



IBM Software Group

WebSphere Business Modeler V6.2

Interactive process design



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This presentation will discuss the interactive process design feature introduced with WebSphere Business Modeler V6.2.

Goal

- To discuss the new *interactive process design* feature
 - ▶ Also known as *direct deploy*



This presentation provides the foundation for understanding the new interactive process design feature. You might already know this feature as the direct deploy human centric business processes.

The topics covered here are also covered in the overview. This presentation will present the basic concepts in more detail.

Agenda



As shown in the agenda, there are quite a few topics to discuss. After reviewing this presentation and the related demonstrations, you will be ready to try building and testing your own business process. The introduction will set the stage for the discussion. Then it will follow up with details on the process elements you can use, the various components that are part of the solution, and who does what and when.

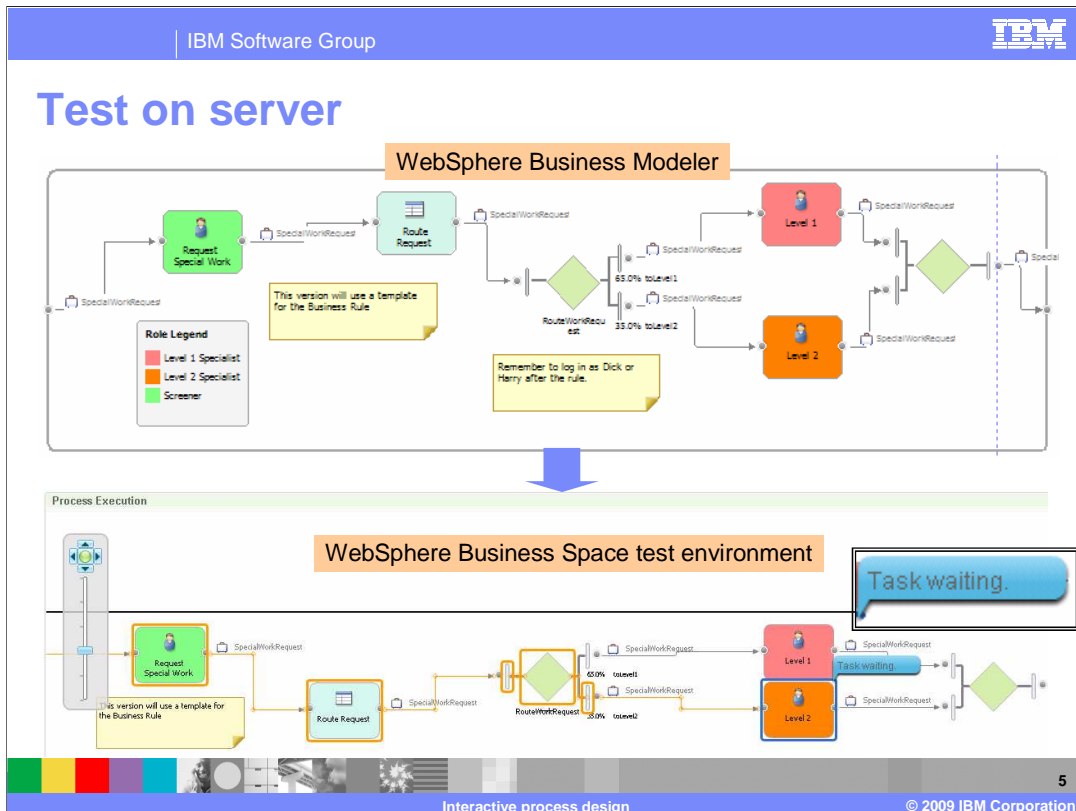
The last few topics will walk you through the basic topology and stepping through a business process.

Introduction



Interactive process design enables the business user to quickly deploy and test their business process without enlisting the services of the IT group.

For a human centric business process, the business user is able to step through the tasks, providing the input using Lotus Forms. While stepping through the tasks the data values for the inputs and outputs can be inspected.



