



IBM Software Group

WebSphere Business Modeler V6.2

Reports and printing



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Updated April 21, 2009

This presentation discusses the reporting and printing features of WebSphere® Business Modeler V6.2

Goal

- To introduce the reporting and printing features available with WebSphere Business Modeler V6.2 such that you can quickly get started creating reports.

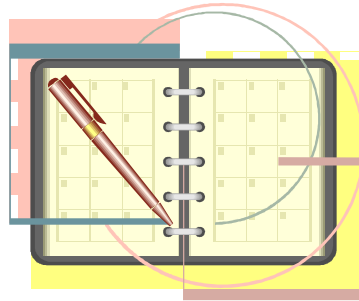


The goal here is to provide enough information to get started making reports. This is a getting started overview.

After listening to this presentation, you can practice creating some simple reports and then use the product information center to get the details necessary for creating professional reports.

Agenda

- Concepts
- The big picture
- Kinds of reports
- Creating reports
- The report wizard
- Printing

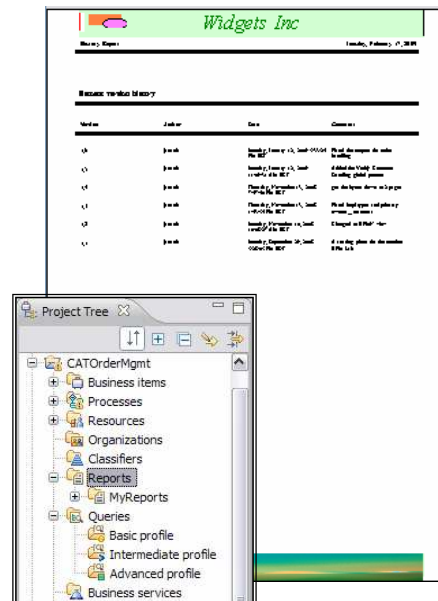


This presentation will familiarize you with the basic concepts used for creating and printing reports and will show how it all fits together into the 'big picture'.

There are several different kinds of reports which determine how you'll approach your reporting needs. We'll take a look at these and then discuss how to create, preview and print them using the report wizard and report designer.

Reports are...

- a way for you to view, share, and print information derived from the models you have created
 - ▶ Structure, resources, organizational, costs, timing and version history
- Queries are...
 - ▶ A way to view the information in your project without printing.
 - ▶ Predefined reports are based on predefined queries



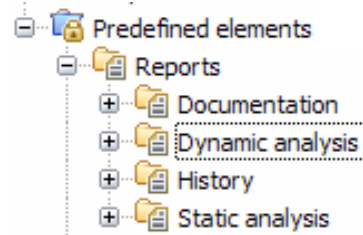
During the course of constructing a business model and running simulations, valuable information is collected and entered into WebSphere Business Modeler. In order to validate and understand the model, it is necessary to view and print the data that has been collected. WebSphere Business Modeler provides a query and reporting facility that enables you to query the system or to format custom reports and print them out. The query and report facility comes with a large library of predefined queries and reports that can be used as examples or as a starting point for your own custom queries and reports.

All predefined queries have a corresponding predefined report based on the query. Use the query if you only want to view the information, and use the report if you want to format, print, or save the information. For example, you can use the Process Statistics Report to generate, print, and save information equivalent to the information presented in the Query view when you run the Process Statistics Query.

Reporting elements (concepts)

- Reports Catalog
- Predefined report templates
 - ▶ A collection of ready to run report templates
- Templates
 - ▶ Provides the structure of the report
- Data sources
 - ▶ Provides the data used by the report template
- Style master
 - ▶ Reusable custom headers and footer
- Report Designer

Predefined report templates



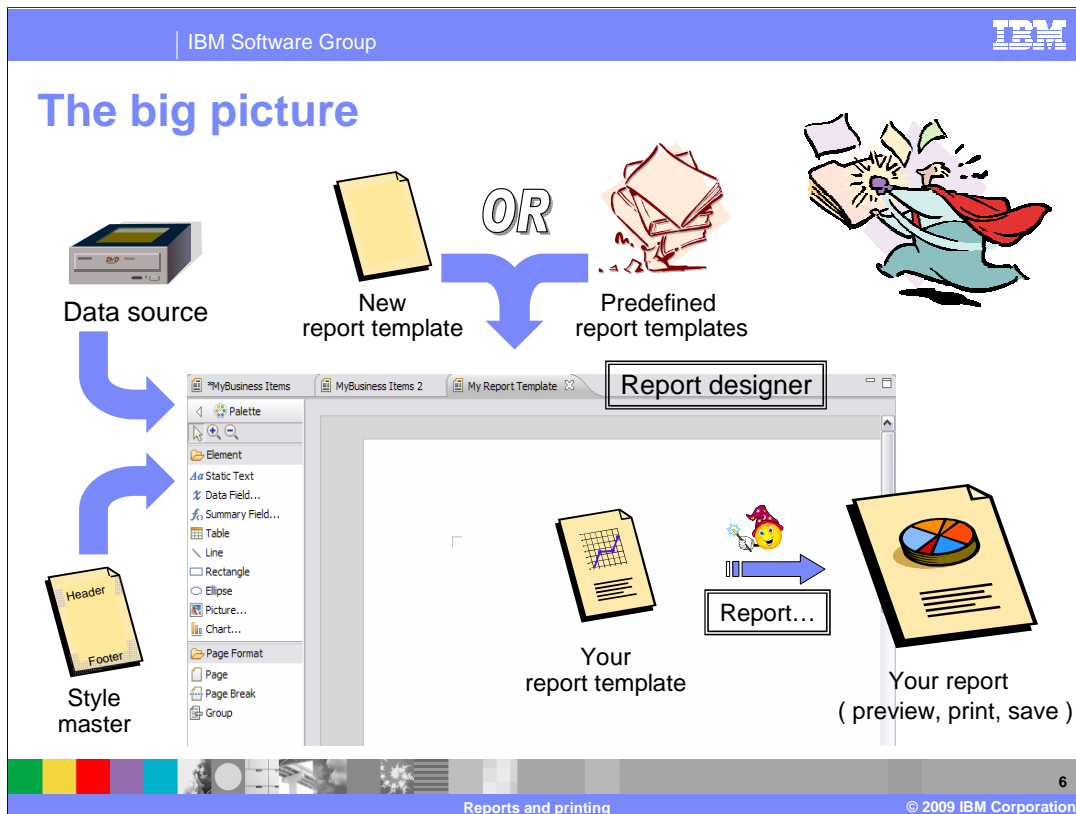
The Reports catalog is the place where you will keep your report templates and finished reports. Shown here are the categories of predefined report templates. This gives you a good idea of the different kinds of reports you can create. The predefined report templates will give you a quick start to creating your own reports.

