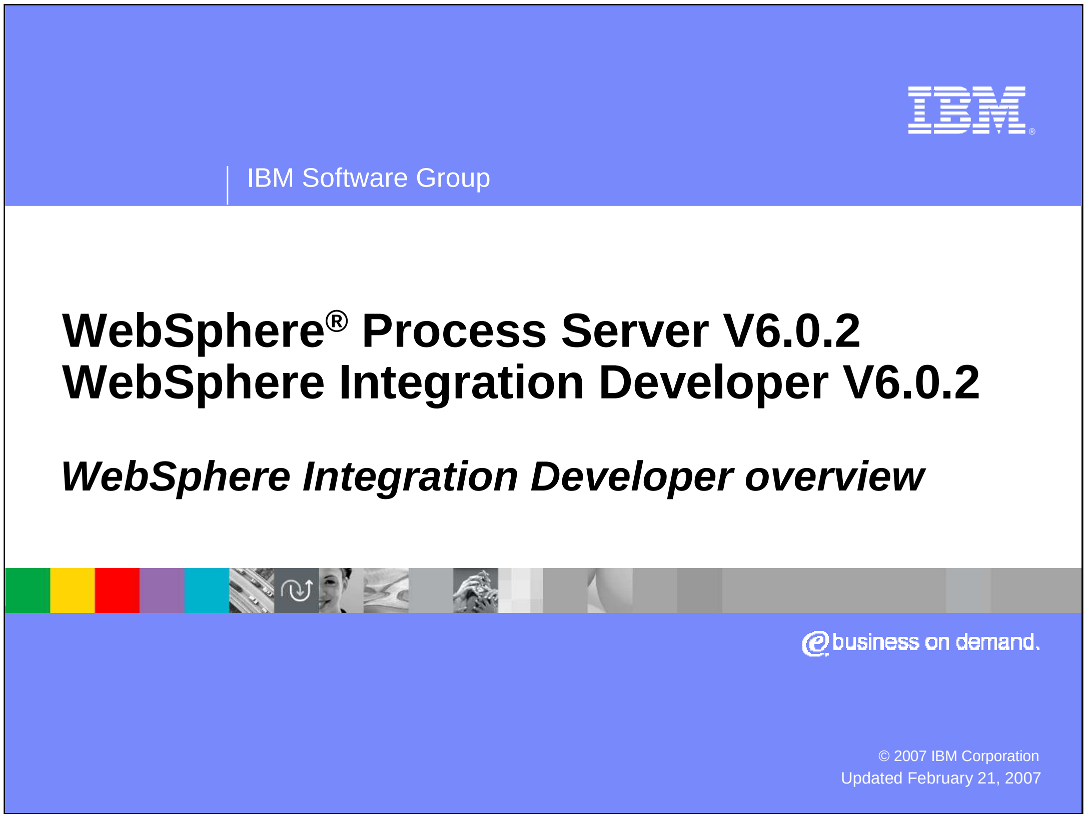

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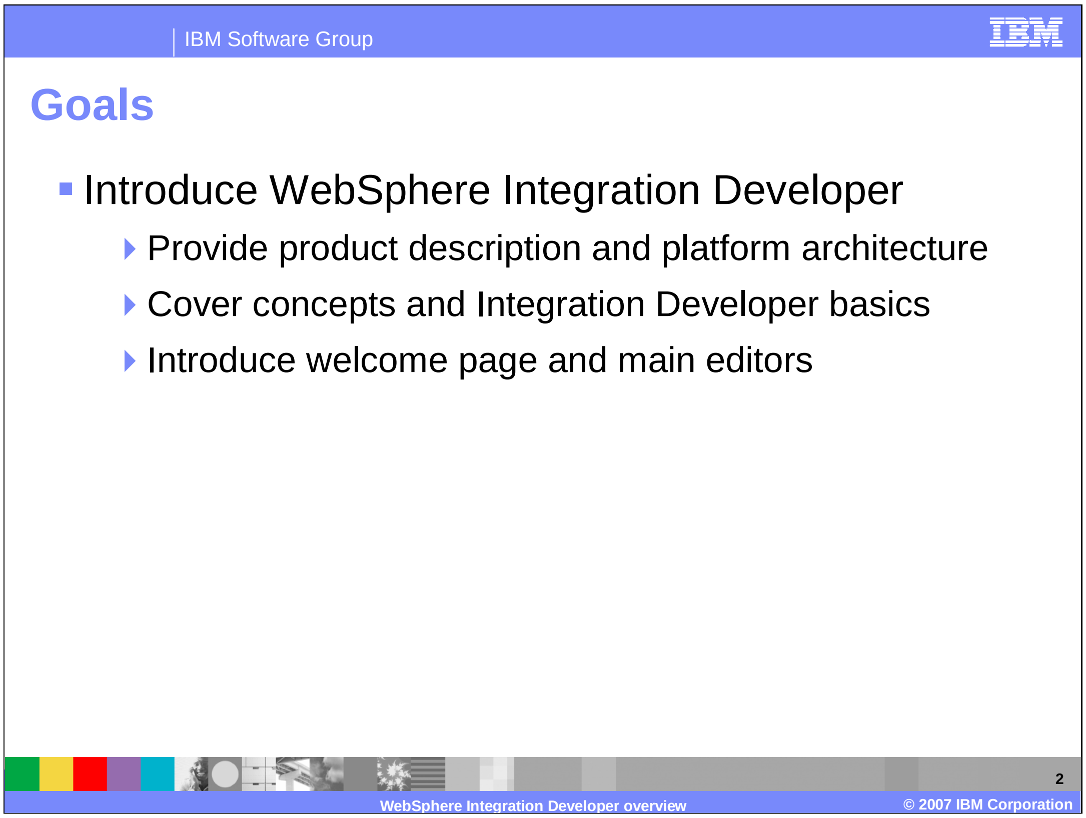
WebSphere® Process Server V6.0.2 WebSphere Integration Developer V6.0.2

WebSphere Integration Developer overview

business on demand.

Updated February 21, 2007

This presentation will provide an Overview of WebSphere Integration Developer version 6



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Goals

- Introduce WebSphere Integration Developer
  - Provide product description and platform architecture
  - Cover concepts and Integration Developer basics
  - Introduce welcome page and main editors

