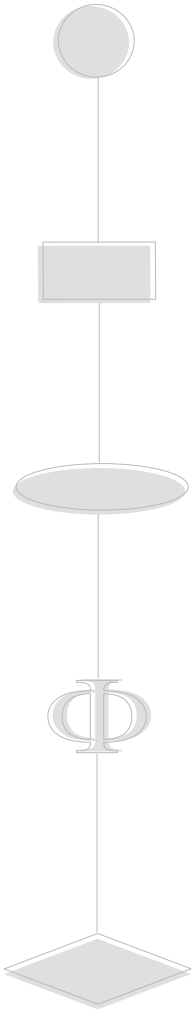
E-iProcess Suite



WORKFLOW · BPR

Tutorial

Version 3.4

HOLOSOFX

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Workflow•BPR Tutorial

You are working for an innovative company, Componex, Inc., that wants to stay on the cutting edge of technology to remain competitive. Componex has heard that Process modeling and reengineering can assist in achieving those goals. You know that the job can be accomplished efficiently if certain formal steps are followed and your team is guided through them. To fully model a Process, it will be necessary to go through four main phases:

1. Data gathering and preparing for modeling
2. Modeling the Process
3. Validating the Process
4. Performing Process analysis

This tutorial will guide you through the steps for creating an As-Is Process Model, analyzing the Process Model, creating a To-Be Process Model, and then comparing the As-Is and To-Be models.

Gathering Your Process Data

You have met with key personnel in the company and formed a BPR team. After many meetings, you and your team have selected a number of Processes that are suitable candidates for improvement.

Selecting Your First Process

You have decided to start with a small Process so that your team members can become familiar with your expertise in the BPR field and with Workflow•BPR. The first Process selected is the ***Sales Order Process***.

The first Task in this reengineering project is to get your group to identify and agree on the Process boundaries: where it starts and where it ends. Your group decided that the Process will start when a customer places a phone call to submit an order and end when the customer receives the product.

Identifying and Interviewing Process Participants

With the help of your team, you are able to identify the employees involved in this Process. You create a list of their names, phone numbers, and locations. You invite the employees to attend a one-hour seminar to inform them of your efforts and goals.

During the seminar, employees were handed a questionnaire form that requested information regarding the best time to reach them and their willingness and availability to participate in the Process. A form was also handed out (to be filled out and returned by a specific date), asking how they participated in the Sales Order Process (i.e., what they did) and asking them to state their views concerning the Process.

After the seminar, the questionnaire responses were thoroughly reviewed and several of the employees were selected to participate in a one-day workshop. Three days before the workshop, it was decided to review the returned forms in order to gain an overall understanding of the Process. Telephone calls were also made to clarify several ambiguous parts of the Process. After obtaining a clear understanding of the Process, a two-page document summarizing the story of the Process was written. Creating a Process Story is an optional part of the data gathering Process, but it provides a useful way to communicate information about a Process.

At the beginning of the workshop, a copy of the Process Story, with additional questionnaires to detail the story as needed, were handed out to each of the participants. During the workshop, you were able to validate the Process Story, correct errors, and detail several high-level parts.

Putting It All Together into a Story

After the workshop, your notes and the completed participant forms were used to rewrite the Process Story Document as follows:

Componex, Inc.

The Componex, Inc. organization is a fictitious example of a national sales company that supplies product subassemblies to connector manufacturers. The company headquarters are located in Hawthorne, California. A normal workday is designated as 8:00 a.m. to 5:00 p.m. Every Componex employee receives the same standard holidays each year: New Year's Day, President's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving, the day after Thanksgiving, Christmas Eve (half day), and Christmas Day.

The Situation

With the introduction of a new product subassembly, Componex recently experienced a sharp increase in the cost of supplying product subassemblies to its customers. Componex wants to model and evaluate its Sales Order Fulfillment Process so that they can make improvements can be made. Unfortunately, this has proven more difficult than expected. Componex has heavily invested its future in the success of this particular service. Although everyone (in theory) wants to improve the sales order fulfillment Process, nobody wants to be singled out as the bottleneck or the weak link. The first attempt at Process Modeling involved asking the managers from each of the responsible departments to model their work and put the work Process together in a standard flowchart. The result of this initial effort was difficult to integrate because each department used different notations. When Componex overcame that hurdle three months later, they realized that they still had to produce a data model that would assist them in analyzing their Process.