The different categories also give a hint that there is some data that needs to be created for certain reports. In the case of the dynamic analysis reports, the dynamic analysis must be run first. Running the analysis, be it dynamic or static, will create the data used by the data sources.

The report templates are the structuring elements. They will receive the data from the data sources and format the report. The final report can then be previewed and printed or just previewed. The final report can also be saved to the reports folder in your project or to the local file system.

The style master is a way for you to customize and reuse the headers and footers for the reports.

The report designer is the graphical layout tool you'll use to create and edit your report templates.



Looking at the big picture, the report designer is used to create a report template that is associated with a data source and a style master. The style master is optional and can be applied or changed at any time. It provides the common header and footer information for the report.

When creating a report template you can start from one of the predefined report templates or create a new one from scratch.

When your report template is ready, you run the report wizard, directing it to the project you want to report on.

The report template is a generalized description of what data to use from the data source and how to format it. It can be used for many different projects and is highly reusable.

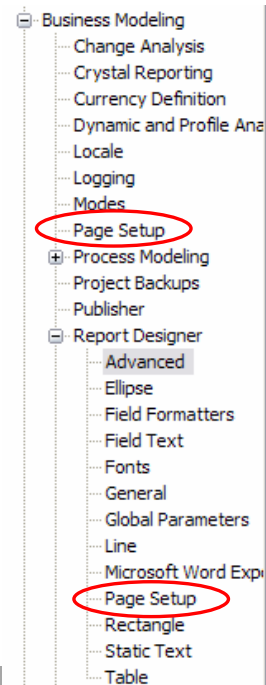
The data source provides the data used in the report. The data can be the business model and all of its associated artifacts or the it can be the results of an analysis.

The report wizard combines the data from the data source with the report template to generate the formatted report.

The finished report can be previewed, printed and saved.

Report designer preferences

- Special set of global preferences for *Report Designer*
- Advanced
 - ▶ Enable the process specification data source to include a diagram for each global process
- Fonts
- Global parameters
- Page setup



Now that you know that there is a thing called report designer, take a look at the preferences.

There is a special set of global preferences just for the report designer.

You'll probably want to take a look at the advanced page, the fonts, global parameters and the page setup.

The advanced page has a key option for including process diagrams in reports and the fonts page will let you add more fonts.

You will also want to define and setup your global parameters. The only one defined by default is the report title.

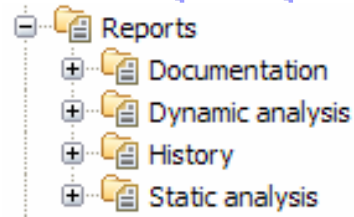
Then there is the page setup.

There is a special 'page setup' option for the report designer. Not to be confused with the one for Business Modeling, one level up.

Kinds of reports

- Based on ...
 - ▶ The business model documentation
 - Depends on what you have specified
 - ▶ An analysis – static or dynamic
 - Must run the analysis to create the data first
 - ▶ History
 - Depends on the team support

Predefined report templates



Before trying to create your own report template you need to understand where the data you are reporting on comes from.

There are four basic kinds of reports, documentation, dynamic analysis, static analysis and history.

All reports, except for the documentation reports, use data that are generated from an analysis. The dynamic or static analysis must be performed before invoking the report wizard otherwise the report will be empty.

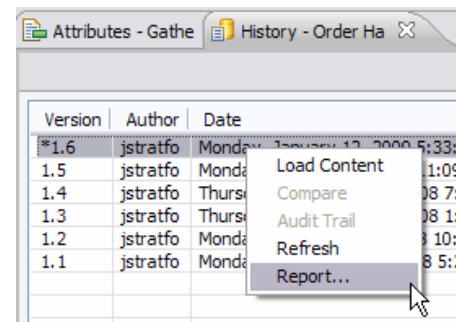
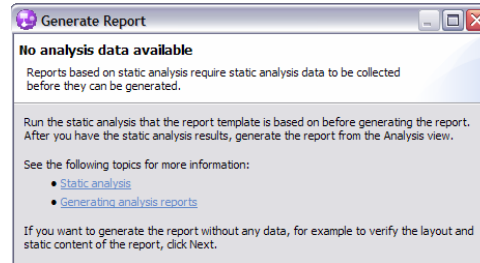
The history reports are another kind of analysis that report on the version history. It is only applicable if you are using the team support feature.

With the team support you can generate a version history that is displayed in a view. With the history report, you can use the information in the history view to create a report that can be previewed, printed or saved.

The documentation report only requires that you have a business model defined. It uses the structural and relationship information in the model as the data source. For this reason, it is a good place to get started learning and practicing the skill of report template creation.