2

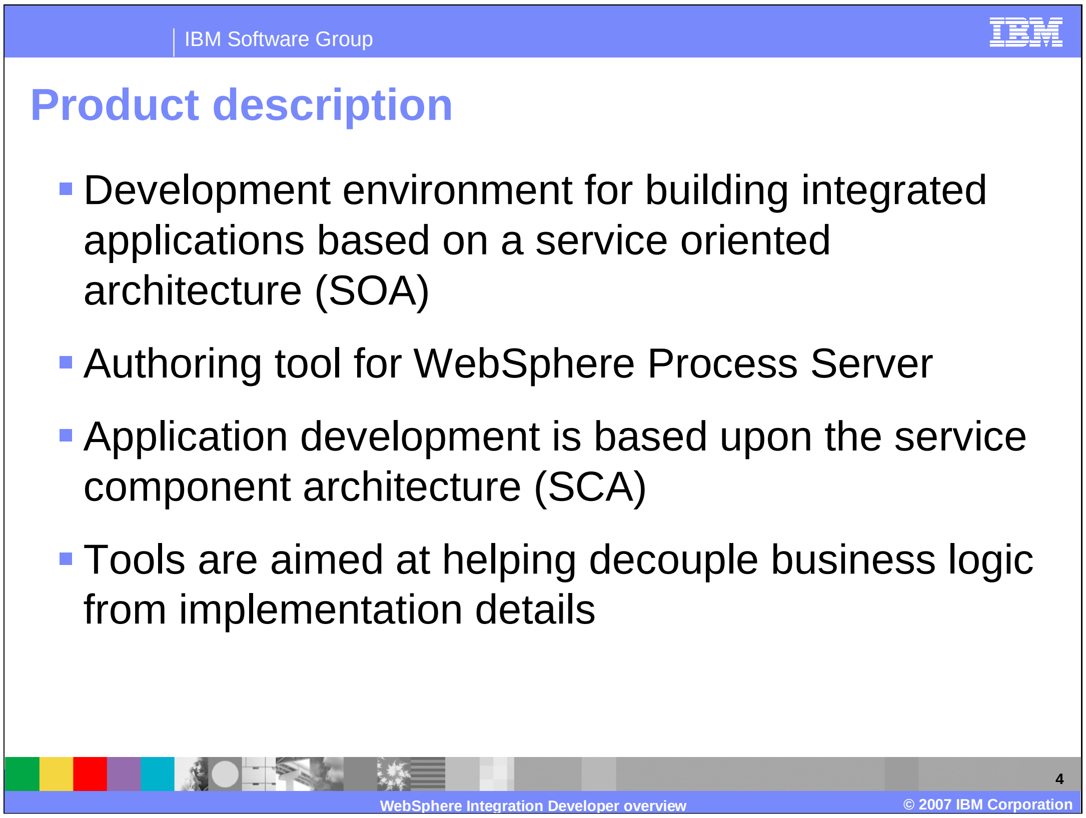
WebSphere Integration Developer overview

The goals of this presentation are to introduce the WebSphere Integration Developer product and features. This presentation will provide a product description and lay out the platform architecture to level-set where Integration Developer is in the WebSphere and Rational development environment hierarchy. This presentation will also familiarize you with concepts, Integration Developer basics, the welcome page, and main editors in order to improve first time use.

Section

Overview

This section will provide an overview of WebSphere Integration Developer.



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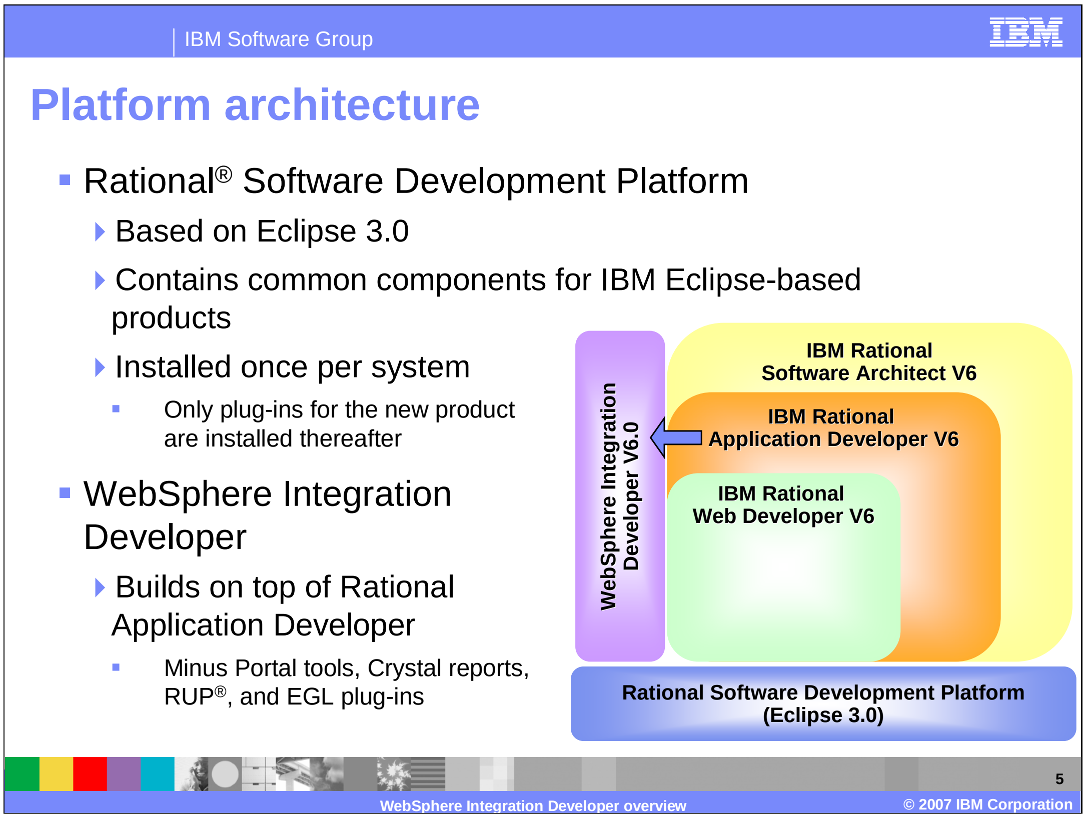
Product description

- Development environment for building integrated applications based on a service oriented architecture (SOA)
- Authoring tool for WebSphere Process Server
- Application development is based upon the service component architecture (SCA)
- Tools are aimed at helping decouple business logic from implementation details

4

WebSphere Integration Developer overview

WebSphere Integration Developer version 6 is the development environment for building integrated business applications targeted for WebSphere Process Server. WebSphere Process Server is the next generation business process integration server that provides an application framework for building and running applications based upon a service oriented architecture (SOA). SOA support in WebSphere Process Server is based on a new programming model referred to as Service Component Architecture (SCA). One of the primary purposes of WebSphere Integration Developer is to provide the appropriate tools to easily build and test SCA-based applications targeted for WebSphere Process Server. Both SCA and the tools support for SCA are aimed at helping developers decouple business logic from implementation details.



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Platform architecture

- Rational® Software Development Platform
  - Based on Eclipse 3.0
  - Contains common components for IBM Eclipse-based products
  - Installed once per system
    - Only plug-ins for the new product are installed thereafter
- WebSphere Integration Developer
  - Builds on top of Rational Application Developer
    - Minus Portal tools, Crystal reports, RUP®, and EGL plug-ins

WebSphere Integration Developer V6.0

IBM Rational Software Architect V6

IBM Rational Application Developer V6

IBM Rational Web Developer V6

Rational Software Development Platform (Eclipse 3.0)