After the disappointing results of the initial investigation, Componex decided to hire an outside consultant to model their Processes using Workflow•BPR. They met with management to establish their objectives in modeling the Sales Order Fulfillment Process, then collected the following Process information.

Receive Order

The order fulfillment cycle begins when a customer places a telephone order by calling the Order Processing Department. An Order Processing Clerk enters the order information and determines whether the details of the order are complete. The Order Processing Clerk then prints out a copy of the Sales Order. Each Clerk can perform this data entry operation in about 10 minutes.

If the customer has previously done business with Componex, the Order Processing Clerk checks the customer's credit. If credit is available, the Clerk continues processing the order, then forwards these documents to the Accounts Receivable Manager for approval. The Accounts Receivable Manager approves the customer's credit eligibility, initials the lower right corner of the accepted Sales Order, and then sends the order to the Accounts Receivable Clerk for final processing and issuance of a Work Order. Office mail is used throughout the organization to distribute paper documents among employees. It takes an average of 20 minutes to complete.

If this is the first time the customer has ordered subassemblies from Componex, the Order Processing Clerk runs a standard credit check by sending the customer's credit information to a financial subcontractor, who returns a Credit Report by fax. The Order Processing Clerk sends the Credit Report to the Accounts Receivable Manager for approval of a credit line. The Accounts Receivable Manager approves or disapproves the customer's credit eligibility, initials the lower right corner of the accepted Sales Order, then sends the order and a Notification of Credit Approval to the Accounts Receivable Clerk for final processing and issuance of a Work Order. If the credit report is not favorable or the Accounts Receivable Clerk does not approve the order, the order is rejected. If the customer's credit and the order are approved, the Accounts Receivable Clerk creates a Work Order and sends the original to the Warehouse and a copy to the Engineering Department, using office mail.

Supply Parts

The Engineering Department prepares a blueprint design of the product parts and forwards the design to the Warehouse. A Warehouse Clerk looks up the blueprint for the requested product, copies it, then collects the appropriate parts for that product per the blueprint's parts list. The Clerk creates a kit by putting the parts and the copy of the blueprint into a plastic bag and sealing it. He labels the bag, signs the Work Order, and attaches it to the kit. The Warehouse Clerk then delivers the kit to the Product Assembly department for assembly. Depending on the size of the order, it takes approximately one hour and 15 minutes (Working Duration) for the Clerk to complete these Tasks. The delivery takes 20 minutes.

Assemble Parts

As soon as the Warehouse Clerk delivers the kit to the Product Assembly Department, the Assembler collects the kit, takes it to her/his workstation, and assembles the product. The Assembler first solders the separate electronic components onto the appropriate boards, then assembles the boards into a chassis. As soon as the product is put together, he/she immediately calls the Quality Control Department so that a Quality Control Engineer can come and inspect the product. It takes the Assembler approximately 30 minutes to inspect the kit and verify the parts against the parts list, approximately three hours and 30 minutes to solder the components to the boards, and approximately 30 minutes to assemble the boards into a chassis, depending on the complexity of the finished product.

Testing

The Quality Control Engineer performs a series of test procedures to make sure that the product meets specification standards. It takes the Quality Control Engineer up to two hours to complete inspection and testing. Once the product assembly is approved, a Quality Control Clerk delivers the product to the Shipping Department. The delivery takes approximately 20 minutes.

Packaging

First, the Packaging Clerk determines what kind of packaging to prepare based on the copy of the order sent from the Accounts Receivable Clerk. There are two types of packaging available: cardboard box and wooden crate. He collects the appropriate packaging supplies from their internal stores and then assembles the packaging. The Packaging Clerk refers to PACK.H, a packing procedure document, to be sure that the constructed packaging meets all safety and shipping requirements. As soon as the packaging assembly is complete, the Packaging Clerk attaches the copy of the Work Order to the packaging and puts it on the storage rack until delivery of the order. It usually takes the Packaging Clerk five minutes to assemble a cardboard box, 45 minutes to build a wooden crate, and approximately 20 minutes to deliver it to the Shipping Department.