The top picture shows the business model as seen in WebSphere Business Modeler and the bottom picture shows what the model looks like in the Business Space Process Execution widget.

Notice that the path that has already been traversed is outlined in orange and the node where the business process is waiting for input is outlined in blue. The current node is flagged as “task waiting.” The inset shows the task waiting flag enlarged so you can see it better.

The nodes that have already been traversed require input and you’ll see how that works in the demos that are part of this topic. Wherever there is a human interaction, you are presented with a Lotus Form to complete and submit.

There are Business Space widgets for accepting the task, submitting the forms and viewing the data.

Solution components

- WebSphere Business Modeler, to create the model
- WebSphere Process Server, to run the model
 - ▶ WebSphere Business Monitor (optional)
- Business Space for the interactive test environment
 - ▶ running in a WebSphere Process Server
- WebSphere Service Registry and Repository
 - ▶ To locate and invoke existing Web services
- Lotus Forms viewer and designer

There are numerous components involved in interactive process design. There is the WebSphere Business Modeler which is used to create the business model and initiate the interaction. Then there is the WebSphere Process Server where the business process will run and if business monitoring is being used, a WebSphere Business Monitor is needed to run the monitoring model.

The next major piece of the solution is the WebSphere Business Space which is used for managing the user-interactions. There are widgets for the interactive test environment and the business monitoring. These widgets will come with the respective products.

The WebSphere Service Registry and Repository is not required until you are ready to invoke external services from your business process. The WebSphere Service Registry and Repository provides the facilities for doing dynamic endpoint lookup to locate the service implementation based on the interface name. If the endpoint information is known, and you are ok with coding this information into your model, then the service can be called directly. The service must be running and accessible through the network.

Forms are an integral part of a human centric business process. They provide the mechanism for getting information to and from the application. Lotus Forms are used with the interactive process design feature. If you want to create polished professional forms then you'll need to use the Lotus Forms designer, otherwise the Lotus Forms Viewer will suffice. If you are going to use the Lotus Forms designer, then install it with your WebSphere Business Modeler eclipse package. This will allow you to export the default forms that modeler generates, so you can give them to your forms development team.

Roles and responsibilities

- Clear separation between the business user and the IT support
- Business user
 - ▶ Create the business model, including the Lotus forms used with the human tasks
 - ▶ Connect to the managed sandbox server
 - ▶ Deploy the application from modeler
 - ▶ Step through the tasks using the business space



To understand how the interactive process design works you will need to think in terms of roles. There is a server component involved. The business user is shielded from the details of the server installation and configuration and only needs to be concerned with creating the business process, connecting up to the server and running the business process.

In order to provide the complete picture this presentation will also discuss the IT role. If you're a business user, remember, the IT team is taking care of the installation and setup.



As you can see, there is a fair amount of work for the IT group to do to get everything setup.

First the servers need to be installed. The minimum setup is a stand-alone V6.2 WebSphere Process Server. This can be the unit test environment that comes with WebSphere Integration Developer. If monitoring is part of your application then the WebSphere Business Monitor and toolkit will need to be installed and configured also. Since Lotus Forms is used for the interfaces, the Forms Viewer and server will need to be installed. The Forms Viewer is part of the WebSphere Business Modeler installation as well. Somewhere in the organization Lotus Forms Designer will need to be installed also. To export the default forms from WebSphere Business Modeler, the Forms Designer must be installed in the same eclipse package as the WebSphere Business Modeler.

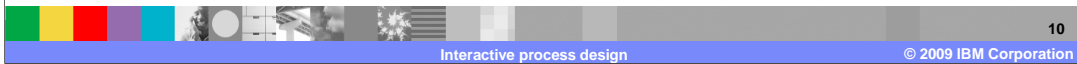
The WebSphere Service Registry and Repository is another optional server that might need to be installed and configured. This server is used to locate the endpoints for the services in your business processes that are not human tasks.

