



IBM Software Group

WebSphere® Business Modeler V6.1.2

eForms – Simulation and storyboarding



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This education module will discuss the new support for human centric modeling in WebSphere Business Modeler V6.1.2, simulation of human centric business processes and story boarding.

Modeling human centric business processes

- Two new features based on Lotus® eForms
 - ▶ Storyboarding
 - The ability to step through a series of user interface forms
 - A semi-manual process
 - Index to any form in the business process
 - A quick and easy way to gather user requirements and validate the business process flow
 - A new 'storyboarding view' is provided
 - ▶ Simulation of human centric business process
 - Data driven, based on predefined inputs and real time user interactions



There are two new features with WebSphere Business Modeler V6.1.2 that help when modeling human centric business processes.

Storyboarding is a way to validate the flow of the user-interface using the eForms. It's a way to display the forms in any arbitrary order. It's very useful in gathering the system requirements and validating them with your stakeholders

Simulation of a human centric business process is completely different. With simulation, the WebSphere Business Modeler simulation engine is used and the path through the business process is determined by the data provided on the inputs. During the course of the simulation, whenever a human task is navigated to, the simulation pauses and the associated eForm is presented. Data is entered into the form and then the simulation continues. The data that is entered is then used as part of the simulation. The simulation is driven by the data.

Requirements

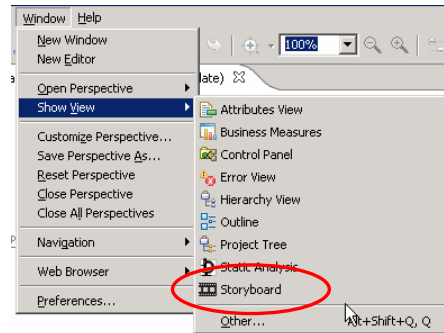
- Lotus Forms Viewer 3.0 or Designer 3.0
 - ▶ Designer is required if you want to export the default forms to be 'beautified' by a professional Lotus Forms Designer
- WB Modeler 6.1.2
- A business process that has human tasks and associated eForms



Lotus Forms Viewer or Designer 3.0 is required for the storyboarding or human centric simulation. There must be an eForm associated with the human task.

Storyboards

- To get started you'll need a business process with human tasks and forms
 - ▶ Remember the output forms
- Next add the storyboard view to your workspace.
- Create a simulation snapshot
- Switch to the storyboard view



The storyboarding feature requires a business process with some human tasks and a simulation snapshot. The simulation snapshot is required but the simulation engine is not used.

The storyboard view is not part of the workspace by default and must be manually added to the workspace.

Creating a new storyboard

Sequence	Human Task	Input Form	Output Form
<input checked="" type="checkbox"/>	1 Approve Executive Application	Approve Executive	Approve Executive
<input checked="" type="checkbox"/>	2 Approve Standard Application	Approve Standard	Approve Standard
<input checked="" type="checkbox"/>	3 Four Eye Approval	Second Level Approval	Second Level Approval

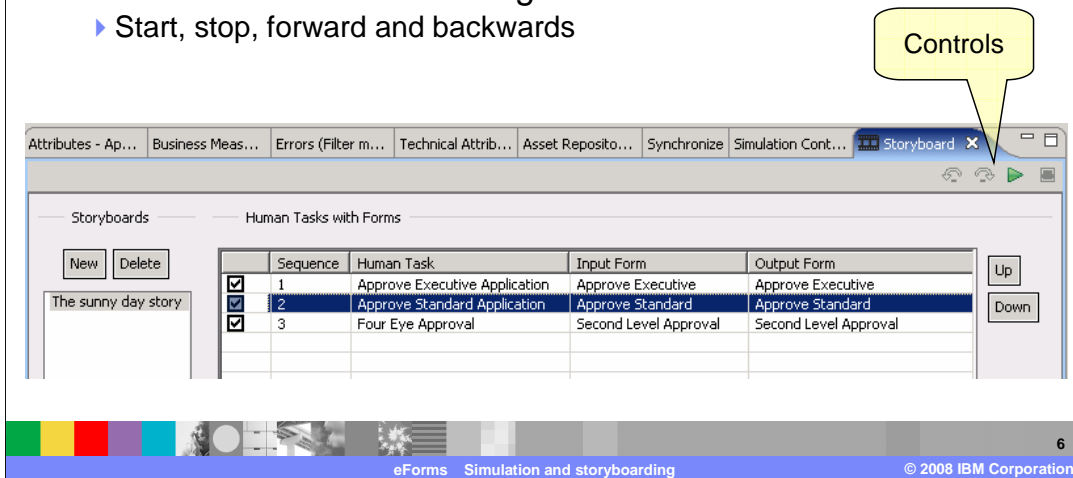
Selecting the new button will populate the table with all of the forms in the current simulation snapshot.