5

WebSphere Integration Developer overview

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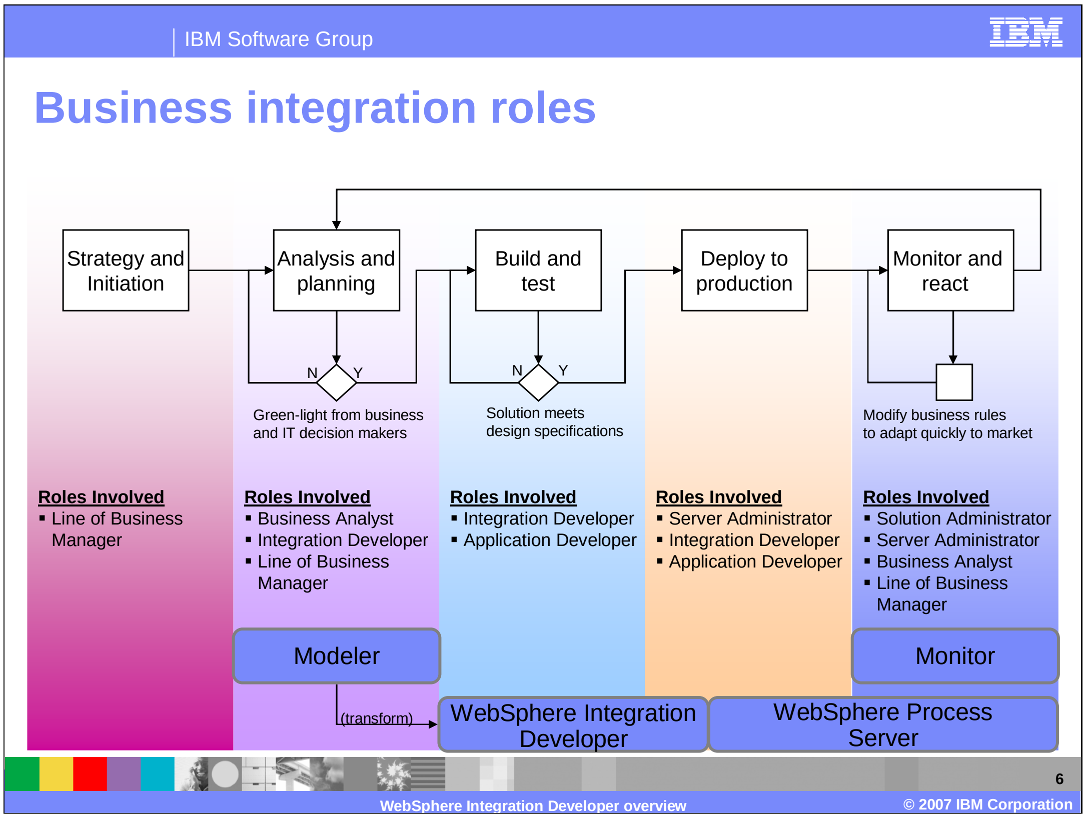
As this graphic shows, WebSphere Integration Developer is built on the Rational Software Development Platform. Rational Software Development Platform is based on Eclipse 3.0 technology, and each IBM product built on this platform will co-exist and share plug-ins with other Rational Software Development Platform-based products. Rational Software Development Platform is installed once per system with the first product that is installed. As other products built on this platform are installed on the system, only the necessary plug-ins are installed.

WebSphere Integration Developer is based upon the core IBM Rational Application Developer product. However, it is important to note that there are several features that are not included in the core IBM Rational Application Developer product that is part of WebSphere Integration Developer. Specifically, the following features are not included: Portal tools, Crystal Reports, Rational Unified Process (RUP), and Enterprise Generation Language (EGL). Because WebSphere Integration Developer is based upon a subset of the full IBM Rational Application Developer version 6 tools, advanced users that need the support listed above will require a full license for IBM Rational Application Developer.

Refer to the WebSphere Integration Developer installation guide for more information on WebSphere Integration Developer version 6 coexistence with other Rational Software Development Platform-based products. This document can be accessed from the installation launchpad for WebSphere Integration Developer.



Business integration roles

Strategy and Initiation

Roles Involved
- Line of Business Manager

Analysis and planning

N Y

Green-light from business and IT decision makers

Roles Involved
- Business Analyst
- Integration Developer
- Line of Business Manager

Modeler

(transform)

Build and test

N Y

Solution meets design specifications

Roles Involved
- Integration Developer
- Application Developer

WebSphere Integration Developer

Deploy to production

Roles Involved
- Server Administrator
- Integration Developer
- Application Developer

Monitor and react

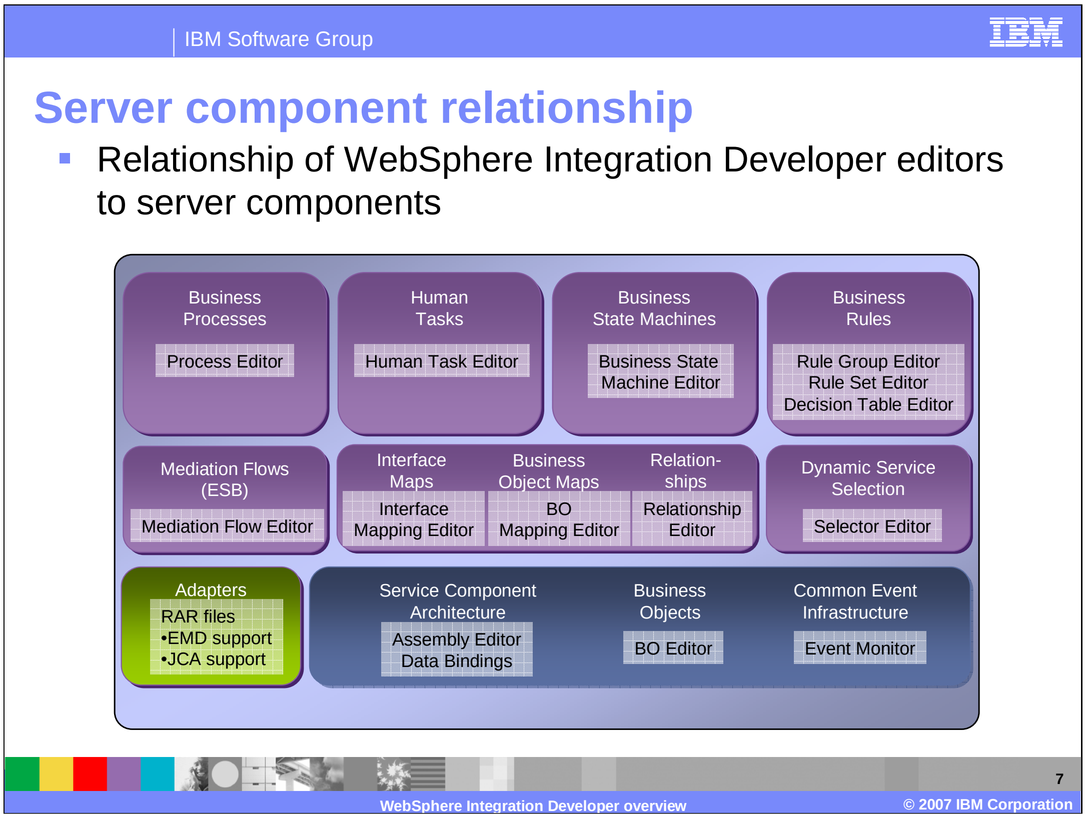
Modify business rules to adapt quickly to market

Roles Involved
- Solution Administrator
- Server Administrator
- Business Analyst
- Line of Business Manager

Monitor

WebSphere Process Server

The diagram shown on this slide is provided to illustrate the development life cycle, roles, and product set involved with building an integrated business application. Of particular focus in this presentation is the roles involved in building, testing, and deploying applications using WebSphere Integration Developer. Specifically, the roles involved for these tasks include the Integration Developer and the Application Developer.