Shipping

The Shipping Clerk initials the Work Order copy, folds it up so that the customer's name and address are visible, puts the copy inside of a clear plastic envelope, and secures it to the top of the package. The Shipping Clerk waits for the arrival of the product from Engineering and matches it with the proper packaging. He/She then packs and seals the package and ships the product to the customer by airmail. Finally, the Shipping Clerk prepares a Shipment Notification Form and forwards it, through office mail, to Accounts Receivable for customer billing. It generally takes the Shipping Clerk two hours to finalize her/his shipping procedure.

Generating an Invoice

When Shipping mails the Work Order to Accounts Receivable, the Accounting Secretary logs in the Work Order copy and forwards it to the appropriate Accounting Clerk. The Accounting Clerk checks the Work Order to make sure it is correct, then generates an invoice in duplicate. The Accounting Clerk mails the original invoice to the customer and files the copy in the customer’s folder. It takes the Accounting Clerk approximately one hour to create a customer folder and generate an invoice. After 30 days, the Accounting Clerk checks to see if the customer has paid. If the check has not been received, the Clerk issues a reminder notice.

Identifying Problems and Goals

After meeting with your BPR group, which included a thorough review of the Process Story Document, you identify the following problems (some of these problems you identified earlier through employee interviews):

- Too much time is spent sending paper documents by office mail.
- A large portion of time is spent on data entry and approval activities.

The goals are usually linked to problems. After many lengthy concession and compromise discussions, you and your team decide to set the following goals:

- Reduce or eliminate the time spent sending paper documents via office mail.
- Reduce the time spent on data entry and approval Tasks.

Creating Your First Mini Process

Your way of mastering the Workflow•BPR tool is to know how to model Processes. In this chapter, you will learn how to model a small section of the ***Sales Order Process***. When finished, you will be ready to model the rest of the Process on your own, or with minimal guidance.

Identifying Relevant Data

Let us examine the "Receive Order" part of the Process Story described in the last chapter. From the information provided in this paragraph, you can identify Organization Units, Roles, and Activities. We will underline Entities with single lines, Phis (inputs/outputs) with dotted lines, and Roles with double lines.

Receiving an Order

The Order Fulfillment Cycle begins when a Customer places a Phone Order by calling the Order Processing Department. An Order Processing Clerk enters the order information and determines whether the detail of the order is complete. The Order Processing Clerk then prints out a copy of the Sales Order. Each Clerk can perform this data entry operation in about 10 minutes.

If the customer has previously done business with Componex, the Order Processing Clerk checks the customer's credit. If credit is available, the Clerk continues processing the order, then forwards these documents to the Accounts Receivable Manager for approval. The Accounts Receivable Manager approves the customer's credit eligibility, initials the lower right corner of the accepted sales order, and then sends the order to the Accounts Receivable Clerk for final Processing and issuance of a Work Order. Office mail is used throughout the organization to distribute paper documents among employees and usually takes an average of 20 minutes to complete.

If this is the first time the customer has ordered subassemblies from Componex, the Order Processing Clerk runs a standard credit check by sending the Customer's Credit Information to a Financial Subcontractor, who returns a Faxed Credit Report. The Order Processing Clerk sends the Credit Report to the Accounts Receivable Manager for approval of a credit line. The Accounts Receivable Manager approves or disapproves the customer's credit eligibility, initials the lower right corner of the accepted Sales Order, then sends the order and a Notification of Credit Approval to the Accounts Receivable Clerk for final Processing and issuance of a Work Order. If the credit report is not favorable or the

Accounts Receivable Clerk does not approve the order, the order is rejected. If the customer's credit and the order are approved, the Accounts Receivable Clerk creates a Work Order and sends the original to the Warehouse and a copy to the Engineering Department, using office mail.

From the review conducted above, we can create the following table:

Table 1: "Receive Order" Entities, Phis, and Roles

Entities	*Phis*	*Roles*
Customer**	Phone Order	Order Processing Clerk
Order Processing	Sales Order	Order Processing Manager
Accounts Receivable	Credit	Accounts Receivable Manager
Financial Subcontractor**	Credit Report	Accounts Receivable Clerk
Engineering	Notice Of Approval	
Warehouse		

** External Entity

Using the Receive Order portion of the story, you can extend the data associated with attributes as presented in the following tables:

Table 2: "Receive Order" Phi Data

Phi (Input/Output)	*Type*	*Category*
Credit Report	Paper Form	Paper Document
Customer Credit Information	Fax	Paper Document
Faxed Credit Report	Fax	Paper Document
Notification of Credit Approval	Paper Form	Paper Document
Phone Order	Phone	Other
Sales Order	Paper Form	Paper Document
Work Order	Paper Form	Paper Document

Table 3: "Receive Order" Decisions Data

Decision	*Choice*	*Percent*
Customer on file?	No	30
Customer on file?	Yes	70
Order Approved?	No	25
Order Approved?	Yes	75

Table 4: "Receive Order" Media Data

Transfer Medium	*Elapsed Transfer Time*
Fax	1 Minutes
Inter-Office Mail	20 Minutes

Table 5: "Receive Order" Connector Data

Source	*Phi*	*Target*	*Transfer Medium*
	Credit Report	Approve Customer Credit	Inter-Office Mail
	Customer Credit Information	Run Standard Credit Check**	Fax
Run Standard Credit Check**	Faxed Credit Report	Forward to Acc. Receivable	Fax
Forward to Acc. Receivable	Faxed Credit Report	Approve Customer Credit	Inter-Office Mail
Approve Customer Credit	Notification of Credit Approval	Approve Customer Order	Inter-Office Mail
Create Work Order	Work Order		Inter-Office Mail
Create Work Order	Work Order C1 (Copy)		Inter-Office Mail

** External Process

Table 6: "Receive Order" Activities data

Activity	*Organiza-tion Unit*	*Role*	*Function*	*Elapsed Duration*	*Working Duration*	*Value-Added*	*Quality Control*	*Workflow*
Approve Customer Credit	Accounts Receivable	Accounts Receivable Manager	Accounting	10 Min.	5 Min.	Business Value-Added	Not Quality Control	Potential Workflow
Approve Customer Order	Order Processing	Accounts Receivable Clerk	Accounting	30 Min.	20 Min.	Business Value-Added	Not Quality Control	Potential Workflow
Check Credit History	Order Processing	Order Processing Clerk	Accounting	30 Min.	15 Min.	Business Value-Added	Not Quality Control	Potential Workflow
Create Work Order	Order Processing	Accounts Receivable Clerk	Accounting	5 Min.	1 Min.	Real Value-Added	Not Quality Control	Potential Workflow
Enter Order Information	Order Processing	Order Processing Clerk	Sales	10 Min.	5 Min.	Real Value-Added	Not Quality Control	Potential Workflow
Forward to Acc. Receivable	Order Processing	Order Processing Clerk	Accounting	5 Min.	1 Min.	Business Value-Added	Not Quality Control	Potential Workflow
Reject Customer Order	Order Processing	Accounts Receivable Clerk	Sales	5 Min.	2 Min.	No Value-Added	Not Quality Control	Potential Workflow
Run Standard Credit Check**				1 Hour				

** External Process

Some relevant data attributes were missing from the Process Story Document. These missing data attributes were collected later from more detailed notes that had been taken, and from contacting the Process participants. Luckily, you found most of these data attributes in your detailed notes and only had to make a few telephone calls to collect the rest.

The dialog boxes shown in this Tutorial

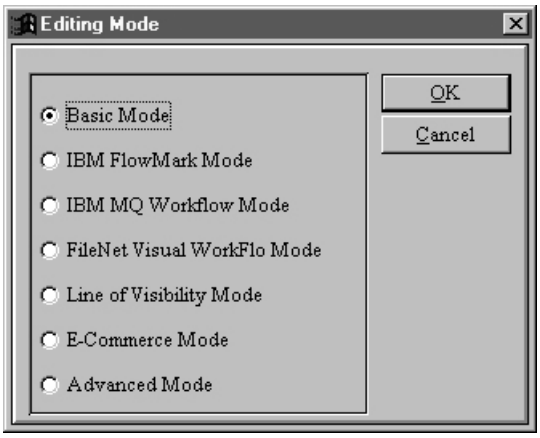
The process modeling capabilities of Workflow•BPR can be used for many purposes. The data required for modeling in preparation for Procedure Publishing can be different than the data required for modeling in preparation for Workflow integration. To avoid confusion of what data is applied for which purpose, Workflow•BPR will configure the dialog boxes and menus so that the data will be applied towards one purpose, and all data not relevant for the desired purpose will be hidden from view.

