



WebSphere Education



Exporting from WebSphere Business Modeler

Unit 23

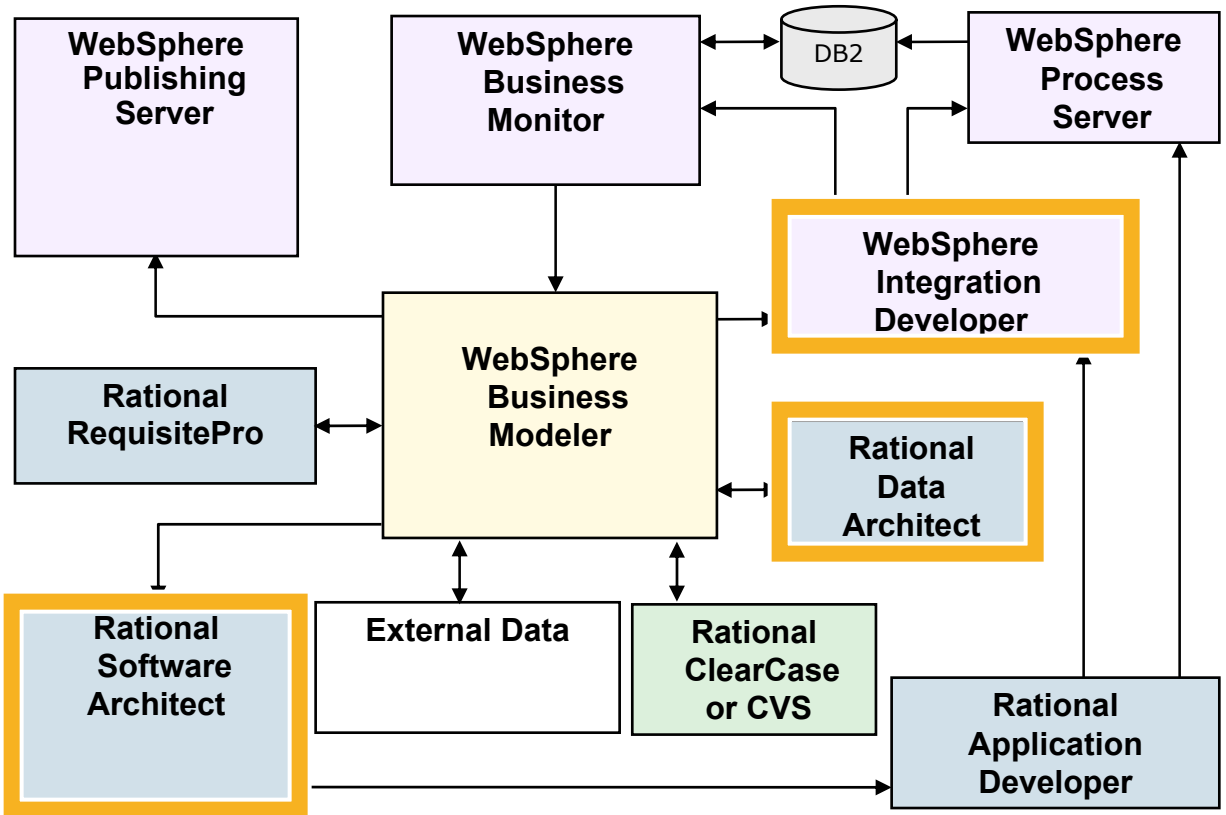


Unit objectives

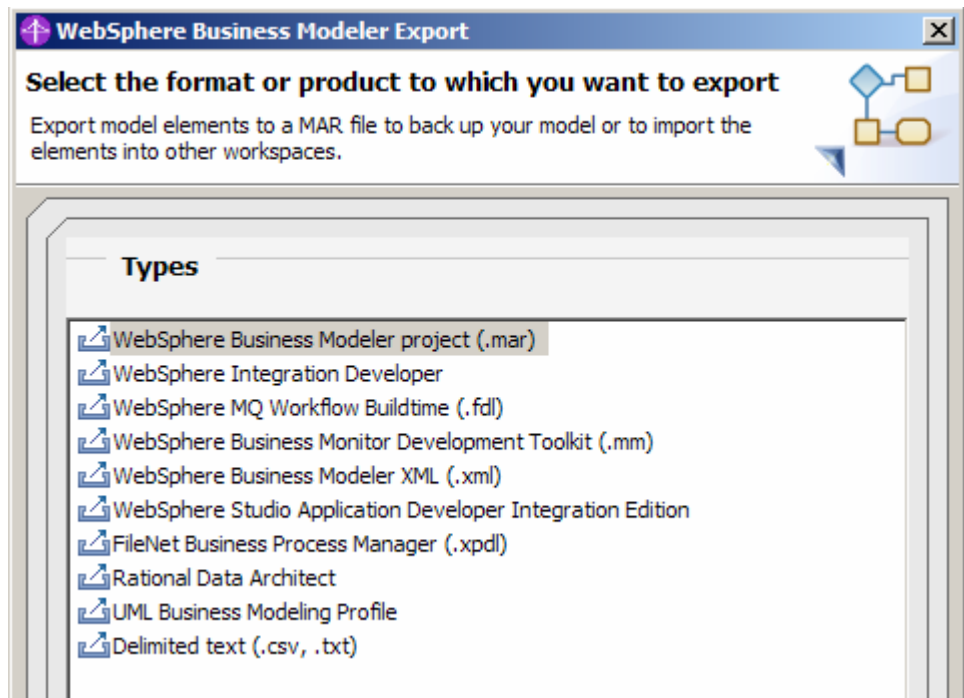
After completing this unit, you should be able to:

- Describe the process for exporting the following types of files from WebSphere Business Modeler:
 - WebSphere Business Modeler project
 - WebSphere Integration Developer
 - WebSphere MQ Workflow buildtime
 - WebSphere Business Monitor Development Toolkit
 - WebSphere Business Modeler XML
 - WebSphere Studio Application Developer Integration Edition
 - FileNet Business Process Manager
 - Rational Data Architect
 - UML Business Modeling Profile
 - Delimited text

Exporting data from Modeler



Modeler export



Exporting models to different formats (1 of 2)

- WebSphere Business Modeler project
 - Exports the selected project or elements into a MAR file
- WebSphere Integration Developer
 - Exports Service Component Architecture (SCA) artifacts and Business Process Execution Language (BPEL), Web Services Description Language (WSDL), and XML Schema Definition (XSD) files that can be imported into WebSphere Integration Developer to create an implementation for WebSphere Process Server
- WebSphere MQ Workflow Buildtime