Notice the check boxes and the sequence number. What you can't see is the start run button on the right.

The name of the storyboard can be changed by directly editing the name. You can create as many different storyboards as you need. Each one storyboard represents a specific sequence of forms.

Before starting the story

- You can select which forms you want to be in the story by using the check box
- You can change the order with the up and down buttons
- The basic controls on the right are...
 - ▶ Start, stop, forward and backwards



Select the forms you want and then use the up and down buttons to arrange them in the sequence you want.

Notice the controls in the upper right part of the storyboard view.

Running the story

The screenshot displays the IBM eForms simulation interface. On the left, a process diagram shows two tasks: 'Approve Executive Application' and 'Approve Standard Application'. The 'Approve Executive Application' task is highlighted with a blue arrow. On the right, an 'Input/Output Form' is displayed with fields for Applicant, SSN, LastName, FirstName, MiddleInitial, AptNo, and StreetAddress. The 'Approve Executive' form is highlighted in yellow. At the bottom, a storyboard table lists the sequence of forms, with the first row highlighted in blue. A red circle highlights the navigation buttons (back, forward, stop) in the storyboard pane.

Sequence	Human Task	Input Form	Output Form
1	Approve Executive Application	Approve Executive	Approve Executive
2	Approve Standard Application	Approve Standard	Approve Standard
3	Four Eye Approval	Second Level Approval	Second Level Approval

Pressing the start button will open up the first form in the sequence. You can enter data into the form but the data is not propagated from one form to the next.

The human task associated with the currently displayed input/output form is highlighted in the process diagram on the upper left.

The blue arrow in the bottom pane, indicates the currently displayed form.

The previous and next controls are used to step through the forms.

Data driven simulations



- Uses the input data to drive the simulation
- Requires a little more setup than the storyboard
- Issues with managing the input data for large complex objects
 - ▶ Cannot move the data from one simulation snapshot to another
 - ▶ Can be managed by creating global instance data
- Can save the data associated with a given eForm in a snapshot



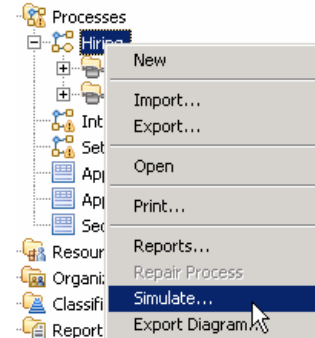
Simulation of human centric business processes is driven by the data input to the human task, using the eForm.

To use this feature you need to have human tasks with associated eForms.

When filling out the form, only the fields that are used to control the process navigation need to be filled out. The data entered into the form can be saved and reused for subsequent simulations but the data cannot be shared between the simulation snapshots. To manage complex forms with a lot data you can create global instance data and use associate the instance data with the form.

Getting started with human centric simulations

- Before going too far, too fast, make sure you have the basic default eForms you need
 - ▶ Remember the output forms
- Associate proper resources to the *primary owner*
- Assign times to the tasks
- Create the simulation snapshot
- Ensure that you selected all the components you need and want
- Validate the terminators
- Typical snapshot creation



To run a simulation of a human centric business process you do not need to have fancy eForms. The default forms will fulfill the minimum requirement.

The human task must have a primary owner assigned to it. At this point you'll probably want to create the human or staff resources for your organization.

The duration of the task must be set to something other than the default. If there is no time element assigned then the token passing through the simulation of the business process will be out of synch with the expected behavior.

Once the human resources and the task durations have been set, create the simulation snapshot.

Simulation configuration

The screenshot displays the IBM eForms Simulation configuration interface. The top portion shows a process flow diagram with the following steps:

- Input: Application
- Business Rule: Check Grade
- Decision: 10.0% Yes / 90.0% No Executive Position?
- Parallel Paths: Approve Executive Application and Approve Standard Application

The bottom portion shows the 'Simulation Attributes' panel with the following settings:

- General tab selected
- Inputs: 365, 0, 0, 0, 0
- Maximum number of process invocations: 0
- Random number seed: 0
- Delay for steady state simulation: 0 Days, 0 Hours, 0 Minutes, 0 Seconds, 0 Milliseconds
- Method of selecting an output path: Based on an expression
- Enable Form simulation: Yes No

Two callout boxes highlight specific settings:

- Enable form simulation**: A yellow callout box points to the 'Enable Form simulation' checkbox, which is checked.
- Set to data driven mode**: A yellow callout box points to the 'Method of selecting an output path' dropdown menu, which is set to 'Based on an expression'.