There are seven (7) different Editing Modes supported by Workflow•BPR. This Tutorial was designed for working in the Basic Editing Mode. Therefore, all pictures showing Workflow•BPR dialog boxes will be set to the Basic Editing Mode.

Setting Workflow•BPR for the Basic Editing Mode

To set Workflow•BPR for the Basic Editing Mode:

1. 🖱 Choose **Editing Mode** from the **Format** menu. The **Editing Mode** dialog box will appear (see the figure below).



2. 🖱 Select the **Basic Mode** radio button.
3. 🖱 Click **OK** or ⌨ press **Enter**. The ADF object dialog boxes will be configured to support process modeling for the purpose of basic process modeling.

   ✍ **You can also ⌨ type Alt+1 to set the Editing Mode to the Basic Editing Mode—*When there are no dialog boxes open*.**

Creating Your Organization File

The first step involves creating an Organization File. An Organization File allows for the creation of a Repository of data for the organization and its Processes. This data can be reused as often as needed to define the Process Model objects drawn in the Workflow•BPR diagrams. The data can be used "as is" in the Process Models, or you can override some of the data attributes.

> ✍ **It is recommended that you check off the steps that have been completed to assist in keeping track of your progress.**

To create your Organization File:

1. 🖱 Choose **New Organization** from the **File** menu or 🖱 select the **Create A New Organization** option from the **Organization File** dialog box that appears when you first open Workflow•BPR. The **New Organization** dialog box appears (see the figure below).

2. 🖱🖱 Double-click on the "Samples" folder that was installed in the WFBPR folder with the Workflow•BPR application.
3. 🖱🖱 Double-click on the "Tutorial" folder that is inside the "Samples" folder. You should see three (3) other folders: "Complete," "HerOrg," and "HisOrg."
4. ⌨ Type "MyOrg.org" in the **File Name** text box.
5. 🖱 Click **Save** or ⌨ press **Enter**. Workflow•BPR will create an Organization File named "MyOrg.org," inside a new organization folder named "MyOrg," and then create and display an untitled Process in an Activity Decision Flow Diagram.

Populating the Data Repository

Before beginning the creation of Process Model drawings, a portion of the data collected is entered into the Data Repository. The remainder of the data will be entered during the modeling.

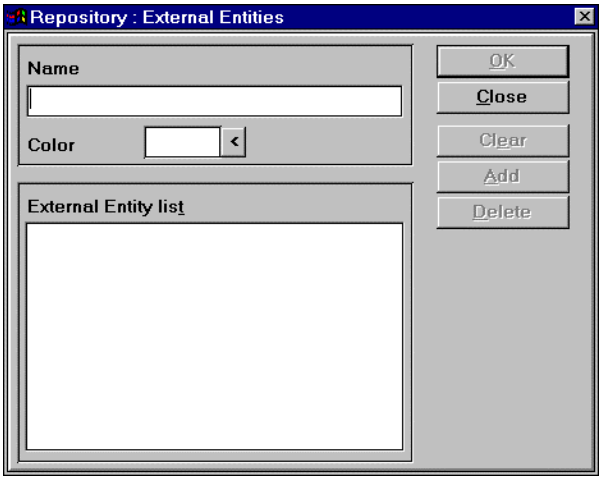
Creating External Entities

An External Entity is an individual or company outside the organization that affects your organization's Process. These entities either provide input to your organization or receive output from it. Entities in Workflow•BPR are either internal or external. Internal Entities are referred to as Organization Units. External Entities are any Entities that exist outside the organization's domain and deal or interface with one or more of its Processes.

From Table 1 on page 9, we can identify two External Entities, "Customer," and "Financial Subcontractor."

To create the two External Entities:

1. 🖱 Choose **Organization Data** from the **Repository** menu. A sub-menu appears.
2. 🖱 Choose **External Entities**. The **External Entities** dialog box appears (see the figure below).



3. ⌨ Type "Customer" in the **Name** text box.
4. 🖱 Click the < button next to the **Color** box to display a palette of pre-defined colors. 🖱 Click once on a basic color to select a pre-defined color.
   * To create a customized color, first 🖱 select a pre-defined color close to the shade preferred. Notice that Workflow•BPR places a cursor in the spectrum map defining that color. 🖱 Click the cursor in the spectrum

map until the shade changes to the one selected, then click **Add To Custom Colors**. Click **OK** to return to the **External Entities** dialog box.

