the Edit Query button, after completing the previous exercise.

1. Click on the SQL button.
2. Click OK, when done viewing the SQL.

Add Query

- Web Intelligence allows us to have more than one query in a document. We could use multiple queries to
  - Supply both detail and summary information. We often do this if the sum of the details does not match the sum in the summary. This often happens when departments share the credit for certain measures within the company.
  - Import data from multiple universes or contexts within the same universe. (See example on the next slide)
  - There are other valid reasons that we won't list.
- Sometimes people use more queries than necessary
  - Suppose that you wanted the number of transactions and the amount of sales. You could easily build one query to return this information. However, some developers will build a separate query for both needs.

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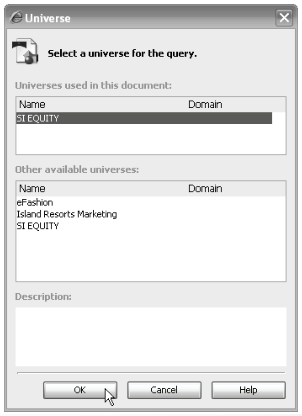
Being allowed to use more than one query in a document allows us to create more powerful reports. For example, sometimes it is just too complicated to sum the details to get a total in a report. An example might be a company that sales one investment type, such as a short term loan. Let's say the company that borrowed money is Microsoft. Now, Microsoft can be considered a technology company and it can also be considered a media company. Suppose that both the Media and Technology departments in a company claimed the loan in their department's revenue. Let's say the loan was for $400,000. The totals for each department would contain the 400,000.

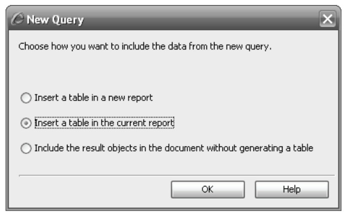
Now, we want to create a company total. So, we add the details from both the technology and media departments and we get 400,000 more than we should have. After analyzing the data, we find out that we double-counted the 400,000. This is the way our company does business, so we can not tell them that only one department should claim the 400,000. We therefore, use one query for the details, and then create another (without the department dimension) for the company total.

I hope that this does not confuse you, but I wanted to mention it here, because it is so common. We will do an example of this later in the course.

Add Query Example

- In this example, we will create a table with the total Revenue/Expense for each portfolio. Then, we will add a table with the total Number of Calls for each portfolio.
  - This example will create a table for each query. Later, we will learn how to combine the information into one table.





Portfolio Name	Trans Year	Revenue/ Expense
Alternative Energy	2000	-89,221.3
Alternative Energy	2001	303,885.9
Biotech	2000	-369,888.4
Biotech	2001	449,314.1
DOW 30	2000	-4,385,412.5
DOW 30	2001	5,736,865.5
Finance	2000	-507,100.7
Finance	2001	574,563
Media	2000	-465,393.9
Media	2001	386,853.6
Technology	2000	-1,116,767.25
Technology	2001	1,059,497.45

Call Portfolio Name	Call Year	Num Calls
Biotech	2000	12
Biotech	2001	11
DOW 30	2000	18
DOW 30	2001	10
Finance	2000	8
Finance	2001	8
Media	2000	8
Media	2001	4

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Multiple Query Document

(First table)

1. Click the New toolbar button to create a new Web Intelligence document.
2. Select the SI Equity universe.
3. Open the Portfolio class and double-click Portfolio Name, Trans Year, and Revenue/ Expense.
4. Click the Run Query button.

(Second Table)

5. Click the Edit Query button to return to the Edit Query environment.
6. Click the Add Query button to add a new query.
7. Select the SI EQUITY universe from the Universe list and click the OK button.
8. Open the Multiple class within the Calls class.
9. Double click on Call Portfolio Name
10. Double-click Call Year and Num Calls in the Calls class.
11. Click the Run Queries button.
12. Click the *Insert a table in the Current Report* option, in the New Query prompt dialog.
13. Click the OK button.