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Server component relationship

- Relationship of WebSphere Integration Developer editors to server components

Business Processes
Process Editor

Human Tasks
Human Task Editor

Business State Machines
Business State Machine Editor

Business Rules
Rule Group Editor
Rule Set Editor
Decision Table Editor

Mediation Flows (ESB)
Mediation Flow Editor

Interface Maps
Interface Mapping Editor

Business Object Maps
BO Mapping Editor

Relation-ships
Relationship Editor

Dynamic Service Selection
Selector Editor

Adapters
RAR files
•EMD support
•JCA support

Service Component Architecture
Assembly Editor
Data Bindings

Business Objects
BO Editor

Common Event Infrastructure
Event Monitor

7

WebSphere Integration Developer overview

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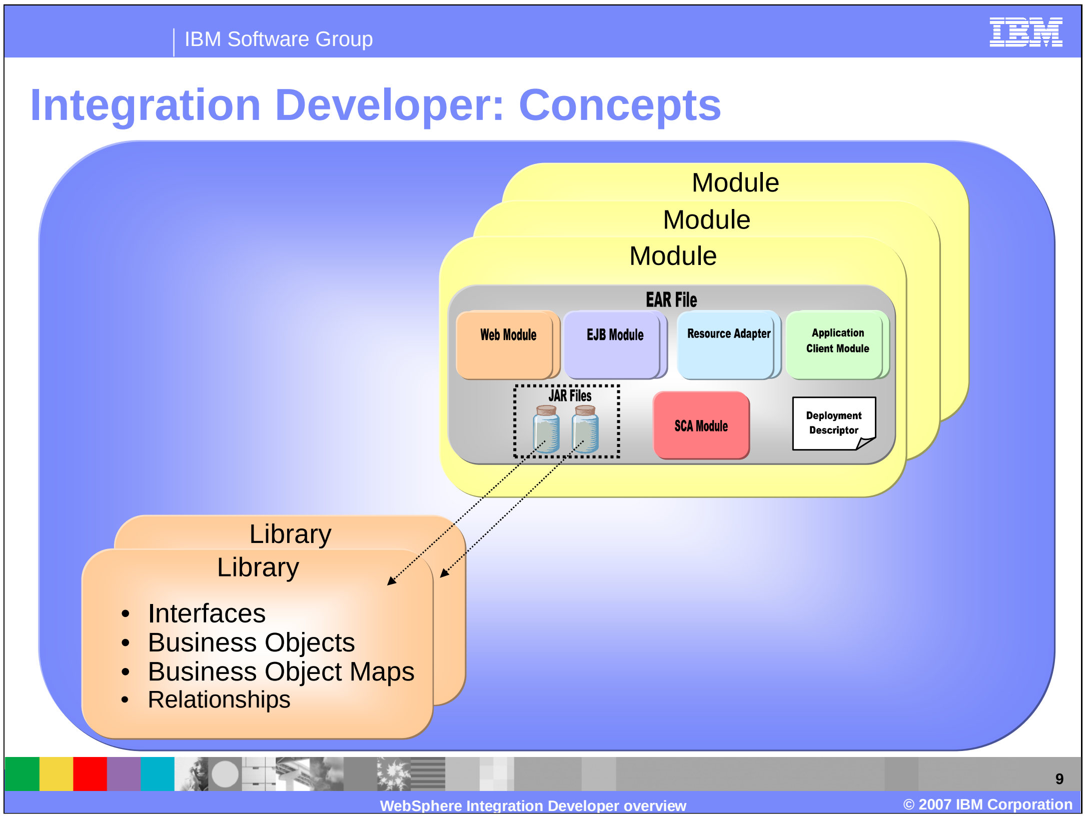
Here is an updated "cake" chart with the WebSphere Integration Developer editors associated with each of their respective components. The adapters are shown as part of the server runtime at the SOA core level.

Section

Concepts

This section will provide a description of some important WebSphere Integration Developer concepts.



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Integration Developer: Concepts

Module

Module

Module

EAR File

Web Module

EJB Module

Resource Adapter

Application Client Module

JAR Files

SCA Module

Deployment Descriptor

Library

Library

- Interfaces
- Business Objects
- Business Object Maps
- Relationships

9

WebSphere Integration Developer overview

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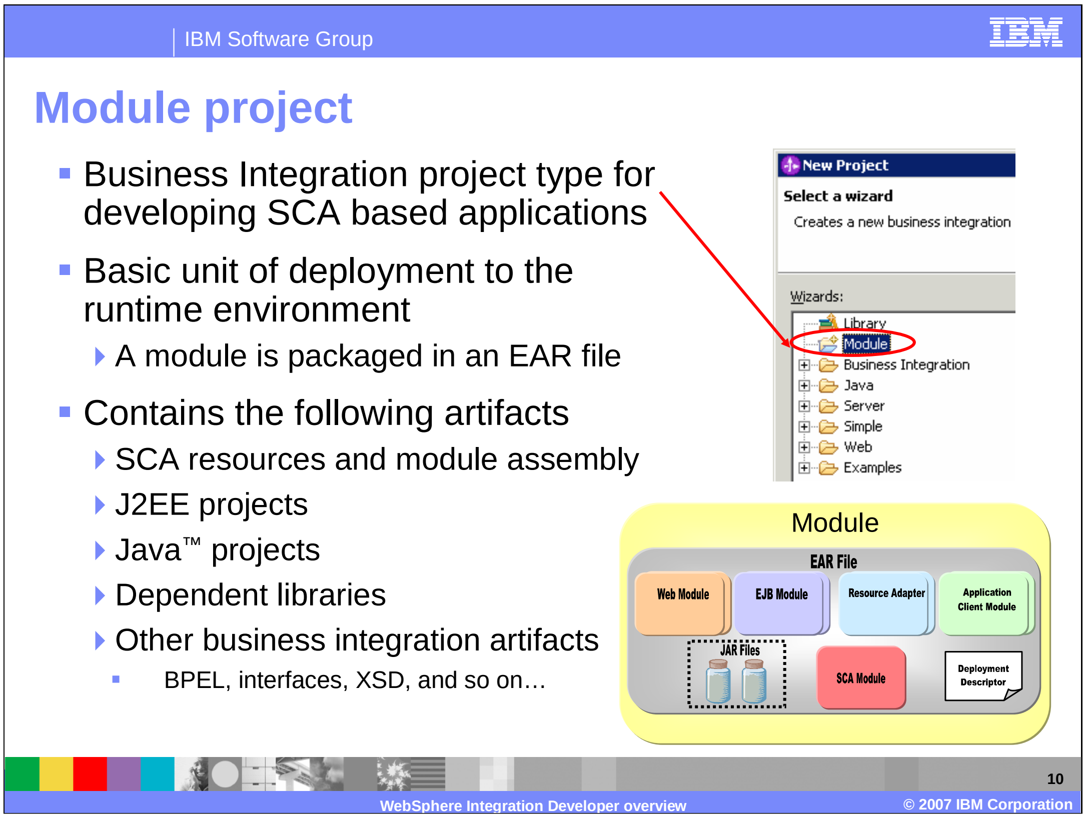
There are two important project types when doing business integration development in WebSphere Integration Developer. A module project represents a basic unit of deployment, and encapsulates SCA resources (SCA Module), J2EE projects, Java projects, and dependant libraries. A Library project is also another type of business integration project. Unlike the module project, a library project is not a deployable unit. The library project holds artifacts that can be shared between multiple modules. It is important to note, however, that the at runtime the Library is not shared. In this case, the library is deployed individually with the module that is dependent upon it.