The bottom status bar indicates 'eForms Simulation and storyboarding' and '© 2008 IBM Corporation'.

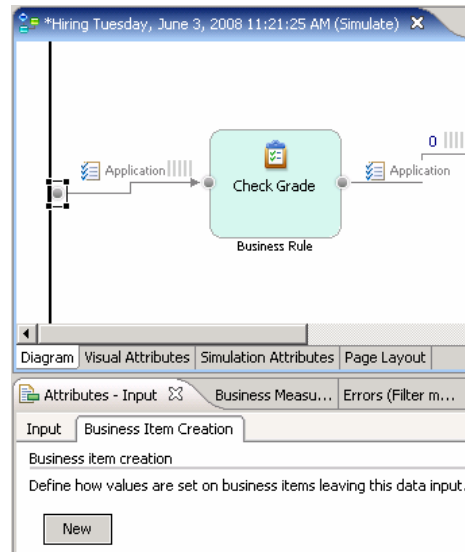
When preparing to do a simulation of a human centric business process, there are two settings that must be configured before running the simulation.

In the general tab of the attributes for the simulation snapshot, enable the form simulation.

Next set the method for selecting the output path to, *based on an expression*.

Data preparation

- In the simulation snapshot,
 - ▶ Select the input node
 - ▶ Select the Business Item Creation tab in the view below
 - ▶ Select the *New* button



Since the simulation of the business process is based on the data, you must make sure that there is data available. You will need to create some business items with concrete data values.

Select the input node for the business process and then in the attributes, select the Business Item Creation tab.

Select the new button.

The business item creation allows you to populate a business item with specific data values that will be used by the simulation.

Create new private instance data.

- You can see the complex structure of the application business item
- Select a row on the left, then the add button on the right
- Create a new *Private* instance

Simulation Value Creation

Simulation value creation

Type a new value and click OK.

Value creation rule

Define custom rules

Business item attributes

Attributes of the business item. If the business item is updated, refresh the table to synchronize the instance with the business item.

Name	Type	Minimum	Maximum	First value
Applicant	Applicant	1	1	
Job	Job	1	1	
Docum				
FirstA				
FinalA				
Applic				

Select instance

Select instance

Click OK.

Private

New instance name

Applicant 1

Public

Business Items

Add... Remove



When you select the new button you are presented with the 'simulation value creation' dialog shown here.

You can create private data or use existing public data. The public data must be created before creating the simulation snapshot.

Fill in the data

- Fill in the data as much as you need or want
- Some elements are key to the scenario you're running
 - ▶ Such as the IsExecutive flag in the job business item

Simulation Value Creation

Simulation value creation

Type a new value and click OK.

Value creation rule

Define custom rules

Business item attributes

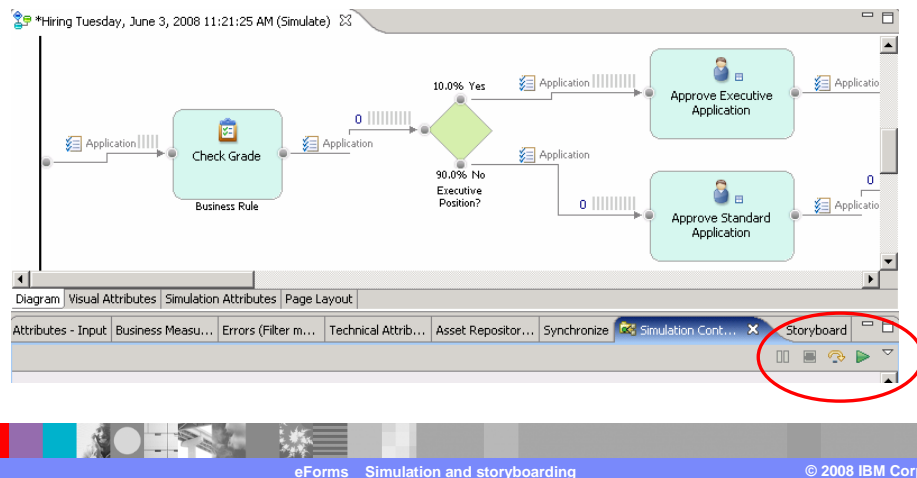
Attributes of the business item. If the business item is updated, refresh the table to synchronize the instance with the business item.