 - Exports the selected project or element into a FlowMark Definition Language (FDL) file
- WebSphere Business Monitor Development Toolkit
 - Exports to an MM (monitor model) file and to two or more SVG files
- WebSphere Business Modeler XML
 - Exports the selected project or element into an XML file

Exporting models to different formats (2 of 2)

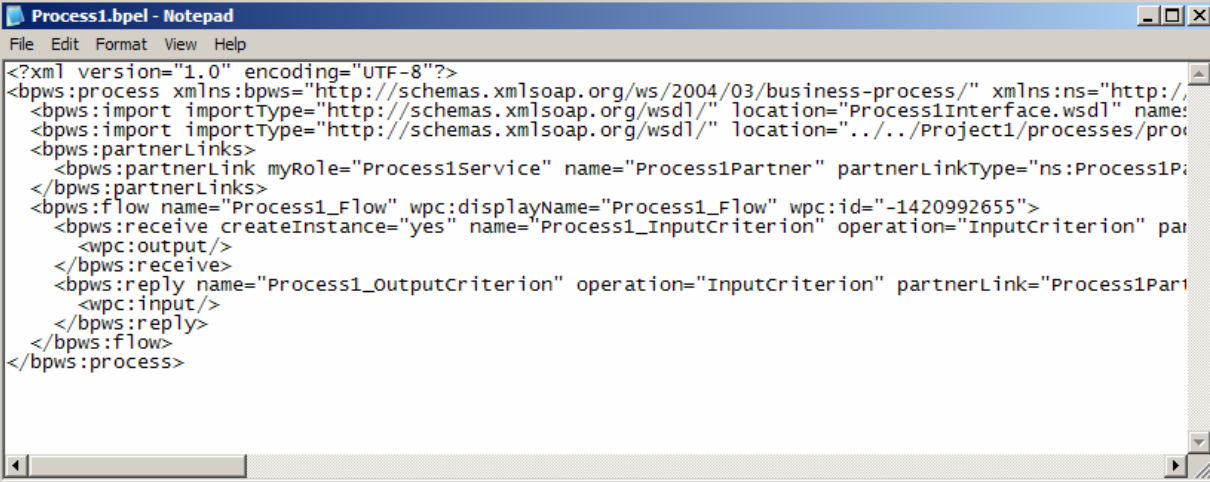
- WebSphere Studio Application Developer Integration Edition
 - Exports the selected project or elements into BPEL, WSDL, and XSD files. These files can then be imported into IBM WebSphere Studio Application Developer Integration Edition.
- FileNet Business Process Manager
 - Exports the selected process or process catalog as XPD files. These files can then be opened with the Process Designer of FileNet P8 to create implementations for the FileNet P8 runtime environment.
- Rational Data Architect
 - Exports the selected business objects into XSD files. These files can then be imported into Rational Data Architect through the use of an XML to LDM transform.
- UML Business Modeling Profile
 - Exports the selected project or elements into a UML 1.4 XMI 1.1 file.
- Delimited text
 - Exports the selected project or element into a text file.