Running the report wizard

- Can invoke Report... from
 - ▶ Project tree
 - Ok for documentation reports
 - ▶ Data source of the report
 - Analysis view
 - History view
 - Process diagram



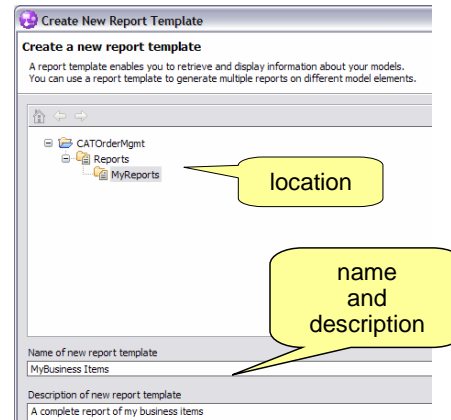
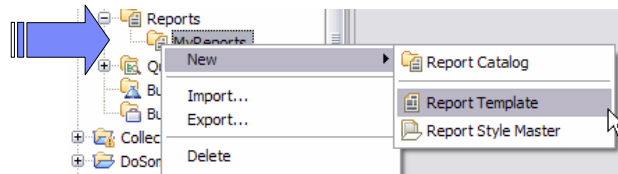
The report wizard can be invoked from many places. If you are doing documentation reports, which use the modeling artifacts as the data source, then you can invoke the report wizard from the popup menu of the project tree. If you try to invoke the report wizard using a template that uses one of analysis data sources, you'll be presented with a message like the one shown in the upper right. No data available. You will need to run the analysis to create the data for the report.

As a general rule you should create the data set that you'll be reporting on first. The data comes from a static analysis, dynamic analysis or a history analysis. Each of these analyses will show you the information in a view. The report wizard can then be invoked from the popup menu of the view.

When you invoke the report wizard from the view, it knows the context in which you're trying to generate the report. This allows the report wizard to narrow down the possible predefined templates that it presents. It will only show those templates that can be used for the current context. For example, if you are in the history view, then there will only be one history predefined report to select from. Your custom history templates will also be available for your selection.

Getting started

- Create the catalog where you want to keep your report template
- Create a simple documentation report
 - ▶ Business items specifications
- Use the project tree menu
 - ▶ New -> Report Template

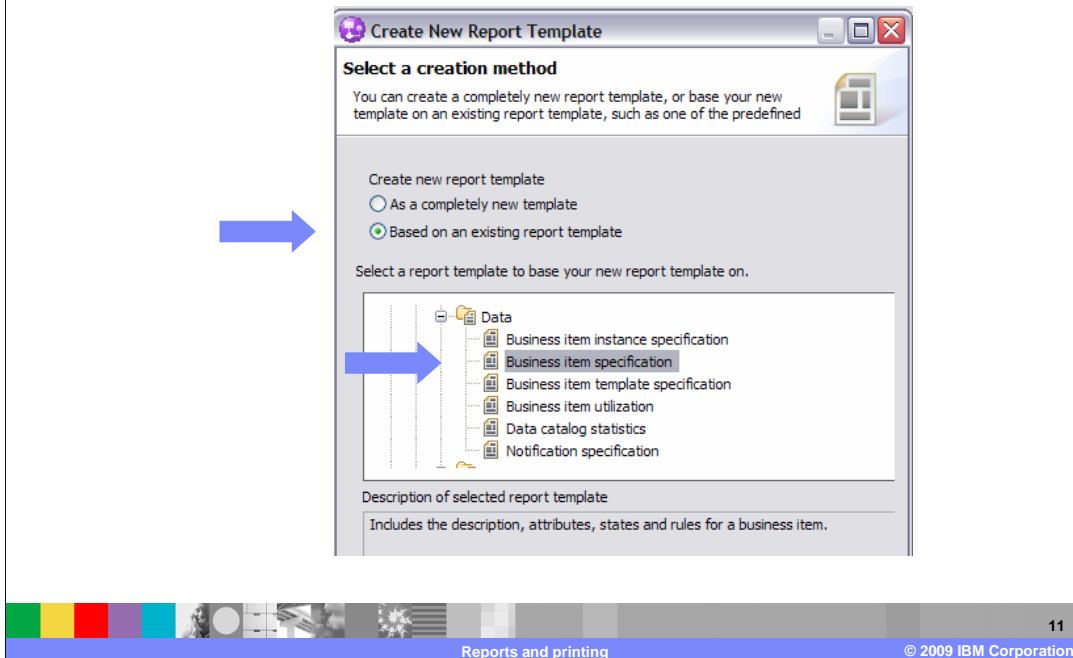


To get started creating a report template, first create the report catalog where you want to put it.

Next create the report template using the popup menu from the report catalog; select the 'new' menu item and then 'report template'. You are then given an opportunity to specify the location, the name and the description for your new report template.