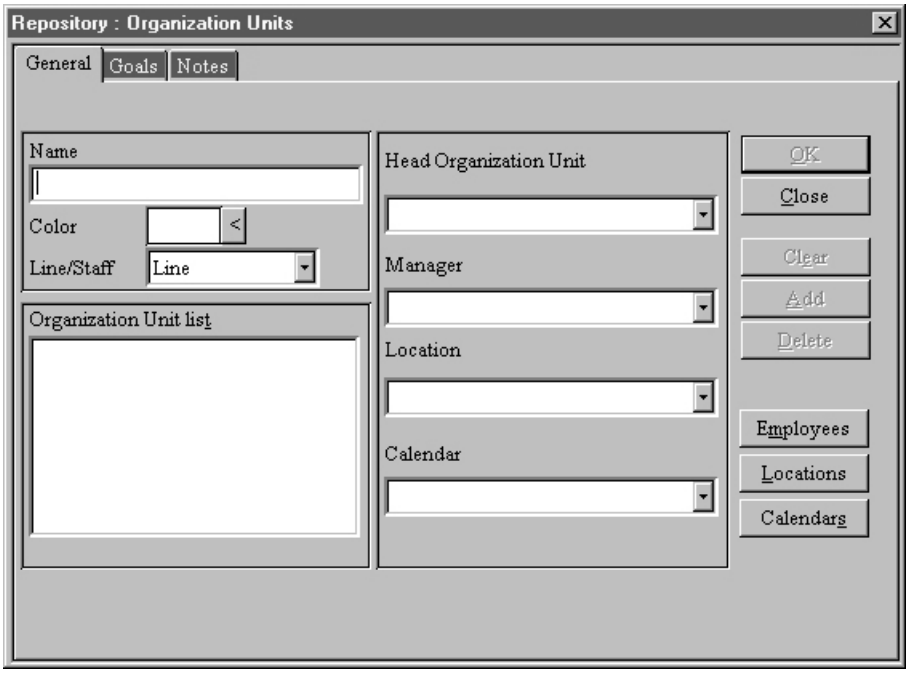
5. Click **Add** or type **Alt+A**. The "Customer" item will appear in the **External Entity** list box, and can be selected later if you want to update the name or attributes.
6. Repeat Steps 3 and 4 to add "Financial Subcontractor."
7. Click **OK** or press **Enter.**

Creating Organization Units

Organization Units are the building blocks of your organization's structure. Units usually represent departments, divisions, or sections. From Table 1 on page 9, Order Processing, Accounts Receivable, Engineering, and Warehousing can be identified as Organization Units. Two of these Organization Units will now be added.

To create two Organization Units:

1. Choose **Organization Data** from the **Repository** menu. A sub-menu appears.
2. Choose **Organization Units**. The **Organization Units** dialog box appears—open to the **General** tab (see the figure below).



3. ⌨ Type "Order Processing" in the **Name** text box.
4. 🖱 Click the < button next to the **Color** box to display a palette of pre-defined colors. 🖱 Click once on a basic color to select a pre-defined color.
   * To create a customized color, first 🖱 select a pre-defined color close to the shade preferred. Notice that Workflow•BPR places a cursor in the spectrum map defining that color. 🖱 Click the cursor in the spectrum map until the shade changes to the one selected, then 🖱 click **Add To Custom Colors**. 🖱 Click **OK** to return to the **Organization Units** dialog box.
5. 🖱 Click **Add** or ⌨ type **Alt+A**. Ignore the other attributes of the Organization Unit for now. The "Order Processing" item will appear in the **Organization Units** list box and can be selected later if you want to update the name or attributes.
6. Repeat steps 3 and 4 to add one more record, "Accounts Receivable." The remainder will be added later while modeling the Process.
7. 🖱 Click **OK** or ⌨ press **Enter.**