WSBPEL: Business Process Execution Language

- WSBPEL is also referred to as BPEL.
 - Industry standard for Web services choreography
 - Published by IBM, Microsoft, and BEA (plus SAP and Siebel)
- Language describes simple or complex exchanges that characterize business partner interactions.
- Defines control elements for workflow.
- Creates a fully-executable, portable script.
- Modeler can transform process models to WebSphere Integration Developer (WID). It includes files in three formats: BPEL (Business Process Execution Language), WSDL (Web Services Description Language), and XSD (XML Schema Definition). These files import to WID to develop executable application code.

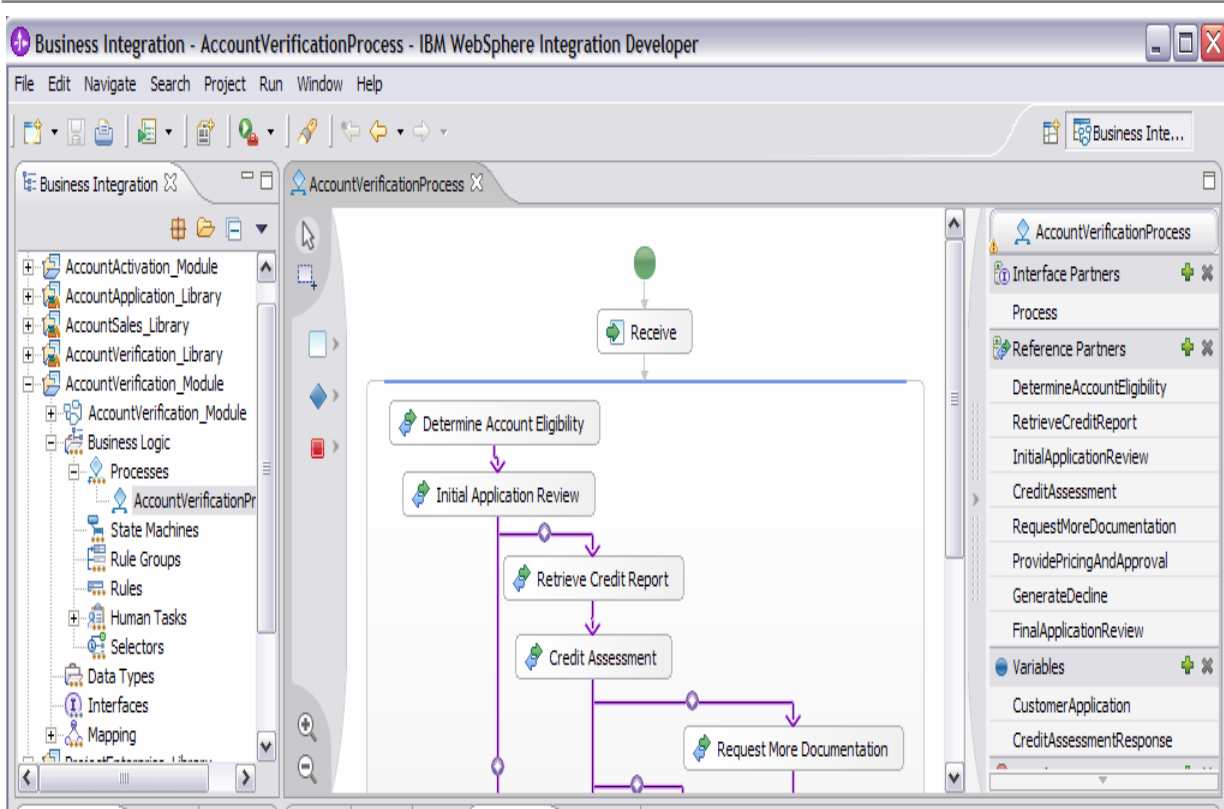
Export to BPEL

- For each process, one BPEL and one WSDL file are created
 - If the process references a global process, task, or services, additional WSDL files are created for each
- XSD files are created for business items used within the process
- The generated files are placed in subdirectories based on the catalog hierarchy of the process and business items