Then there is the matter of the user-registry. This can be the virtual member manager of the WebSphere Process Server, but more than likely there is an LDAP server that is already part of the company infrastructure. If this already exists then the roles and groups to be used in the business processes will need to be defined and mapped in the role mapping file.

The setup work culminates in the creation of the configuration files which are given to the business users to import into their modeling workspace.

There will be occasional work keeping the role mapping up to date and helping with the problem determination. The problem determination will be easier from the business user's perspective because all they need to do is push a button to gather the information and then send the .zip file to the IT support team.

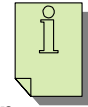
The interactive process design scenario -



Shown here is an outline of the steps a business user goes through to deploy and test a business process using the new direct deployment feature.

The demos that are part of the interactive process design topic will take you through the steps of creating a simple business process, deploying and testing it using the WebSphere Business Space.

The configuration file



- Communicates to WebSphere Business Modeler the server connection information necessary
 - ▶ Complete documentation is in the product information center
- Created by the IT team and given to the business user

A basic configuration file

```
<?xml version="1.0" encoding="UTF-8" ?>
- <rest:serverConfiguration xmlns:rest="http://rest.dtd.btools.ibm.com" name="Sandbox 01" test="true"
  secured="true" memberMapping="Collector.rmf">
  <description>Sandbox01 on myHost020.</description>
  <serverComponent name="WPS through secured REST"
    configuration="https://myHost020.austin.ibm.com:9445/rest/serverComponent/componentConfiguration" />
  <serverComponent name="WebSphere Business Space"
    configuration="https://myHost020.austin.ibm.com:9445/BusinessSpace/services/request/deployConfig" />
</rest:serverConfiguration>
```



There is more information on this topic in a separate presentation and a demonstration. The purpose here is to show what the business user might see. In the best of circumstances the business user will never see the contents of this file. The file is located in a place where it can be easily copied and then from within WebSphere Business Modeler, the business user will import the file when adding a server the server view.

This is the configuration file in its most basic form. This configuration is only for a test environment, that is a 'sandbox' and the associated business space. There is no information for connecting to a monitor server or configuring specific parameters. This is the minimum configuration for a single user to connect to a server and step through a business process using the business space.