Module project

- Business Integration project type for developing SCA based applications
- Basic unit of deployment to the runtime environment
  - A module is packaged in an EAR file
- Contains the following artifacts
  - SCA resources and module assembly
  - J2EE projects
  - Java™ projects
  - Dependent libraries
  - Other business integration artifacts
    - BPEL, interfaces, XSD, and so on…

New Project

Select a wizard

Creates a new business integration

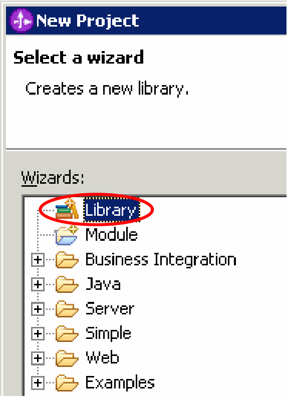
Wizards:

- Library
- Module
- Business Integration
- Java
- Server
- Simple
- Web
- Examples

A module is a business integration project type for developing SCA based applications. A module is a basic unit of deployment to the WebSphere Process Server runtime environment, and as such, is packaged in an EAR file. The ear file contains all the SCA-based artifacts packaged in a JAR file, J2EE projects, such as Web and EJB modules, dependent Java projects, and any dependent Libraries packaged as JAR files. Also included in this project are other business integration artifacts that make up the overall application. This would include BPEL definitions, interface definitions, and XML Schema definitions.

Library project

- Business Integration project type for storing artifacts shared between multiple modules
- Not a deployable unit
- Contains the following artifacts
  - Interfaces
  - Business Objects
  - Business Object Maps
  - Relationships
  - Web services
- Can be added to the dependency list for a module from the dependency editor



New Project

Select a wizard

Creates a new library.

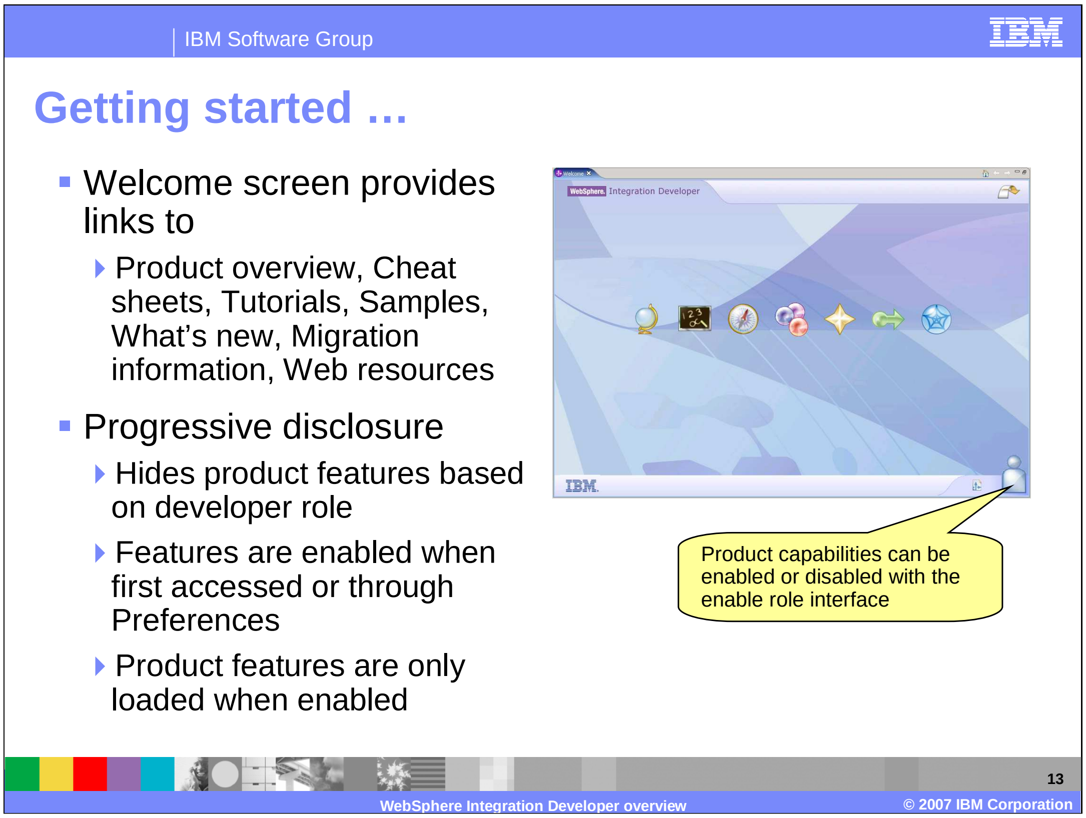
A Library project is a business integration project type used for storing artifacts that are shared between multiple modules. Unlike a module project, a Library project is not a deployable unit to the WebSphere Process Server runtime environment. Another important difference between a Module and Library project is the type of artifacts that can be contained in each project type. Specifically, Library projects only contain interfaces, business objects and graphs, business object maps, and relationships. Library projects do not include other types of business integration resources such as SCA artifacts.

A Library project is created to store artifacts that are shared between module projects. If a module is dependent upon a particular Library project, that project must be added to the dependency list for the appropriate module using the dependency editor.

Section

Integration Developer basics

This section will provide an introduction to the basic WebSphere Integration Developer development environment.



Getting started …

- Welcome screen provides links to
  - Product overview, Cheat sheets, Tutorials, Samples, What's new, Migration information, Web resources
- Progressive disclosure
  - Hides product features based on developer role
  - Features are enabled when first accessed or through Preferences
  - Product features are only loaded when enabled

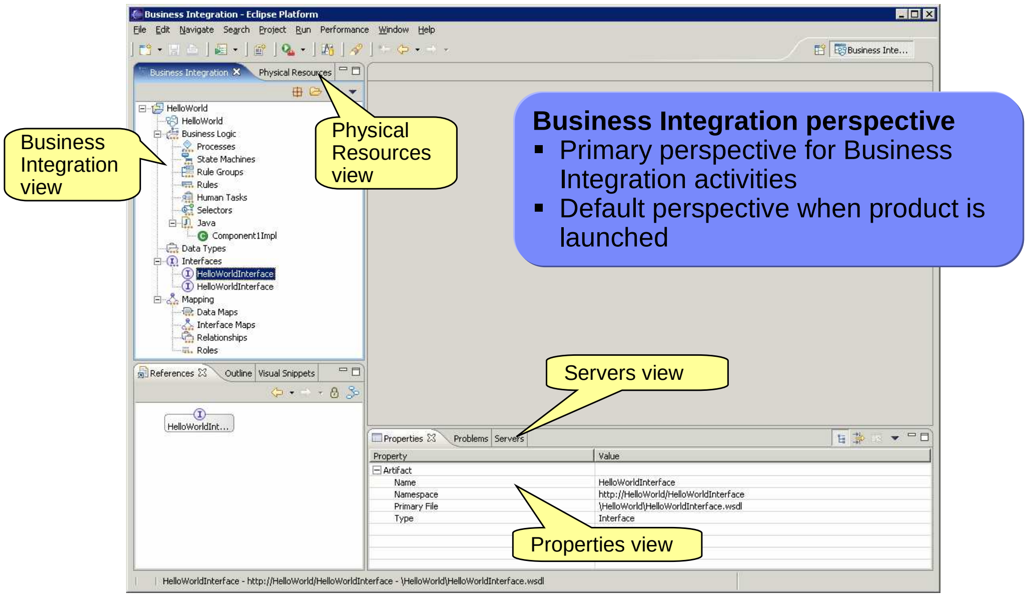
WebSphere Integration Developer
IBM.