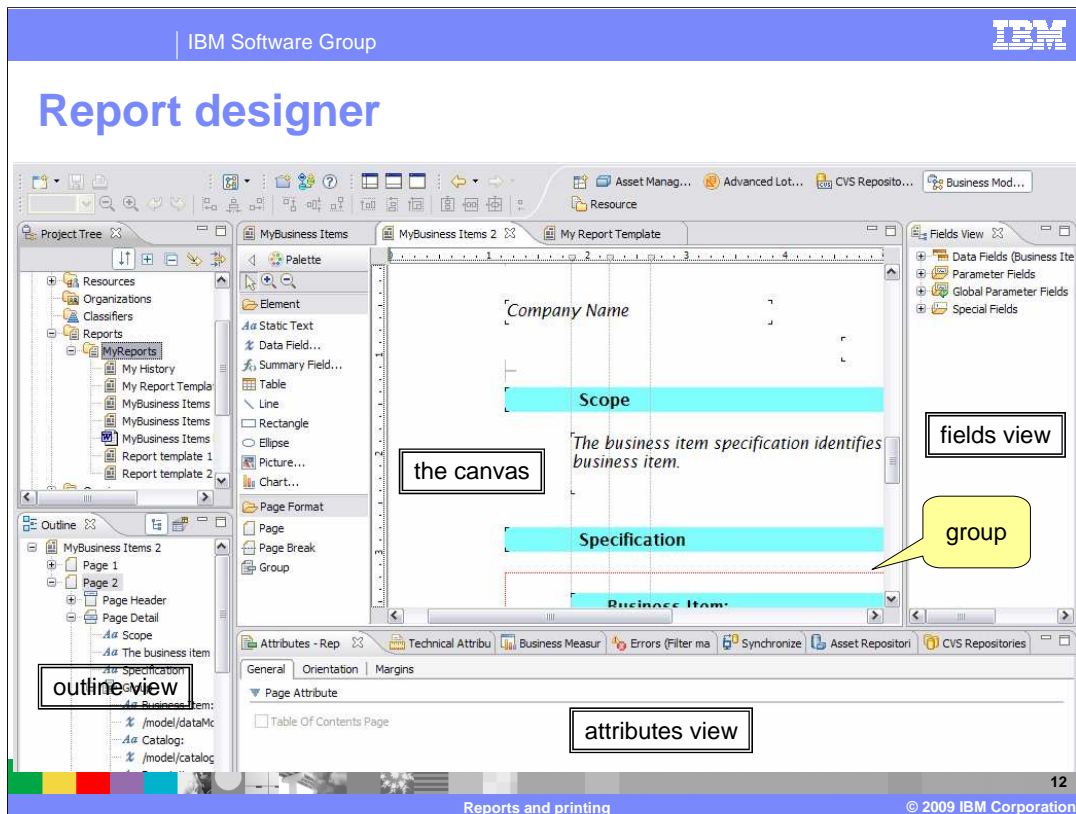
When getting started for the first time, it is easiest to create a documentation type of report, because it uses the business model for the data source. The data does not have to be created by running an analysis first.

The report template



The next big decision to make is whether to create your report template from scratch or to start with one of the predefined templates.

In this example a predefined report template that reports on the business items is selected.



When you create a new report template from a predefined template you will see something like this. It might not look like this when the template is first opened. You might have to use the popup menu from the canvas to show the fields view. The fields view is the pane on the far right.

The fields view is very important because this is where you select the data fields that are used in the report. The first element in the data-fields-list is the name of the data source that is being used. Here it is the Business Item Specification Data Source.

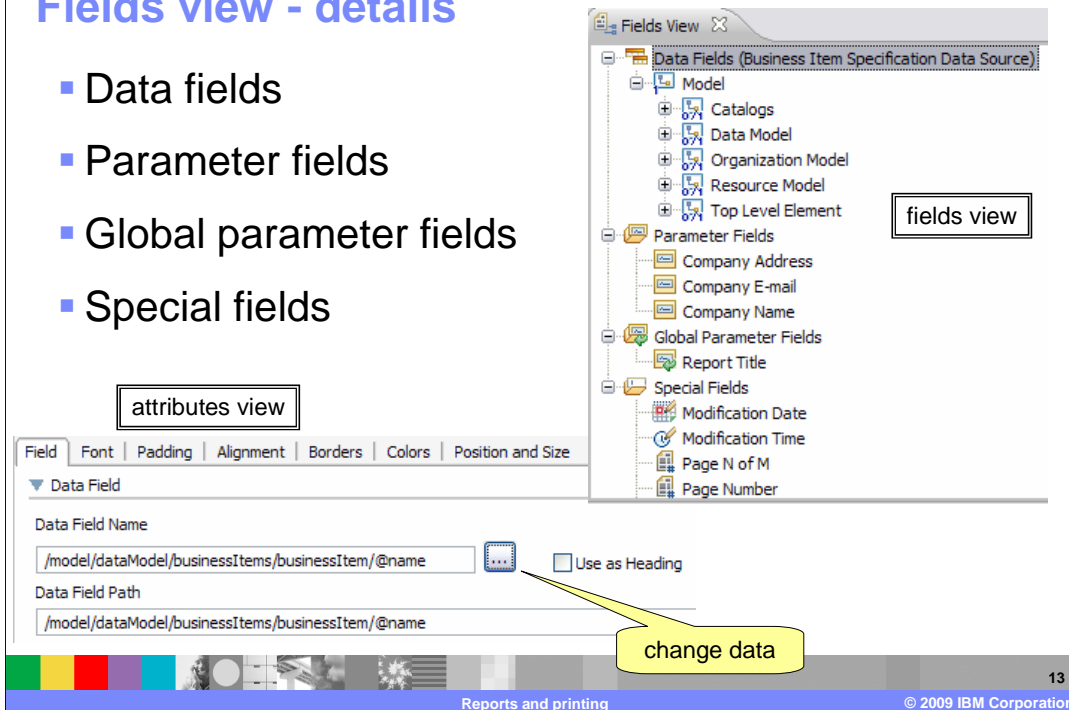
Selecting an element on the canvas will cause the outline view to reposition to the selected element. The outline view is essential for navigating around the report quickly. Whenever an element is selected in the outline view, it is automatically brought into view on the canvas and the details are displayed in the attributes view. The outline view provides a good high level perspective of the overall structure of the report template. It can also be used to add, remove and rearrange pages and to add the header and footer sections.