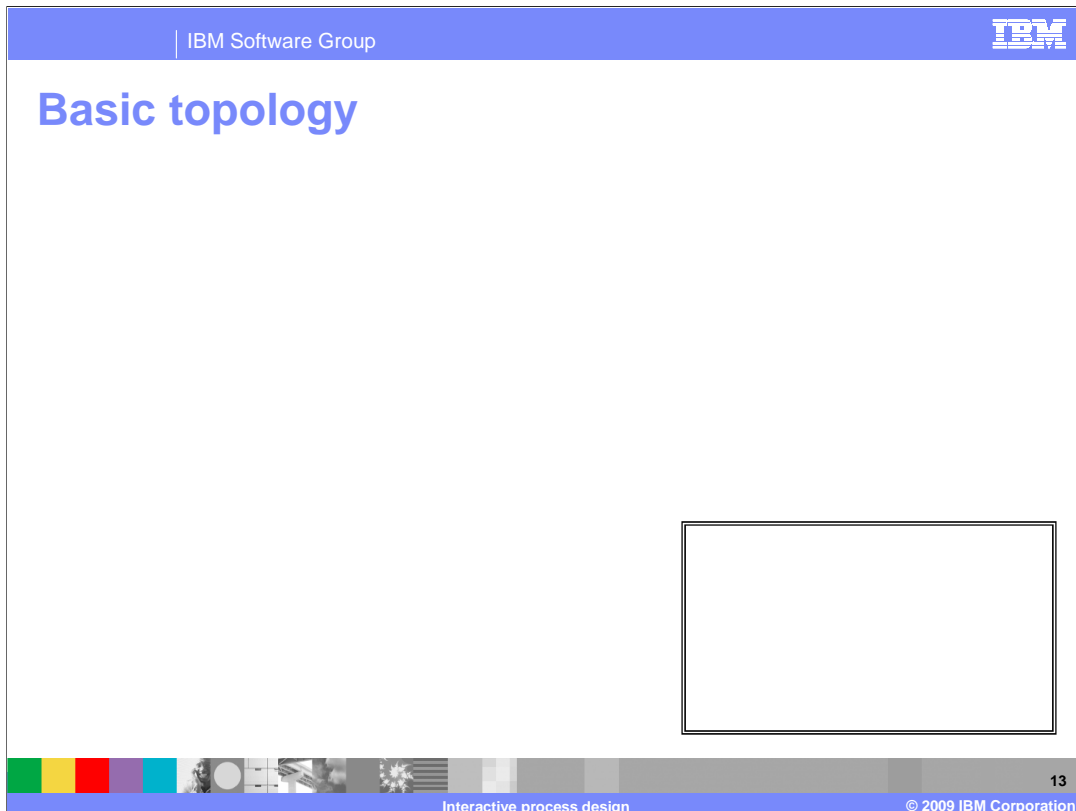
Configuration files and options



To establish communication between WebSphere® Business Modeler and the managed deployment environment, the IT administrator needs to ensure that the server configuration file is properly configured. On the client side the configuration file is a list of the components to be used, such as the business space, the WebSphere Process Server or the WebSphere Business Monitor and the role mapping file.

On the server side, be it the WebSphere Process Server or the Monitor server, there are additional configuration files used by the IT administrator to specify communication parameters such as timeouts.

Details for configuring these files can be found in the online product documentation under the topic “configuring the managed deployment environment.”



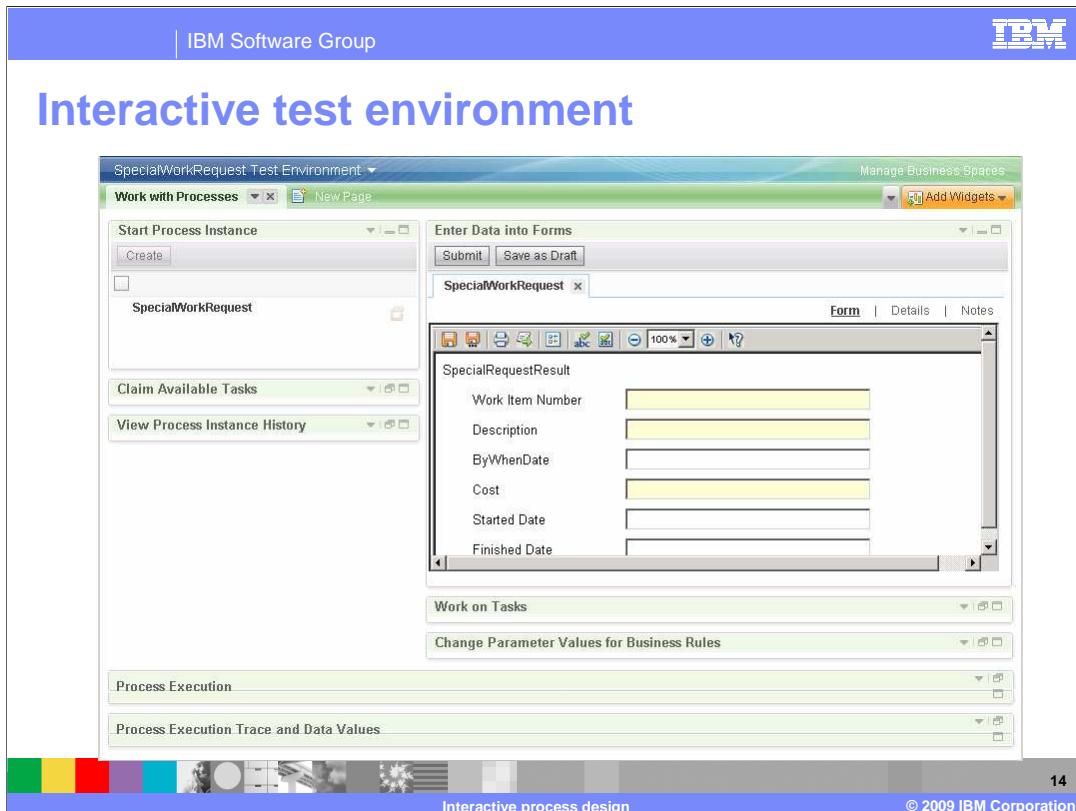
With the interactive process design feature there is some setup required by the IT team.