Add Query Example (Single Table)

- In the previous exercise, we created a report with two queries. Each query was displayed in a separate table. Suppose that we wanted to display this information in a single table? Let's try…

Portfolio Name	Trans Year	Revenue/ Expense
Alternative Energy	2000	-89,221.
Alternative Energy	2001	303,885.9
Biotech	2000	-369,888.4
Biotech	2001	449,314.1
DOW 30	2000	-4,385,412.5
DOW 30	2001	5,736,865.5
Finance	2000	-507,100.7
Finance	2001	574,563
Media	2000	-465,393.9
Media	2001	386,853.6
Technology	2000	-1,116,767.25
Technology	2001	1,059,497.45

=[Num Calls]

Drop here to insert a cell

Call Portfolio Name	Call Year	Num Calls
Biotech	2000	12
Biotech	2001	11
DOW 30	2000	18
DOW 30	2001	10
Finance	2000	8
Finance	2001	8
Media	2000	8
Media	2001	4

Portfolio Name	Trans Year	Revenue/ Expense	Num Calls
Alternative Energy	2000	-89,221.3	79
Alternative Energy	2001	303,885.9	79
Biotech	2000	-369,888.4	79
Biotech	2001	449,314.1	79
DOW 30	2000	-4,385,412.5	79
DOW 30	2001	5,736,865.5	79
Finance	2000	-507,100.7	79
Finance	2001	574,563	79
Media	2000	-465,393.9	79
Media	2001	386,853.6	79
Technology	2000	-1,116,767.25	79
Technology	2001	1,059,497.45	79

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In the above slide, we dragged the Num Calls measure from a table and dropped it into another table. We did this by clicking on any cell in the Num Calls column and then dragging it into the right side of the Revenue/Expense column in the other table. This caused a new column to be inserted and then populated with the Num Calls object. However, the Num Calls object is the same value for every row in the table. Since this is highly unlikely, there must be something that we did not consider.

Multiple Query Document

1. Using the report created in the previous exercise, drag the Num Calls object to the rightmost part of the Revenue/Expense column in the other table. Before you release the mouse button, hold down the [CTRL] key to copy the column and not move it.

Add Query Example (Single Table)

- Two data sets can be related by the common dimensions that they contain.
  - For example, suppose that we have two data sets
    - Debbie has 10,000 shares of IBM
    - Debbie has $50,000
  - When we look at this data, we assume that Debbie has 10,000 shares of IBM and $50,000. However, this is only true if both Debbie's are the same person.
  - In this case Debbie is a dimension, because the name identifies a person. The 10,000 shares and $50,000 are both measures. This means that if we can associate both Debbie's as the same person, then the amounts can simply be assigned to a single row.
  - In BusinessObjects, we associate the Debbie's (Dimensions) by merging the dimensions into a single object.

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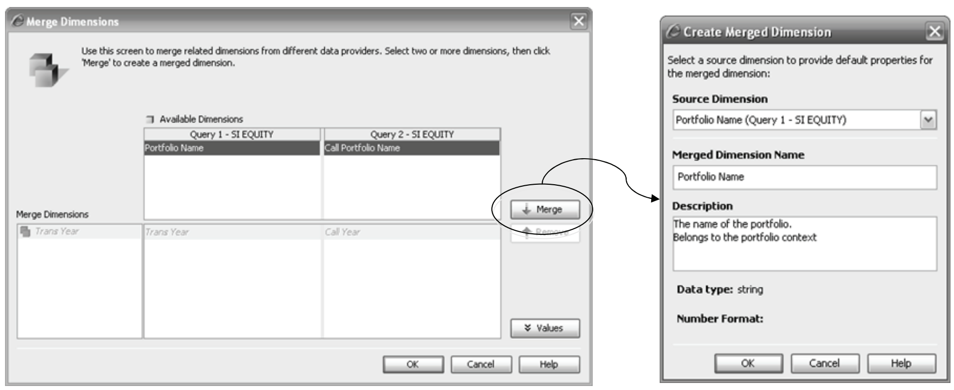
The above example seems kind of silly, but it is exactly how BusinessObjects works with multiple data sets that are to be related. We simply find the dimension objects in all sets of data that identify the same object. Then, we merge these dimensions into a single object.

Add Query Example (Single Table)

- The Merge Dimension dialog allows us to associate dimensions from different queries by merging them into a single dimension.
  - We use the Create Merged Dimensions dialog to correct the number of calls assigned to each portfolio in our example.



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The Merge Dimensions dialog allows us to merge dimensions from different queries into a single dimension in our document. These creations are only available in the document in which they are created and have no effect on other documents within the BusinessObjects system. Once created, we can use the new object as any other object in the document.

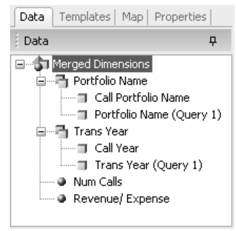
Merge Dimensions in our Document

1) Click the Merge Dimensions button to display the Merge Dimensions dialog.
   Notice that the dialog is populated with dimensions from both queries.
2) Click on the Trans Year object in the Available Dimensions list.
   Notice that only Call Year is enabled in the other query (Query 2). BusinessObjects does some checking for compatibility.
3) Click on the Call Year dimension to select it.
   Notice that now that two dimensions are selected, the Merge button has become enabled.
4) Click the Merge button.
   The Create Merged Dimension dialog is displayed. This is where we can name and describe our new object.
5) Click the OK button.
   The new Merged Dimension object is now listed in the Merged Dimensions list.
6) Repeat the above for Portfolio Name and Call Portfolio Name.
7) Click OK to dismiss the Merge Dimensions dialog.