- Service specifics (ports) are added in the runtime environment



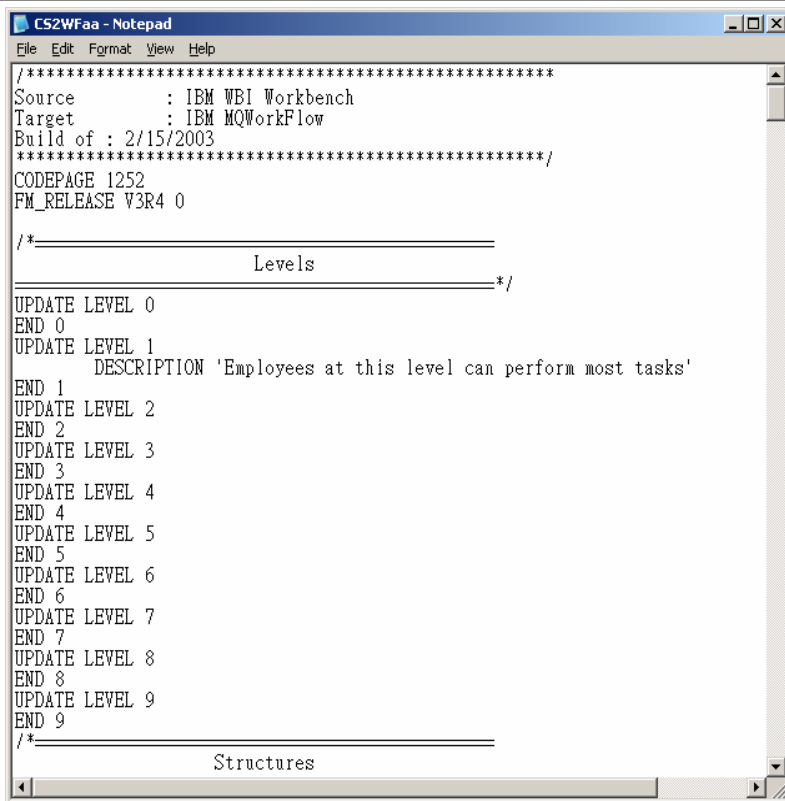
```
<?xml version="1.0" encoding="UTF-8"?>
<bpws:process xmlns:bpws="http://schemas.xmlsoap.org/ws/2004/03/business-process/" xmlns:ns="http://
  <bpws:import importType="http://schemas.xmlsoap.org/wsdl/" location="Process1Interface.wsdl" name:
  <bpws:import importType="http://schemas.xmlsoap.org/wsdl/" location="../../../Project1/processes/pro
  <bpws:partnerLinks>
    <bpws:partnerLink myRole="Process1Service" name="Process1Partner" partnerLinkType="ns:Process1P
  </bpws:partnerLinks>
  <bpws:flow name="Process1_Flow" wpc:displayName="Process1_Flow" wpc:id="-1420992655">
    <bpws:receive createInstance="yes" name="Process1_InputCriterion" operation="InputCriterion" par
    <wpc:output/>
  </bpws:receive>
  <bpws:reply name="Process1_OutputCriterion" operation="InputCriterion" partnerLink="Process1Part
    <wpc:input/>
  </bpws:reply>
</bpws:flow>
</bpws:process>
```