Shown here is the basic topology, including the use of the WebSphere Service Registry and Repository for managing and locating service implementations and interfaces.

The managed sandbox is a stand-alone WebSphere Process Server V6.2 server. It can be the process server that is part of the WebSphere Integration Developer test environment or not. It can be local or remote. The most efficient configuration for the business user is to have a remote stand-alone process server that is not part of WebSphere Integration Developer.

The business modeler uses WebSphere Business Modeler V6.2 to deploy the business process to the managed sandbox and then uses the browser based business space to interact with the deployed process. The business process running in the sandbox will access the WebSphere Services Registry and Repository to resolve any endpoints if necessary.

The business user can also retrieve business service and business service object definitions from the WebSphere Service Registry and Repository.



This screen capture shows all of the business space widgets that are part of the interactive test environment. All of the widgets except for the 'start process instance' and 'enter data into form' widgets have been minimized. The form that is displayed is the default Lotus Form that is generated based on the input element for the business process.

The first thing you do is select the business process in the 'start process instance'. This then opens the form in the 'enter data into form' widget. You fill out the form and then submit it. This will start the business process and the first task will show up in the 'claim available task' widget. It will show up in the 'available tasks' of a person that is a member of the associated group. The roles in modeler map to groups in the deployment runtime and they designate who is supposed to work the task.

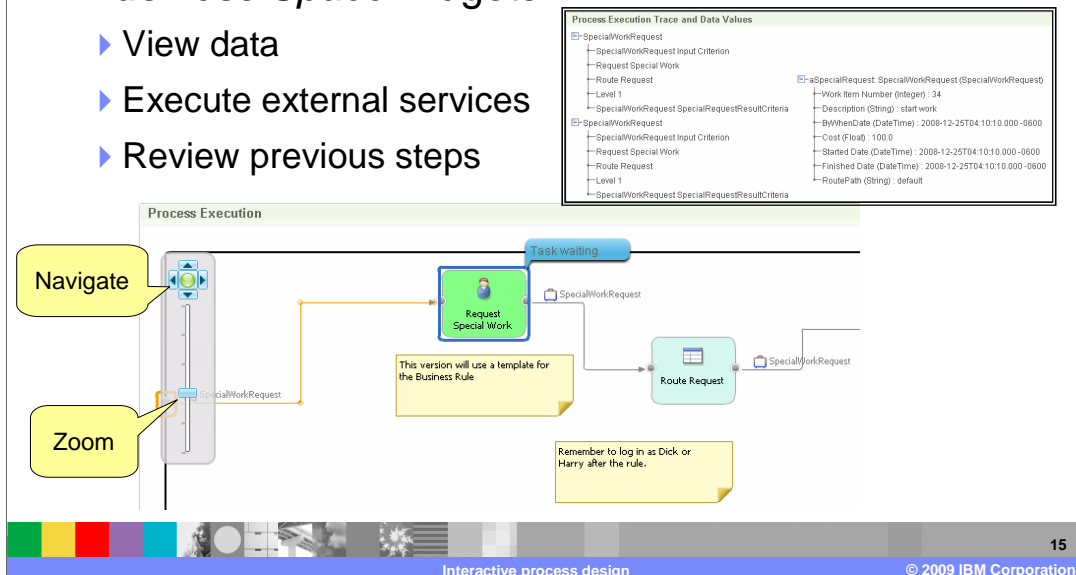
The 'process execution' widget will display the current step as shown on the next slide.