Add Query Example (Single Table)

- If you did the exercise on the previous page, your table should now display the proper number of calls for each Portfolio Name.
- This technology allows us to create many mixed context or universe reports, another example could be
  - The current orders of a product from the sales universe and the number of the product left in inventory from the inventory universe.

Portfolio Name	Trans Year	Revenue/ Expense	Num Calls
Alternative Energy	2000	-89,221.3	
Alternative Energy	2001	303,885.9	
Biotech	2000	-369,888.4	12
Biotech	2001	449,314.1	11
DOW 30	2000	-4,385,412.5	18
DOW 30	2001	5,736,865.5	10
Finance	2000	-507,100.7	8
Finance	2001	574,563	8
Media	2000	-465,393.9	8
Media	2001	386,853.6	4
Technology	2000	-1,116,767.25	
Technology	2001	1,059,497.45	



- Merged dimension are displayed in the data tab as shown above.

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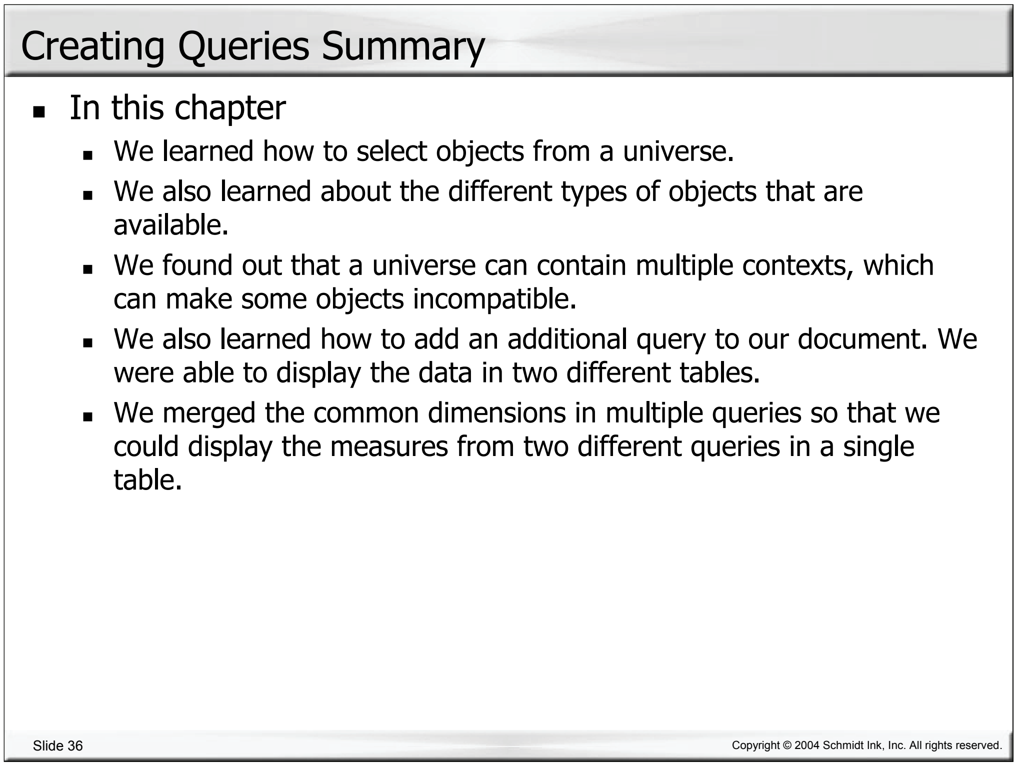
The ability to merge dimensions in a document allows us to relate data from different queries in a document. With this ability, we can create very powerful reports. For example:

- The money spent on marketing in each sales region from the marketing universe and the amount of sales in each sales region from the sales universe.
- The cost of each product from the manufacturing universe and the average selling price from the sales universe.

The list could go on much further since almost every business has the need for such technology.



This chapter has been a great introduction to Web Intelligence query development. We have learned many new things and this seems like a good place to end the chapter. It may behoove you to take a short break here. In the next chapter, we are going to discuss how to place query filters on our queries.