Product capabilities can be enabled or disabled with the enable role interface

One of the first things you will notice if you have not used a product based upon Eclipse 3.0.2.5, is the welcome screen that is shown when you start a new workspace. From this screen you can access information about the product overview, cheat sheets, tutorials, samples, new features, migration information, and Web resources. If you close the Welcome screen, you can always open it again by selecting Help > Welcome from the menu bar.

There is another new feature added in Eclipse 3.0 that is important to be aware of. This feature is referred to as progressive disclosure, though you may also hear it associated with the term “Capabilities”. Progressive disclosure is a way to hide certain product features based upon the developers role. For example, if a user is not working on Web services development, it is possible to hide the associated wizards and tools by disabling the Web services development capabilities. Capabilities that are not enabled can be enabled either when the feature is first accessed ,or by enabling the appropriate capability through the Preferences menu. You can find hidden features by selecting the “Show all wizards” check box. Capabilities can be found by selecting Window > Preferences, expand Workbench, select Capabilities, and check the appropriate capabilities that are needed. Note that capabilities are associated with a given workspace. It is important to be aware of progressive disclosure because it might be necessary for you to turn on certain capabilities in order to make sure that the features you typically use during your development activities are visible to you.

Business Integration perspective



Property	Value
Artifact	
Name	HelloWorldInterface
Namespace	http://HelloWorld/HelloWorldInterface
Primary File	\HelloWorld\HelloWorldInterface.wsdl
Type	Interface

HelloWorldInterface - http://HelloWorld/HelloWorldInterface - \HelloWorld\HelloWorldInterface.wsdl

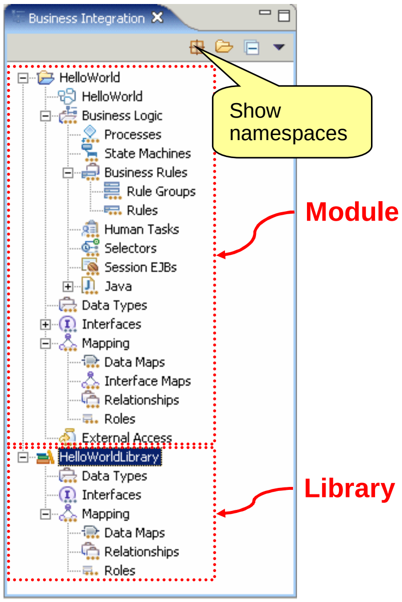
Business Integration perspective

- Primary perspective for Business Integration activities
- Default perspective when product is launched

The primary perspective in WebSphere Integration Developer is the Business Integration perspective. The majority of your business integration work is done from this perspective and it is the default perspective when the product is launched. The screen capture on this slide shows the perspective and highlights several of the important views.

Business Integration view

- Primary view for managing and viewing business integration resources
- Provides logical grouping of resources
    - Artifacts not essential for business integration development are not visible
- Logical resources do not necessarily have a one-to-one relationship with a physical resource



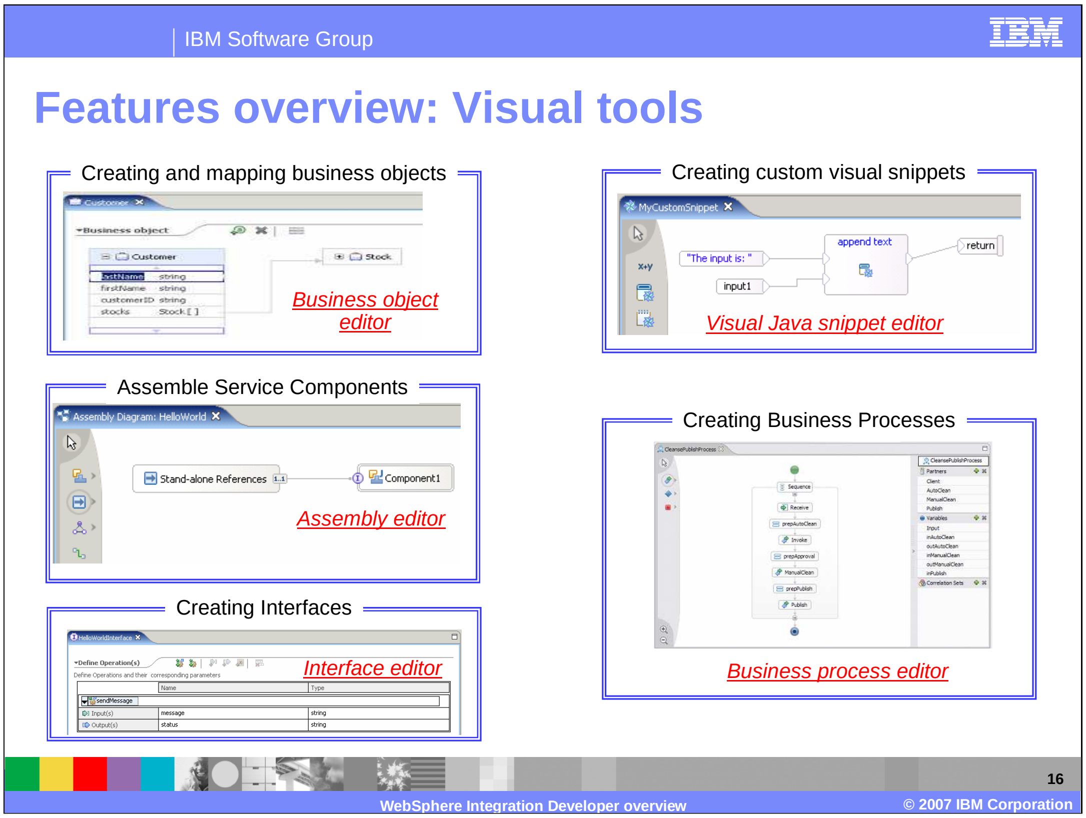
Show namespaces

Module

Library

The primary view in the business integration perspective is the business integration view. This view is used to manage and view all business integration resources. The resources shown in this view provide a logical grouping of resources, and hides artifacts that are not essential for business integration development. It is important to note that this view only shows a logical representation of the resources in the workspace that are related to business integration work, and there is not a one-to-one relationship to physical resources on the file system.

From the screen capture shown on this slide, notice that both Module and Library projects are visible from the Business Integration view. Also note that the types of resources that can be added to a Library project are a subset of those that can exist in a Module project.



Features overview: Visual tools

Creating and mapping business objects

Business object editor

Creating custom visual snippets

Visual Java snippet editor

Assemble Service Components

Assembly editor

Creating Business Processes

Business process editor

Creating Interfaces

Interface editor

The next two slides provide an overview of the primary features and associated visual tools found in WebSphere Integration Developer.

Business Object Editor: The business object editor is used to build and edit Business Objects and Business Graphs. This editor is described in the Business Object presentation.