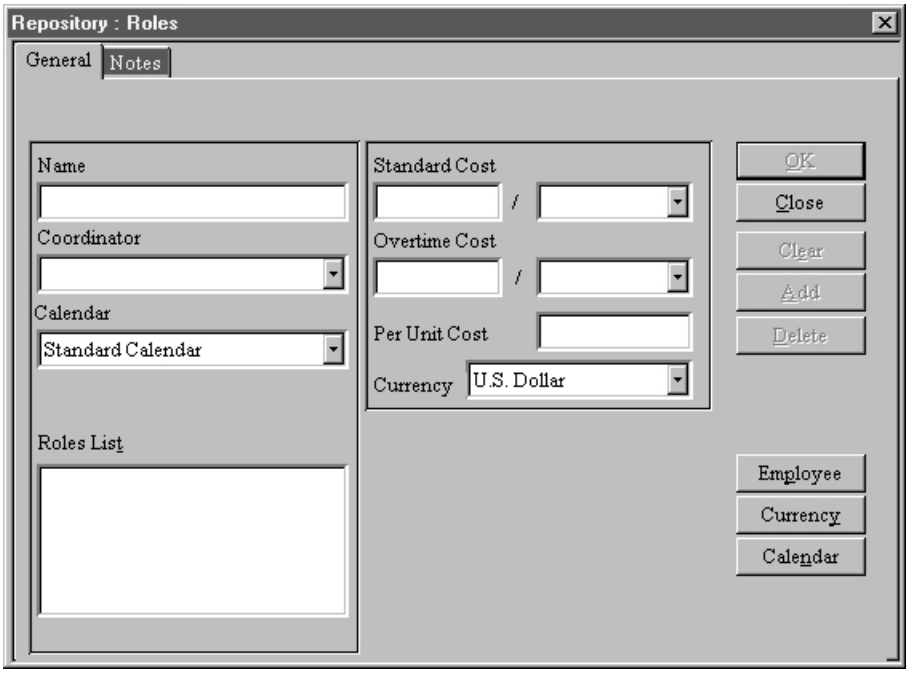
Creating Roles

A Role identifies the type of work that employees who perform tasks in your organization's Process can perform. Multiple employees can have the same role.

From Table 1 on page 9, we can identify Order Processing Clerk, Order Processing Manager, Accounts Receivable Manager, and Accounts Receivable Clerk as Roles.

To create the four Roles:

1. Choose **Organization Data** from the **Repository** menu. A sub-menu appears.
2. Choose **Roles**. The **Roles** dialog box appears—open to the **General** tab (see the figure below).



3. Type "Order Processing Clerk" in the **Name** text box.
4. Type "500" in the **Standard Cost** text box and then select the cost increment "weeks." This entry reflects $500 a week.
5. Click **Add** or type **Alt+A**. The "Order Processing Clerk" item will appear in the **Roles** list box and can be selected later if you want to update the name or attributes.
6. Repeat the above steps to add "Order Processing Manager," "Accounts Receivable Manager," and "Accounts Receivable Clerk." For simplicity, enter the salary for a Clerk as $500/week and the salary for a Manager as $900/week.