Name	Type	Minimum	Maximum	First value
Applicant	Applicant	1	1	Applicant
Job	Job	1	1	Executive
Executive Job				
Salary	Integer	1	1	50000
Position	Text	1	1	VP 550
IsExecutive	Boolean	1	1	True
Documentation	Documentation	1	1	docs
docs				
ContentID	Text	0	1	qwerty
Resume	Text	0	1	theRes
Reference	Text	0	1	theRef
Signature	Text	0	1	theSig
FirstApproval	Boolean	1	1	False
FinalApproval	Boolean	1	1	False
ApplicantAccept	Boolean	1	1	False

The data being created here will be used as the input to the business process being simulated. Not all of the data needs to be filled in. For this example, the IsExecutive attribute is used to make a decision in the business process so it is important to have a value specified there. As the data flows through the business process you'll have time to add or change values using the associated eForms that are presented as part of simulation.

Run the simulation

- Switch to the simulation control view and run the simulation



When the input data is ready and the snapshot attributes are configured, the simulation is ready to run. Select the run button from the toolbar of the snapshot view.

Waiting for user input

The screenshot displays the IBM eForms Simulation and Storyboarding interface. The top part shows a business process diagram with a 'Check Grade' task, a decision diamond '10.0% Yes / 90.0% No Executive Position?', and two 'Approve' tasks. The simulation control view below shows the simulation is running, with a progress bar and a table of processes and tasks. The 'Waiting' state is highlighted, and the 'Open' button is circled.

Form State	Human Task	Arrival Time	Process Instance
Waiting	Hiring\Four Eye Approval	Monday, June 2, 2008 6:14:14 PM ...	Hiring Tuesday, June 3, 2008 11:21:25 AM : 1
Completed	Hiring\Approve Standard Application	Monday, June 2, 2008 6:14:14 PM ...	Hiring Tuesday, June 3, 2008 11:21:25 AM : 1

If the animation is turned on for the simulation you'll be able to see the token passing through the business process. It will stop at a human task and you'll also get a visual confirmation in the simulation control view.

To work with the waiting human task, select it in the simulation view and then select the open button on the right. This will open the associated eForm.

You can also set breakpoints on a task if you need the simulation to pause at a key spot.

Open the form and complete the action

The screenshot displays a simulation window titled "Approve Executive - Waiting - Approve Executive Application". The main area shows an "Input/Output Form" with the following fields:

- Resume: [theResume]
- Reference: [theReference]
- Signature: [theSignature]
- FirstApproval:
- FinalApproval:

Below the form, a "Simulation running" section shows a progress bar and the text "Time that simulation has been running: 00:02:15". At the bottom, a table lists the current process instance:

Form State	Human Task	Arrival Time	Process Instance
Waiting	Hiring\Approve Executive Application	Monday, June 2, 2008 6:14:14 PM ...	Hiring Tuesday, June 3, 2008 11:21:25 AM : 1

The interface includes a "Complete" button at the top left and an "Open" button at the bottom right of the table. The footer of the window reads "eForms Simulation and storyboarding © 2008 IBM Corporation".

You can now fill out the form. The data entered will be available to the business process tasks and decisions. In this job application example, the first approval check box is a key attribute used to route the application as part of the business process. To approve the application the box is checked and when the form is finished, the simulation will continue on to the next activity.

Summary

- Storyboarding
 - ▶ A way to gather and validate requirements by stepping through the input and output panels
 - Uses Lotus eForms
 - Manual process
- Data driven simulation of human centric business process
 - ▶ Uses Lotus eForms
 - ▶ Works as a running simulation
 - ▶ Navigation controlled by data provided by the user during the simulation



WebSphere Business Modeler V6.1.2 provides two new features for modeling human centric business processes; storyboarding and data driven simulation.

Storyboarding is a manual process for walking through the input forms. It is used for clarifying requirements and validating the flow of the business process.

Data driven simulation of human centric business processes provides real time simulation of the business processes. At each human task the input and output forms are presented, providing you with the opportunity to enter data which is then used by the business process. Alternate paths can be explored and logic can be verified.

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