Before leaving this picture, notice the 'change parameter values for business rules' widget. This is where you as the business user can change values related to business rules. The business process used in this example has a business rule.

The widget on the bottom, 'process execution trace and data values', is where you can see and inspect the data that is flowing from one step to the next.

Visual stepping

- Trace a business process in real time using *Business Space* widgets
 - ▶ View data
 - ▶ Execute external services
 - ▶ Review previous steps



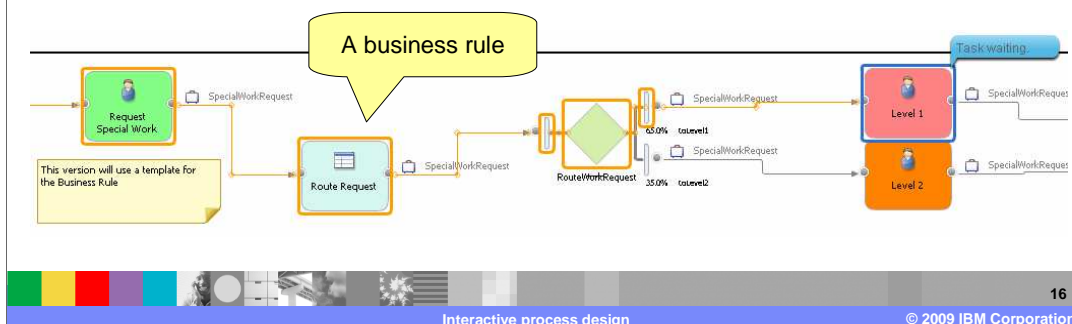
Here you see the execution trace for a business process as it is displayed in the process execution widget in the Business Space test environment. The Adobe Flash Viewer 10 is being used to display the business process diagram and display the current state of the business process. The data can be inspected for the current or previous steps in the process using the “process execution trace and data values” widget, shown in the inset on the upper right.

In the ‘process execution’ widget, the current step is highlighted in blue and the previously processed steps and links are highlighted in orange.

There is a full range of zooming and navigating tools for exploring large business processes.

Following the flow

- Request Special Work is submitted
- Route Request business rule is processed
- The decision is evaluated based on data that was dynamically set by the business rule
- Is routed to the “Level 1” specialist



As soon as the form for the 'request special work' is submitted the business process resumes by invoking the business rule. The business rule uses some if-then logic based on a limit which can be updated by the business user using the 'change parameter values for business rules' widget.

In this instance, the logic routes the special request to the level one specialist, which is another human task. The business rule and the decision do not require human intervention so the business process flowed through them and is now waiting in the 'claim available task' list of the level one specialists. If the roles are being fully implemented and exercised, then a person with the level one specialist role must login to the business space to accept the task and submit the form.

Process execution trace and data values

- Below the Process Execution widget

process steps

data values

Process Execution Trace and Data Values

- [-] SpecialWorkRequest
 - SpecialWorkRequest Input Criterion
 - Request Special Work
 - Route Request
 - Level 1
 - SpecialWorkRequest SpecialRequestResultCriteria
- [-] SpecialWorkRequest
 - SpecialWorkRequest Input Criterion
 - Request Special Work
 - Route Request
 - Level 1
 - SpecialWorkRequest SpecialRequestResultCriteria