BPEL diagram in IBM WebSphere Integration Developer



FDL: FlowMark Definition Language

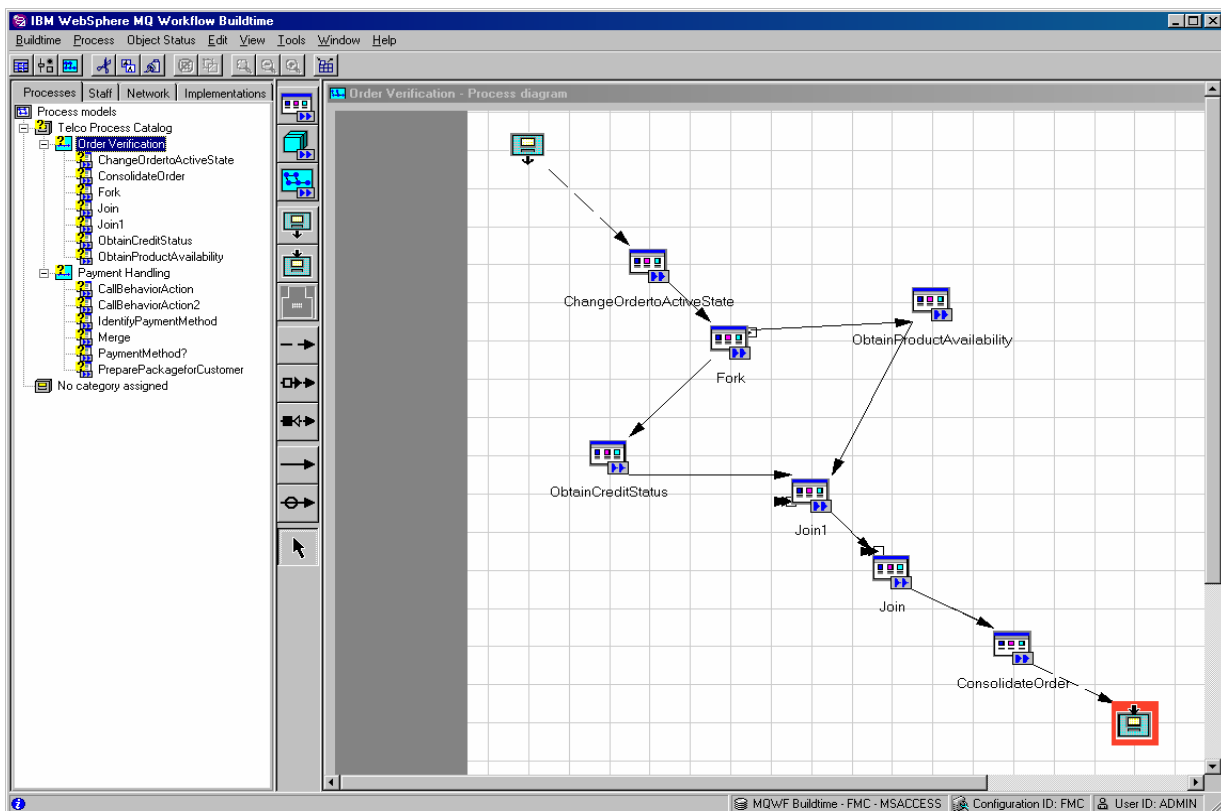
- FDL:
 - Defines all possible paths through the Business Process including the rules that define which paths should be taken and all actions that need to be performed
- WebSphere Business Modeler continues to export processes as FDL for import into WebSphere MQ Workflow.
- Use of FDL as a modeling language is superseded by WSBPEL.



```
CS2WFaa - Notepad
File Edit Format View Help
/*****
Source      : IBM WBI Workbench
Target      : IBM MQWorkflow
Build of    : 2/15/2003
*****/
CODEPAGE 1252
FM_RELEASE V3R4 0

/*=====
                                   Levels
=====*/
UPDATE LEVEL 0
END 0
UPDATE LEVEL 1
      DESCRIPTION 'Employees at this level can perform most tasks'
END 1
UPDATE LEVEL 2
END 2
UPDATE LEVEL 3
END 3
UPDATE LEVEL 4
END 4
UPDATE LEVEL 5
END 5
UPDATE LEVEL 6
END 6
UPDATE LEVEL 7
END 7
UPDATE LEVEL 8
END 8
UPDATE LEVEL 9
END 9
/*=====
                                   Structures
=====*/
```