The attributes view is where you set the formatting options for the selected element. Here, since the canvas is selected, there are tabs for general, orientation and margins. Other elements have tabs that are appropriate for that element. For example; the company name, which is part of the header, has tabs for, font, padding, alignment and such.

The palette contains the structural elements used to create the report. Most of them are very straight forward, with the exception of the group element. The group element is used to group the data elements so that you can iterate over an object and report on all of its attributes. It is displayed as the thin red line under the specification heading in this screen capture. Selecting it will reveal that it too has attributes that you can configure. The key attribute that makes the group element work is the 'grouped-by' field.

Fields view - details

- Data fields
- Parameter fields
- Global parameter fields
- Special fields



Taking a closer look at the fields view reveals that there are several kinds of 'data' fields that can be used in the report.

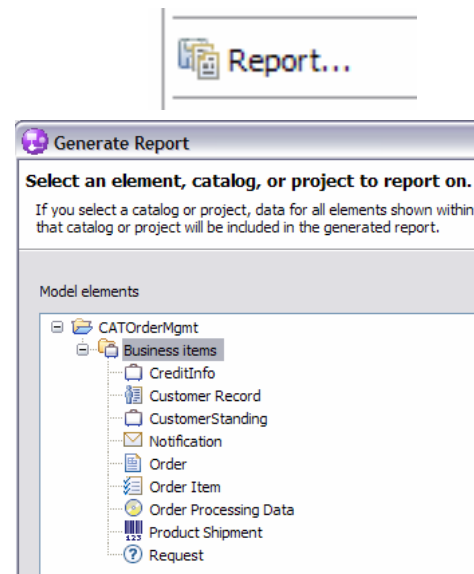
The data fields are the elements that come directly from the data source and will vary according to the data source.

You can surmise from the names in the screen capture that the local and global parameter fields are the data elements for which you can use to customize the report when it is run. They are the data that are important to the report but do not come from the structure of the business model or the analysis. Things like the company name, the title of the report and so forth.

The special fields are system orientated data that help in completing the report. Here you see things like the last modification date, the page number controls, report author and total number of pages. The data field can be dragged from the fields view and dropped onto the canvas or they can be selected when the data field element is added to the canvas using the palette. The data associated with a data field can be easily changed using the attributes view.

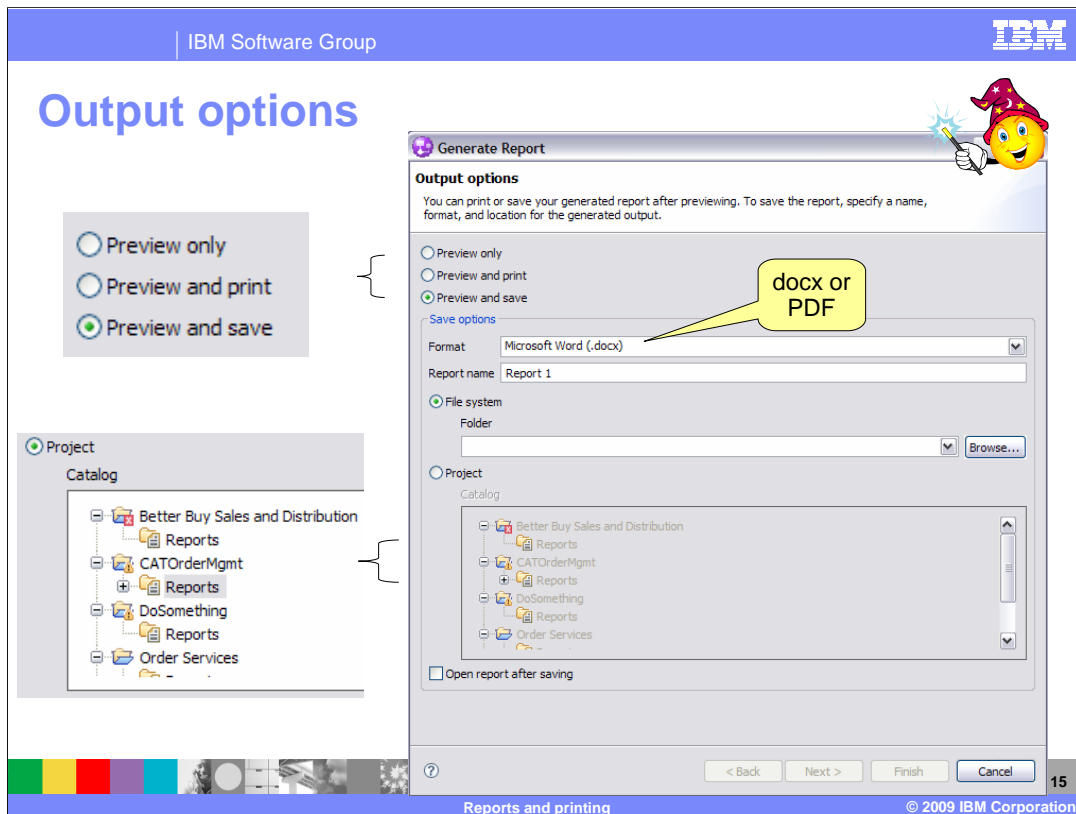
Invoke the report wizard

- To view the report
 - ▶ Right mouse click the canvas of the report template and select *Report...*



The report wizard can be invoked from many places within WebSphere Business Modeler using the popup menu. It is context sensitive so it has some idea of what you are planning to report on and therefore narrows your options accordingly. This is a very nice feature because it prevents you from running reports that will fail or come up empty.

In this case the wizard is being invoked from the canvas of the report template. It can tell immediately that the business items data source is being used. Therefore it only shows the business items for the project that the report template is defined in or has visibility to.