Assembly Editor: The assembly editor is the primary editor for building and assembling SCA applications. This editor is described in the SCA presentation.

Interface Editor: The interface editor is used to build WSDL port-type interfaces used to define some SCA service components.

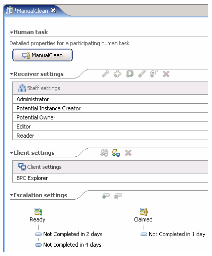
Visual Java Snippet Editor: This editor is used to compose custom snippets visually.

Process Editor: The process editor allows developers to visually create and manipulate business processes. This editor will be discussed in the Business Process Choreography presentation.

Features overview: Visual tools (cont.)

Defining human tasks

Human task editor



*ManualClean

Human task

Detailed properties for a participating human task

ManualClean

Receiver settings

Staff settings
Administrator
Potential Instance Creator
Potential Owner
Editor
Reader

Client settings

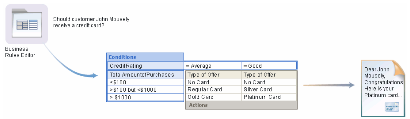
Client settings
BPC Explorer

Escalation settings

Ready
- Not Completed in 2 days
- Not completed in 4 days

Claimed
- Not Completed in 1 day

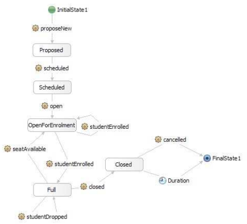
Defining business rules



Decision table editor
Ruleset editor
Rule group editor

Creating a business state machine

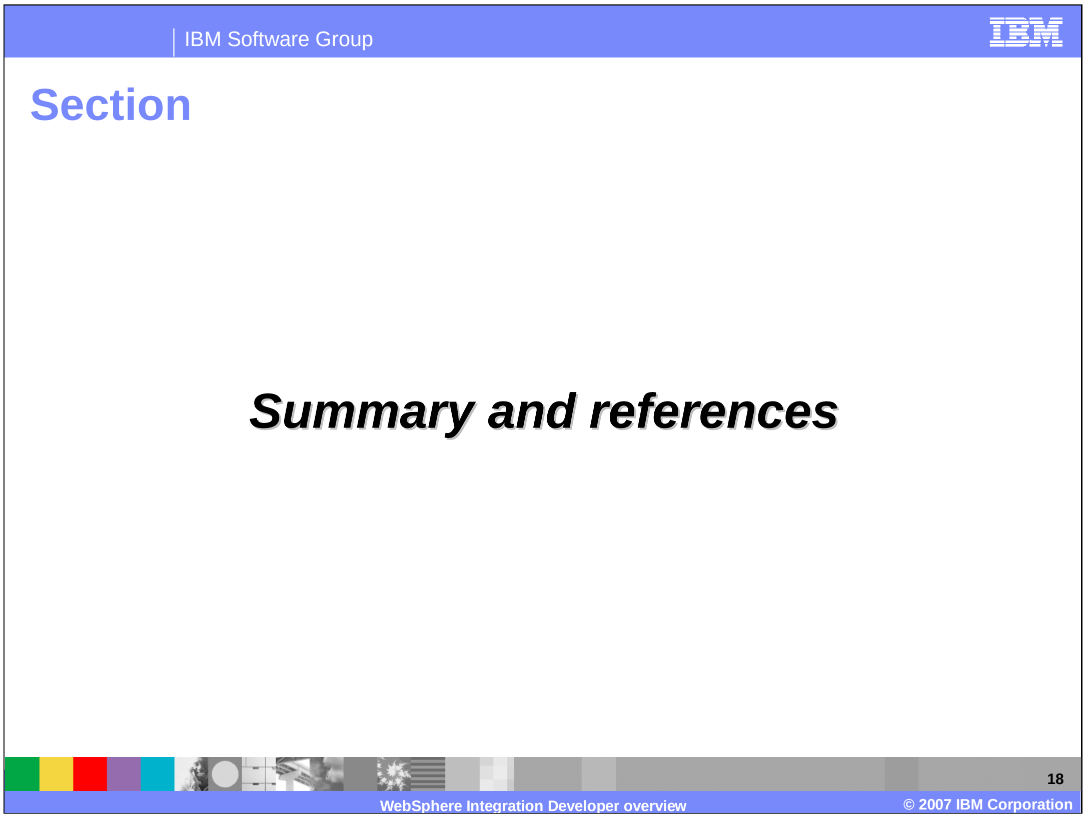
Business state machine editor



Human Task Editor: The Human Task editor allows developers to visually compose services that interact with human participants. This editor is described in the Human Task Manager presentation.

Business State Machine Editor: Allows developers the ability to visually build business state machines. This editor is described in the Business State Machine presentation.

Business rules editors: There are a number of editors associated with building business rules, including the Decision Table Editor, Ruleset Editor, and Rule Group editor.



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Section

Summary and references

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WebSphere Integration Developer overview