Transformation into MQ Workflow Buildtime



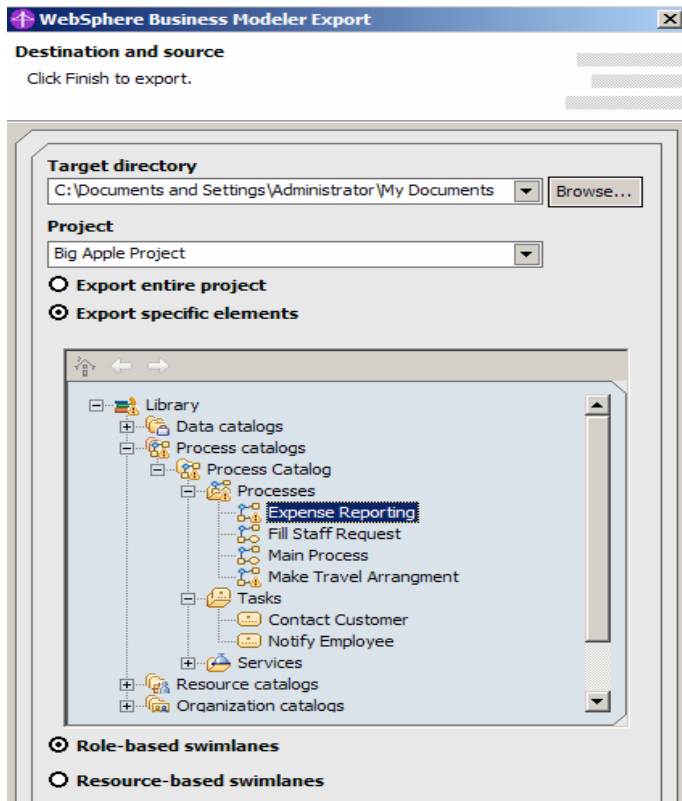
FDL elements not supported

The following FDL elements are not generated when exporting from Modeler to FDL files:

- Process attributes
 - Global container
 - Process administrator
 - Duration of process
 - Control setting (Control tab settings on process: audit trail, notification mode, etc)
 - Activity setting (Activity tab settings on process)
- Program/Process activity attributes
 - Execution setting (Execution tab setting on program/process activity: execution server, and so on)
 - Expiration
 - Tools
 - Notification
 - Control setting (Control tab settings on program/process activity)
 - System (on process activity)
- Connector
 - Data loop connector
 - Default connector
 - Default data connector (generated only for an empty activity)
- Network
 - Anything related to network topology (such as UPES or queue manager) is not supported
- Program
 - Programs are not supported (an empty program is generated for any program activity that is generated)
- Visuals
 - Visual information is not exported

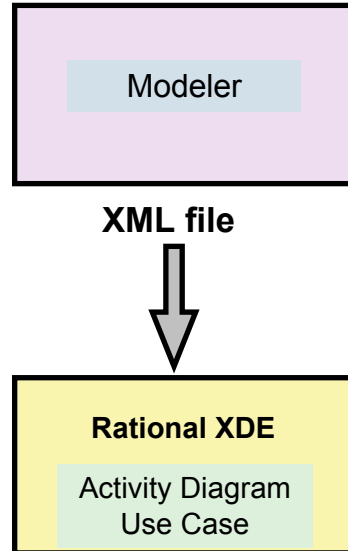
Export UML from Modeler

- Either export the entire project or specific objects.
- Two options for export:
 - Role-based swimlanes partitions in the UML Activity Graph to be created for each role
 - Or, Resource-based swimlanes partitions in the UML Activity Graph to be created for each resource
- After export, an XML file will be created using the name of the project, and the file extension is XML.
- The XML file can be imported into Rational Software Architect.



Export to UML for application development

- Export models to UML file which can be imported into IBM Rational XDE.
- Modeler elements are mapped to UML constructs and saved to an XML file.
- Each data definition is mapped to a UML Class, and each process is mapped to a UML Use Case and associated with a UML Activity Graph to represent the process flow.