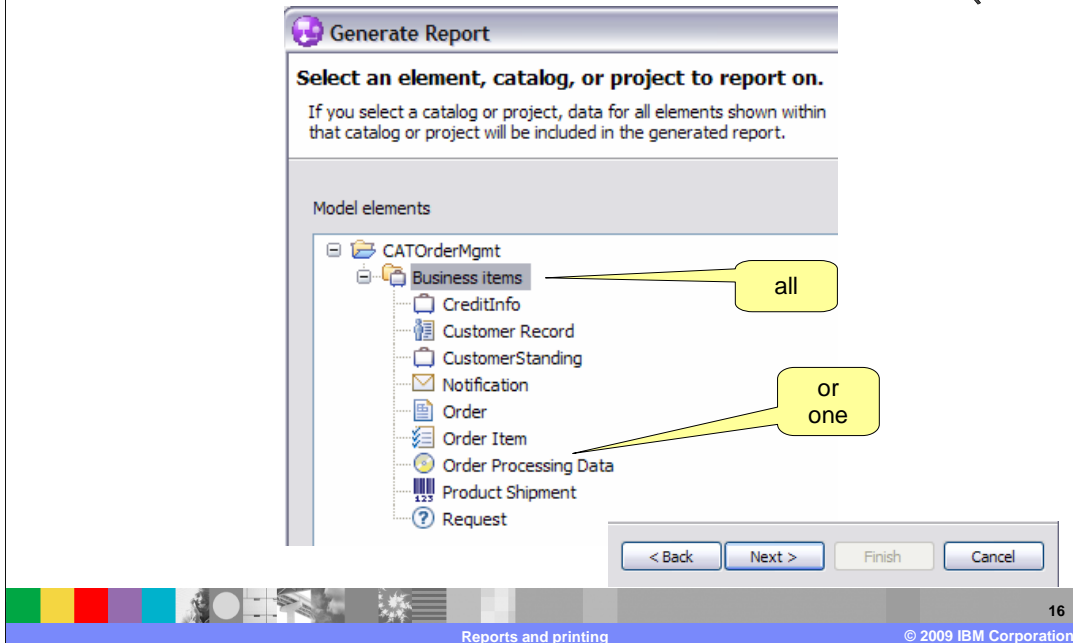
The first page of the report wizard lets you select the output options. You can do a preview only, preview and print or preview and save. The 'preview-only' option provides a quick turn around time which is very handy when you're developing the report template.

The 'preview-and-then-print', lets you verify the report format before committing it to the printer. The last option, 'preview-and-save', is new with WebSphere Business Modeler V6.2. There are two options for where to save the finished report. You can save it to a file or save it in your project. When it is saved with the project, it will also be saved in the team repository or the asset repository if the team support feature is being used.

There are two outputs formats. The default is docx and you also have the option of using PDF.

The docx format is a new Microsoft® format introduced with Microsoft Office 2007. There is a converter from Microsoft available on the internet that can be used with older versions of Microsoft Word.

Select elements



The next page of the report wizard is where you tell it what elements to report on. In this case you can select the entire catalog or one of the elements in the catalog. There is not a multiple select option, so it is all or one.

Enter parameter values



Generate Report

Specify values for parameter fields

Specify values for text and images to appear in your generated report. Select a field from the list and specify a value. For image fields, specify a path to the

Parameter Fields	Parameter Field Value	Parameter Field Description
<ul style="list-style-type: none">Company AddressCompany E-mailCompany Name	Widgets Inc.	Company Name