- [-] aSpecialRequest: SpecialWorkRequest (SpecialWorkRequest)
 - Work Item Number (Integer) : 34
 - Description (String) : start work
 - ByWhenDate (DateTime) : 2008-12-25T04:10:10.000 -0600
 - Cost (Float) : 100.0
 - Started Date (DateTime) : 2008-12-25T04:10:10.000 -0600
 - Finished Date (DateTime) : 2008-12-25T04:10:10.000 -0600
 - RoutePath (String) : default

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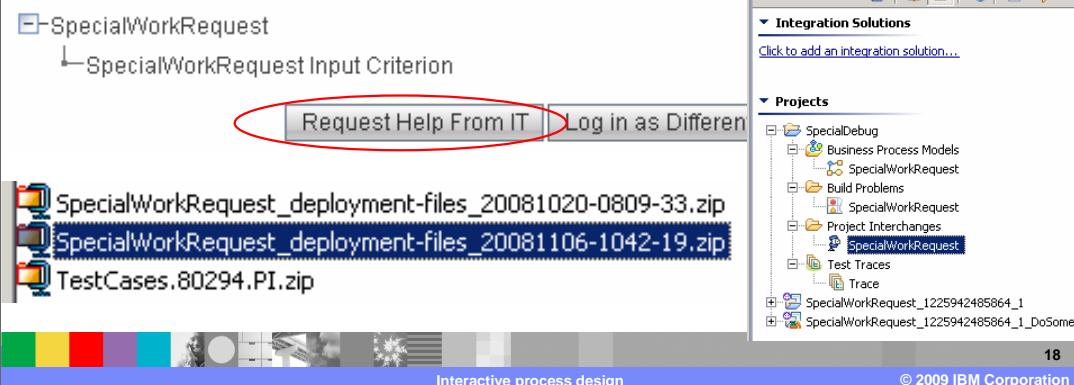
Shown here is an example of the 'process execution trace and data values' widget.

The list on the left represents the steps that have been invoked in the business process. In this case the SpecialWorkRequest business process has been run twice.

The list on the right is used to display the data values that are associated with the business item for the step that is selected on the left.

Problem determination

- Gathering problem determination information
 - ▶ When a problem is encountered that requires technical assistance.
 - Logs and supporting files are easily gathered and archived
 - To be given to the support personnel
 - Imported into WebSphere Integration Developer



At the bottom of the 'process execution trace and data values widget', there are some buttons. The button of interest here is the Request Help From IT. This button will collect and zip up the 'must gather' information for the business user. The business user then sends the problem determination archive to the IT support team. This will give the support team everything they need to debug the problem using WebSphere Integration Developer V6.2.

In WebSphere Integration Developer, the IT support team can view the logs, see the modeler version of the business process and the BPEL representation. They can rerun the steps using the same data values that you used when stepping through the business process.

The other button, 'Log in as a Different User', is used when you need to switch to a different user to match the role, as in the example of the level one specialist. Using this button will open a new browser window, keeping the original trace window intact. As the business process proceeds based on the input from other users, the trace in the original window is updated.

Summary

- Processing elements
- Solution components
 - ▶ Modeler, servers and business space
- Roles and responsibilities
 - ▶ Business user and IT
- Configuration
- Visual stepping
- Problem determination



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Interactive process design

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This presentation discussed the basics of the new 'interactive process design' feature. You now have a solid idea of what this feature is and how it can help you with your business process development.

With this new feature there are additional system components such as servers, user registries and service repositories that need to be installed and configured by the IT support group. The roles and responsibilities were discussed; IT sets it up and helps with runtime problems and the business user develops the models and tests them using the servers.

Configuration and installation details are hidden from the business user. All they need to do is import the a configuration file when establishing the server connection and understand how to use a handful of WebSphere Business Space widgets.

Testing on the server invokes the interactive test environment in the WebSphere Business Space. The business user then steps through the business process by filling out and submitting forms, watching the execution trace and inspecting the data values.

If the business user runs into trouble during the execution of the business process, they can easily gather the debug information to send to the IT support team.

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