Display activity diagram in Rational XDE

Modeling - Rational XDE

File Edit Navigate Search Project ClearCase Modeling Diagram Format Tools Window Help

Toolbox

- UML Class
- UML Component
- UML Deployment
- UML Use Case
- UML Activity
- Pointer
- Activity
- Transition
- Self Transition
- Decision
- Initial State
- Final State
- Swimlane
- Synchronization
- Subactivity State
- ObjectFlow State
- Proxy State
- Stub State
- Note
- Note Attachment
- Constraint
- UML Statechart
- UML Collaboration
- UML Sequence
- Geometric Shapes
- General

Model Explorer

Element Type

- Originate Loan As IsState Model
- Diagram1
- Originate Loan As Is1
- TOP
- Loan Application
- Collect Customer Address
- Forward Call
- Hand Customer Loan Application
- «process» Interview Applicant As Is
- Mail Loan Application
- Schedule Interview
- Schedule Interview01
- Review Application for Completeness
- Application Complete?

Navigator Model Explorer

Properties

Originate Loan As Is1 <Diagram>

Property	Value
Print	
Dimension	0 - Inches
MarginBottom	1
MarginLeft	1
MarginRight	1
MarginTop	1
Orientation	0 - Portrait
PaperSize	0 - Letter (8.5 x 11...)
ShowFooter	True
ShowHeader	True
UML	
(Name)	Originate Loan As Is1
Alias	
Collections	
IsSpecification	False
Stereotype	

Model Documentation

Tasks Model Documentation Output

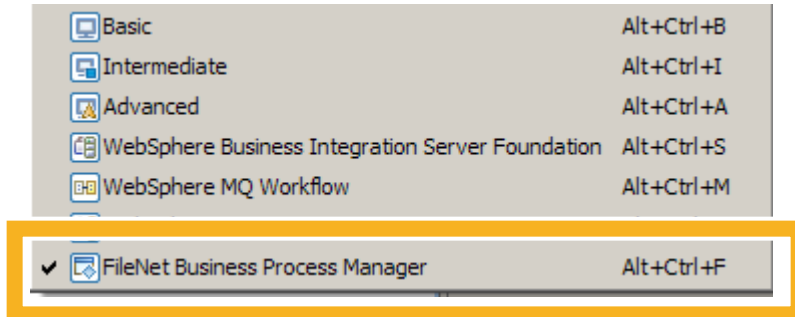
Ready

```
graph TD
    subgraph Customer_Service_Clerk [Customer Service Clerk]
        Review[Review Application for Completeness]
        Schedule01[Schedule Interview01]
        Schedule[Schedule Interview]
        Collect[Collect Customer Address]
        Hand[Hand Customer Loan Application]
    end
    subgraph Mail_Clerk [Mail Clerk]
        MailLoan[Mail Loan Application]
    end
    subgraph Operator [Operator]
        Forward[Forward Call]
    end
    Interview[«process» Interview Applicant As Is]
    LoanApp((Loan Application))


    Review --> Schedule01
    Schedule01 --> Schedule
    Schedule --> Collect
    Collect --> Hand
    Hand --> MailLoan
    MailLoan --> Forward
    Forward --> Interview
    Interview --> LoanApp
```

FileNet Business Process Manager Mode

- Filters out the ability to add the unsupported process elements
 - Observers
 - Timers
 - Notification broadcasters
 - Notification receivers
 - Global tasks
 - Global services
 - Global repositories
 - Business services
- Pre-existing unsupported elements marked as errors
- Expressions required for all decision choices