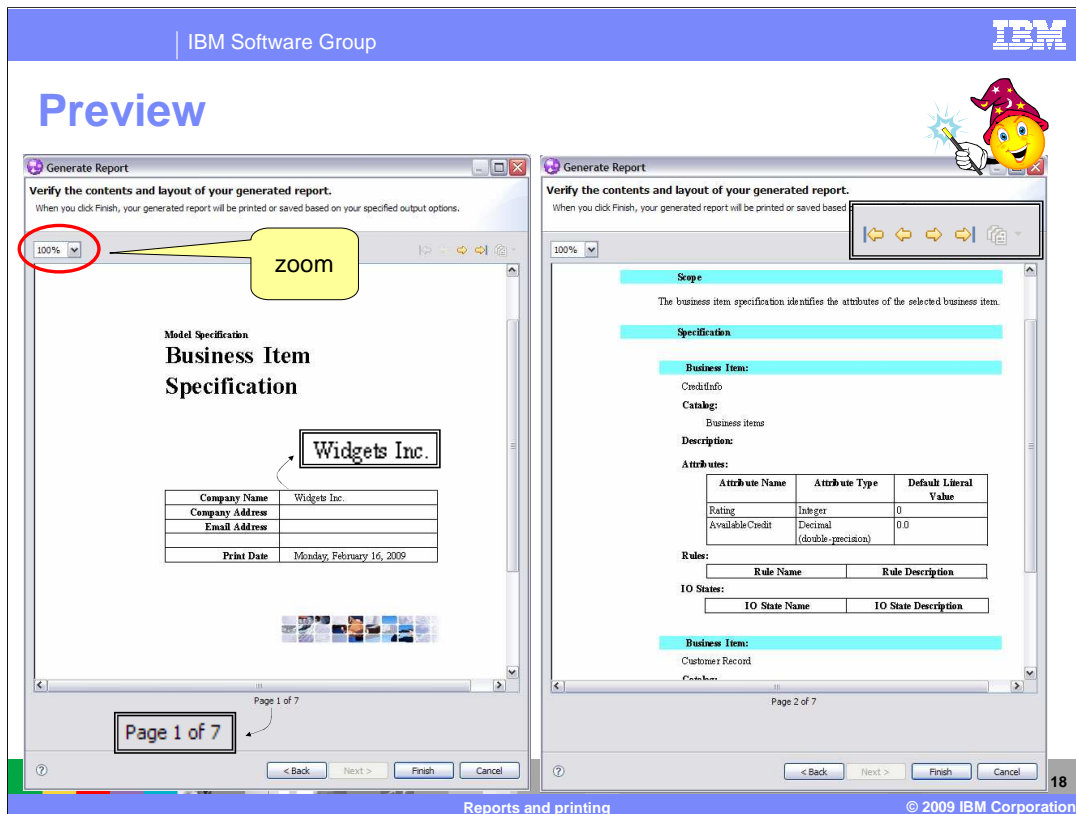
< Back Next > Finish Cancel

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This is where you get to specify the values to be used with the used defined parameters for the report. The example shown here has three; company name, address and e-mail. Select the parameter on the left and type in the value on the right. Notice the description field. This can be a very useful aid when the person running the report is not familiar with the fields.

And yes, you can specify default values for the parameters using the attributes view.



Finally, here is the preview.

Shown here are the first two pages of a seven page report. A couple of things to note; the name of the company on the first page, this is the value given to the company name parameter on the previous slide.

Next notice the navigation buttons on the top right of the page. The navigation controls on page two have been enlarged so you can see them better.

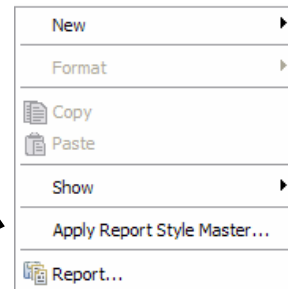
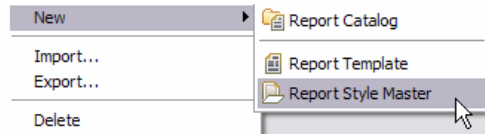
When in preview mode use the navigation controls to go forward and backward or directly to the beginning or end of the report.

Pressing finish at the bottom of the dialog will close the report wizard.

You can also zoom in and out using the drop down menu on the upper left of the preview page.

Style master

- Reuse *header* and *footer* information for multiple report templates
- *Applied* to the report template
- Header and footer areas must be defined in the report template

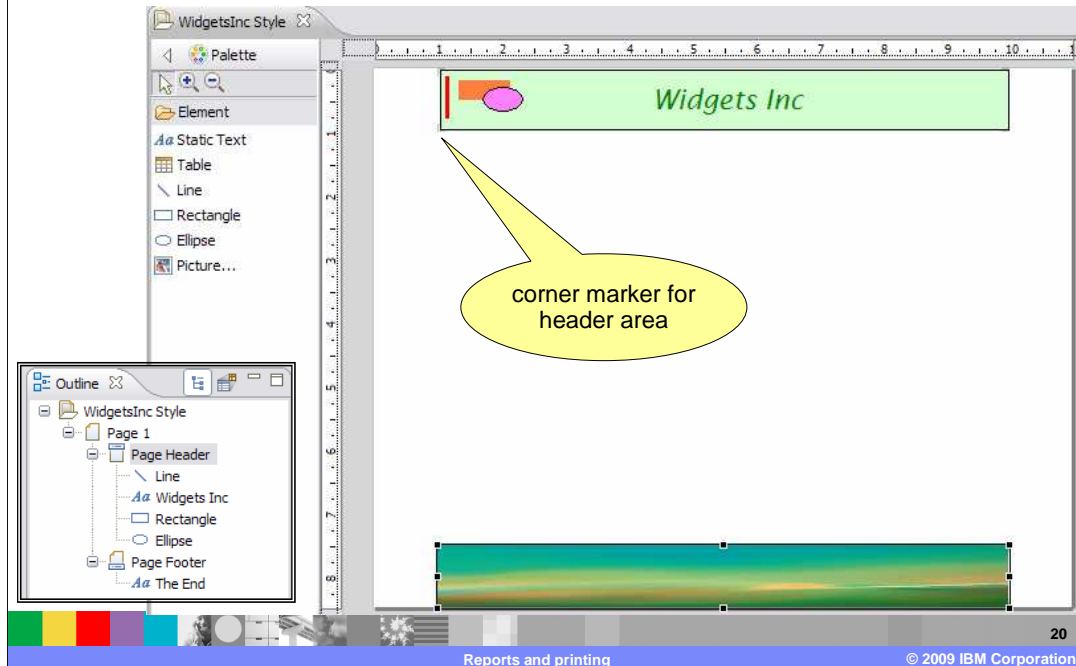


A report style master enables you to reuse header and footer information for multiple report templates.

Rather than adding header and footer information to every report template that you create, you can add your required fields just once to a single report style master. You can then apply that report style master to as many report templates as you want.

The header and footer information defined in the style master will only be displayed on the pages that have a header and or footer area defined. Use the outline view to add header and footer areas to the report template.

Style master example



This shows a style master, using the style master designer. It is very similar to the report designer but there are fewer options in the palette. The header and footer areas are demarcated by the gray corner brackets. When the style master is first opened, you'll need to scroll down to see the footer area.

When the style master is applied to a report template then the header and footer information is overlaid in the header and footer areas, if they exist. Changes to the style master will automatically be picked up the next time the report template is used. There is no need to reapply the style master.