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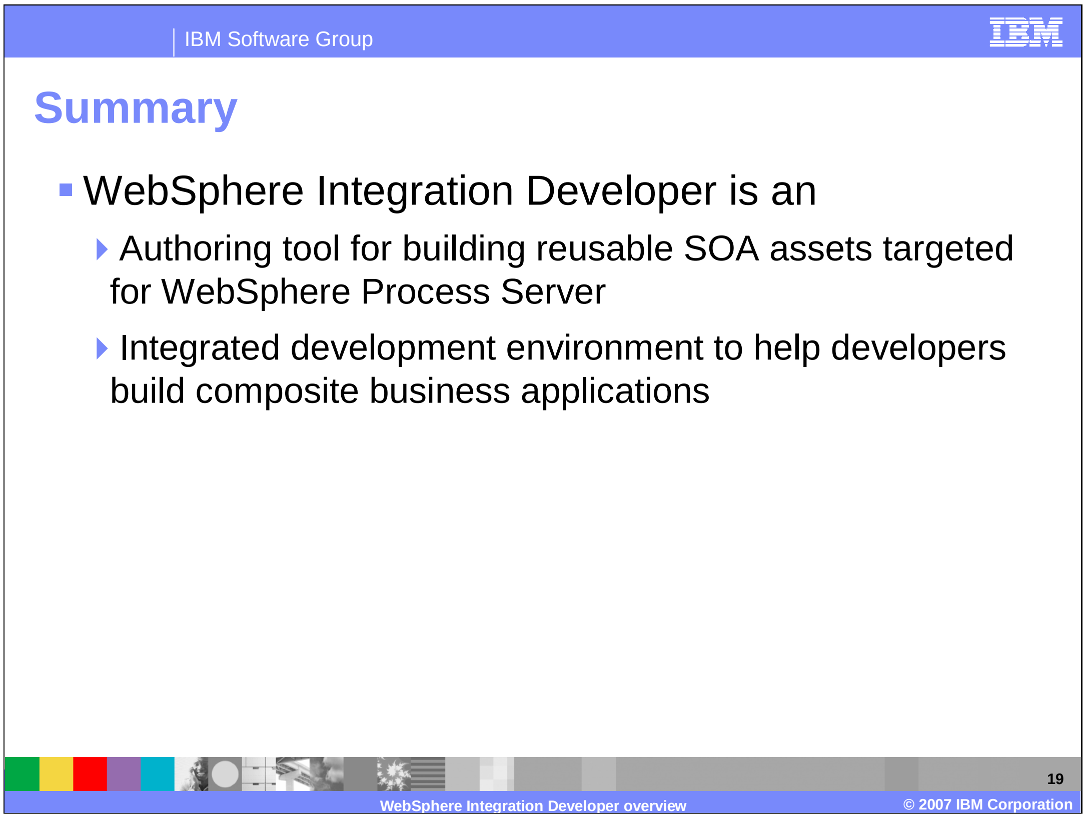
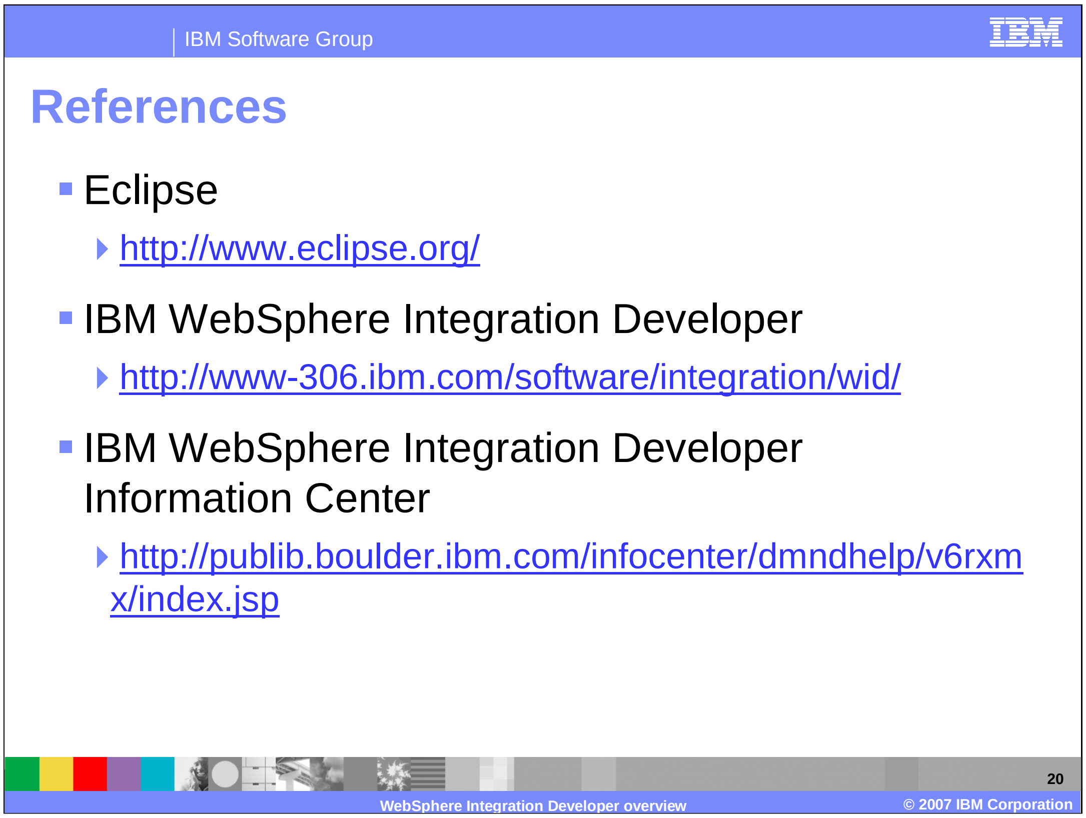
This section will provide a summary and some references for this overview presentation of WebSphere Integration Developer



Summary

- WebSphere Integration Developer is an
  - Authoring tool for building reusable SOA assets targeted for WebSphere Process Server
  - Integrated development environment to help developers build composite business applications

WebSphere Integration Developer version 6 is the authoring tool for building reusable SOA assets targeted for WebSphere Process Server. Specifically, the tools in WebSphere Integration Developer are designed for building SCA based applications.



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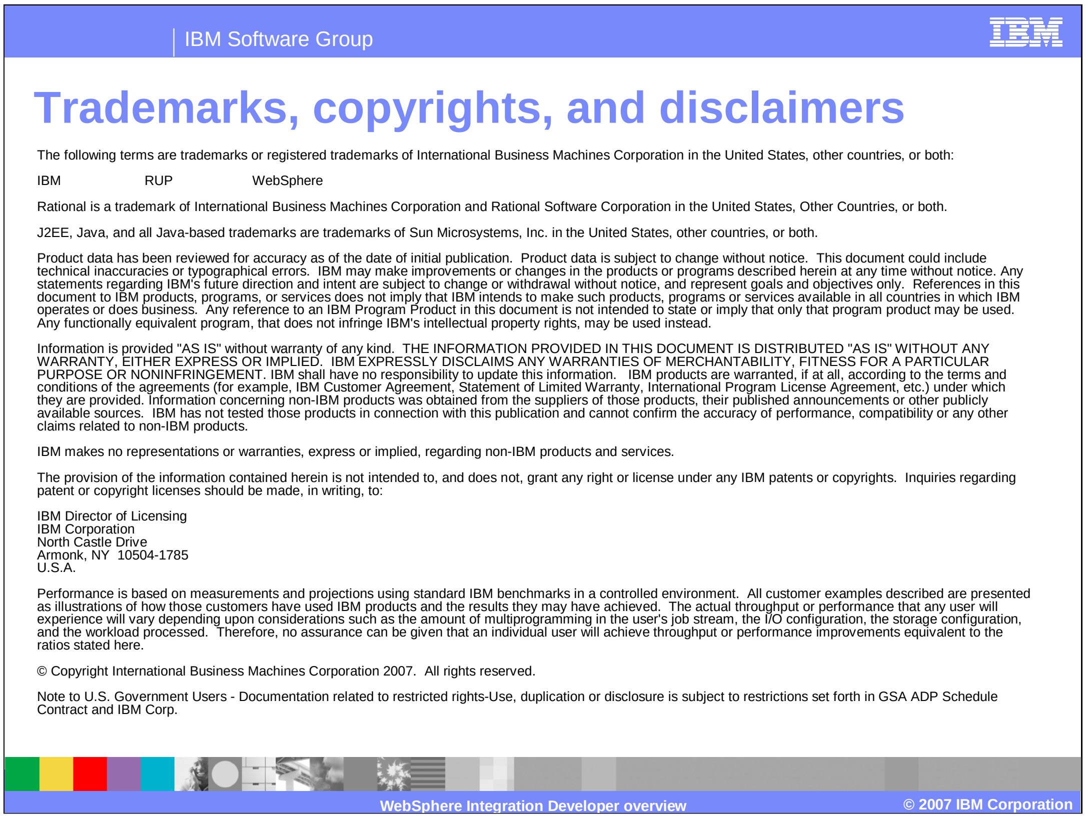
  - http://www.eclipse.org/
- IBM WebSphere Integration Developer
  - http://www-306.ibm.com/software/integration/wid/
- IBM WebSphere Integration Developer Information Center
  - http://publib.boulder.ibm.com/infocenter/dmndhelp/v6rxmx/index.jsp

20

WebSphere Integration Developer overview

For more information about the basis for WebSphere Integration Developer, the Eclipse project, visit the URLs shown here. For more information on WebSphere Integration Developer itself, see the product page at the listed address.



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