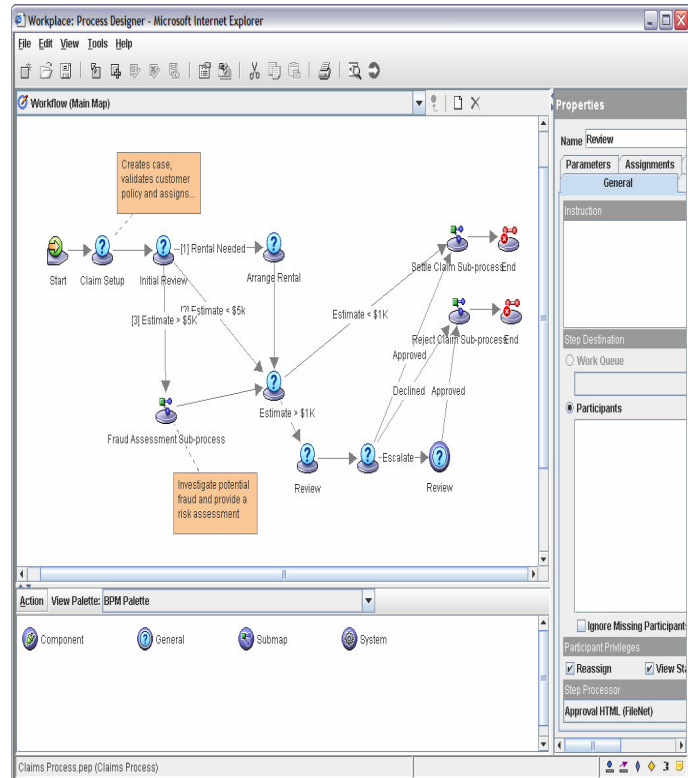


Modeler: Integration with FileNet

- Enables user to create processes in WebSphere Business Modeler and then import them into FileNet Business Process Manager for further refinement and execution.
- FileNet Business Process Manager modeling mode: 
 - Supports creating FileNet-compatible process models that can be exported into the FileNet Business Process Manager by validating processes
 - Marks elements that do not have an equivalent in FileNet.
 - Exports processes as XPD and XSD files which can then be imported into the FileNet Business Process Manager
- User should have extensive experience using WebSphere Business Modeler Advanced and FileNet Business Process Manager.

IBM FileNet Business Process Manager

- Standard-based process modeling for business
 - Supports Business Process Modeling Notation (BPMN)
 - Read and produce process definition in XML Process Definition Language (XPDL) format
- 100% Web-based tool
 - easily accessible while minimizing deployment costs
- Process Simulation
 - based on real execution data or assumed scenarios
- Integrated content management
 - Process flows are primarily document-driven
- Versioning and collaboration support
 - Supports rapid deployment of improved processes while minimizing the impact on normal operations



IBM FileNet Business Process Manager: Process designer

http://hqdemo1:9080 - Workplace: Process Designer - Microsoft Internet Explorer

File Edit View Tools Help

Workflow (Main Map)

```
graph LR; LaunchStep -- "[1]" --> CreditApproval; CreditApproval --> VOE; VOE --> EvaluateLoanApplication[Evaluate Loan Application]; EvaluateLoanApplication --> Approved; EvaluateLoanApplication --> AddMissingInformation[Add Missing Information]; AddMissingInformation --> Rejected;
```

LaunchStep Credit Approval VOE Evaluate Loan Application Approved Add Missing Information Rejected

Properties

Name LaunchStep

General Parameters Assignments Routing

Instruction

Step Processor

Approval Launch HTML (FileNet)

Import XPDL file into IBM FileNet Process Designer

Action View Palette: BPM Palette

Component General Submap System

Loan Application.xpdl (Loan Application)

Delimited text export

- Elements that can be exported
 - Business items
 - File name of business item adds "_bi.txt"
 - Business item templates
 - File name of business item template adds "_bit.txt"
- Attributes that are not supported:
 - Expressions (used in rules and in default values)
 - Complex types
- Roles are referred to as "qualifications" in the exported delimited text files.

Checkpoint: Exporting from Modeler

Your instructor will review these questions with you as a group. If time permits, the instructor may provide you time to answer the questions on your own before the group discussion.

1. Name some of the export formats supported by WebSphere Business Modeler.
2. Name some of the delimited text attributes that are not supported by the Modeler export.

Checkpoint solutions: Exporting from Modeler

1. WebSphere Business Modeler project
WebSphere Integration Developer
WebSphere MQ Workflow buildtime
WebSphere Business Monitor Development Toolkit
WebSphere Business Modeler XML
WebSphere Studio Application Developer Integration Edition
FileNet Business Process Manager
Rational Data Architect
UML Business Modeling Profile
Delimited text
2. Expressions (used in rules and in default values), and complex types

Unit summary

Having completed this unit, you should be able to:

- Describe the process for exporting the following types of files from WebSphere Business Modeler:
 - WebSphere Business Modeler project
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 - UML Business Modeling Profile
 - Delimited text

Exercise overview

In this exercise you will:

- Switch from intermediate mode to WebSphere Integration Developer mode
- Examine and correct errors
- Export your FMC project in a format that can be imported into WebSphere Integration Developer