Section

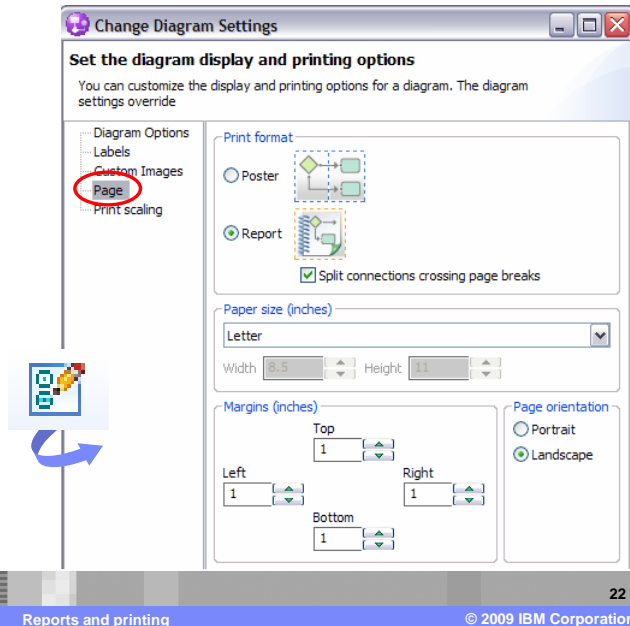
Printing



The next section will discuss printing reports and business process diagrams.

Printing options: reports and diagrams

- Printing the report
 - ▶ Global preferences
 - Report designer -> page setup
 - ▶ To print
 - Use the report wizard *Report...*
- Printing a business process diagram
 - ▶ Options specified in the diagram settings.
 - ▶ Popup menu of the project tree



While process diagrams can be included in a process specification report, they are always displayed using free form layout and fit to the area provided; that is to say the width of the page. Large diagrams are not readable.

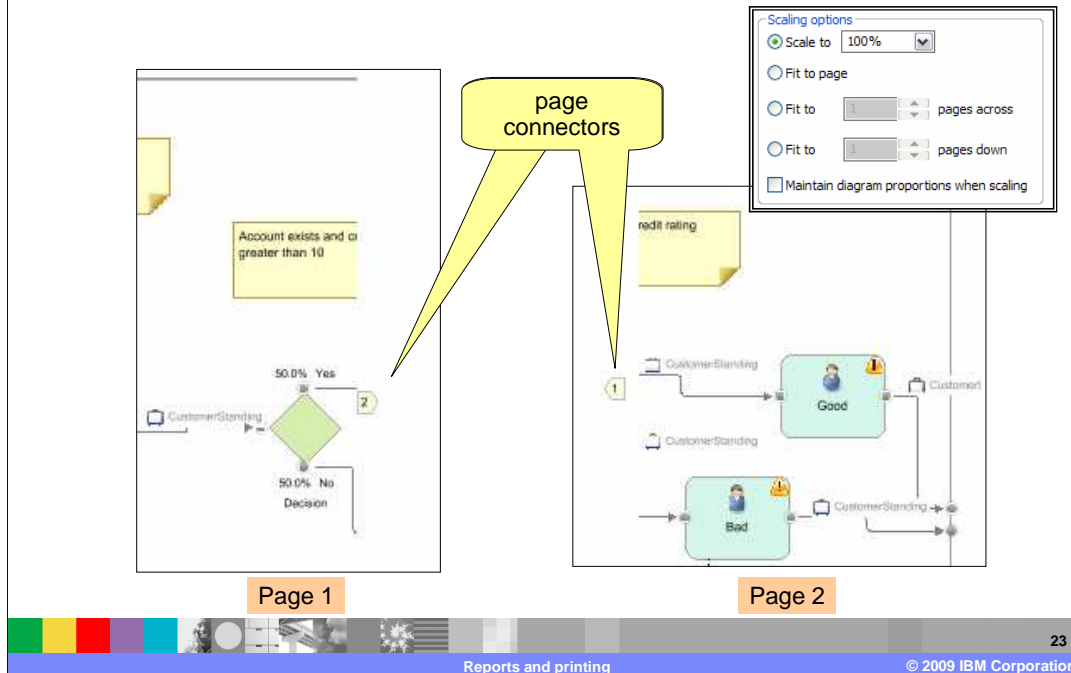
Printing reports and printing process diagrams are two separate functions which use different page setup preferences. The report wizard uses the report designer, page setup preferences in the global preferences. Printing is initiated from the report wizard.

When printing diagrams, the diagram settings, page and print scaling options are used. The diagram settings are available from the icon on the process editor toolbar.

There two options for how to manage the page boundaries when printing diagrams. Poster format is the option to use if you want to take all the pages and tape them together to create a poster to put on the wall. Report format is the option to use if you want to put the pages into a binder. The 'split connections crossing the page breaks' option will leave connectors that point to the connecting page. This makes it easier to find the next page in the report.

Printing a diagram is initiated using the print control button on the eclipse toolbar or by selecting the process in the project tree and using the popup menu.

Example: process diagram, split connections



Shown here is an example of a process diagram that is using the report format with the split connections options.

You can see that page one points to page two and page two points to page one. This is a very simple example.

With a larger diagram it can become complicated quickly, especially when the different scaling options are used.

Summary

- Concepts
- The big picture
 - ▶ Data source + report template + report designer = report
- Kinds of reports
 - ▶ Documentation, dynamic analysis, static analysis and version history
- Creating reports
- The report wizard
- Printing



This presentation provided you with a basic understanding of how the report subsystem in WebSphere Business Modeler works. It covered the basic concepts and then presented the 'big picture', showing how the parts fit together.

The four basic kinds of reports were discussed so that you'd know when to prepare the data sources by running the appropriate analysis.

Key features of the report wizard were shown using a documentation type report based on a predefined report template as an example.

The final topic on printing, pointed out that there are two separate printing functions, one for the diagrams and another for the reports.

At this point you should be able to get started creating your own report templates, referring to the on line product information center for additional details as needed.

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