7. Click **OK** or press **Enter.**

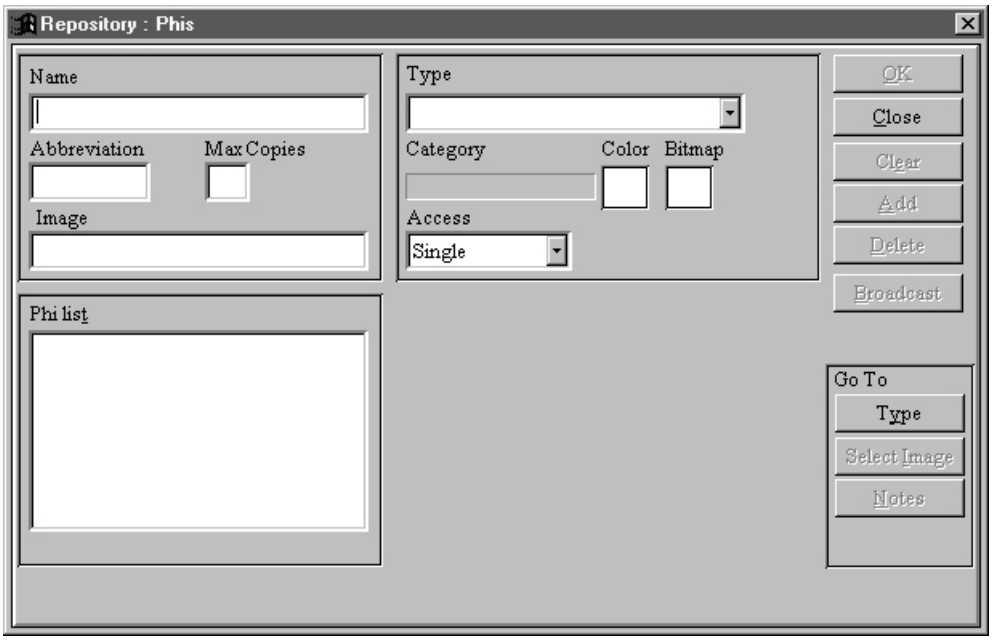
Creating Phis

Phis are the objects that define the inputs and outputs of Tasks. A Phi Type is a class or a group of Phis sharing a common factor. Since each Phi is associated with a Phi Type, Phi Types must be created before Phis can be defined. The important thing to keep in mind is that Phi Types are general categories into which Phis fit. For example, a Phi Type could be an internal form and a phi of that type could be a purchase request form.

From Table 2 on page 9, the Phis "Phone Order" and "Work Order" must be created.

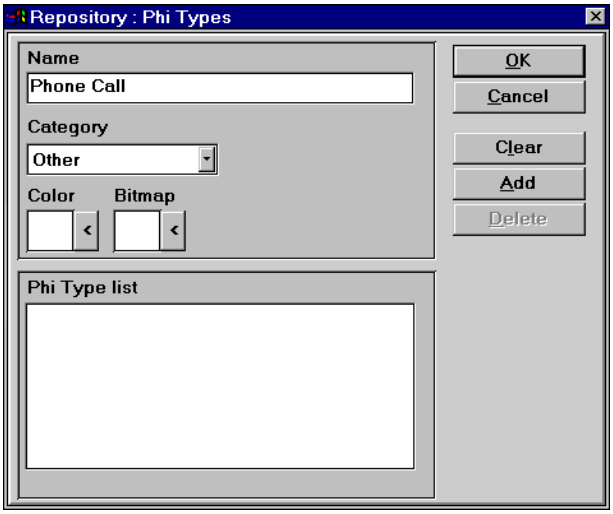
To create the two Phis:

1. Select **Process Data** from the **Repository** menu. A sub-menu appears.
2. Choose **Phis**. The **Phis** dialog box appears (see the figure below).

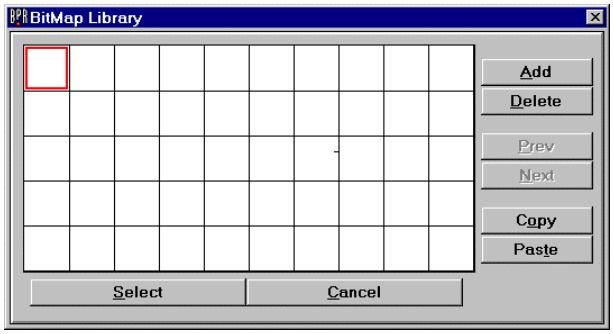


3. Type "Phone Order" in the **Name** text box.
4. Click the **Type** Go To button to access the **Phi Type** dialog box, since we need to create the Phi Type "Phone Call" before we are able to select it from the **Type** list.

5. ⌨ Type “Phone Call” in the **Name** text box of the **Phi Type** dialog box (see the figure below).



6. 🖱 Select “Other” from the **Category** list to identify the Phi Type category.
7. 🖱 Click the < button next to the **Bitmap** box to display the **Bitmap Library** dialog box to select a bitmap to represent your Phi Type (see the figure below).



* If the Bitmap Library is empty, you need to add the bitmaps included in the wfbpr\icons folders:
  - 🖱 Click **Add** to access the **Add Icon File** dialog box.
  - 🖱 Select the “Icons” folder that was installed in the WFBPR folder.
  - 🖱 Select the first icon in the **File Name** list (“abacus.ico”).
  - ⌨ Type **Shift+End** to select the entire set of icon files in the **File Name** list.
  - 🖱 Click **OK** or ⌨ press **Enter**. Workflow•BPR will add all the icons and return you to the **Bitmap Library** dialog box.

* Click **Next** and **Prev** (Previous) to view other sets of bitmaps.

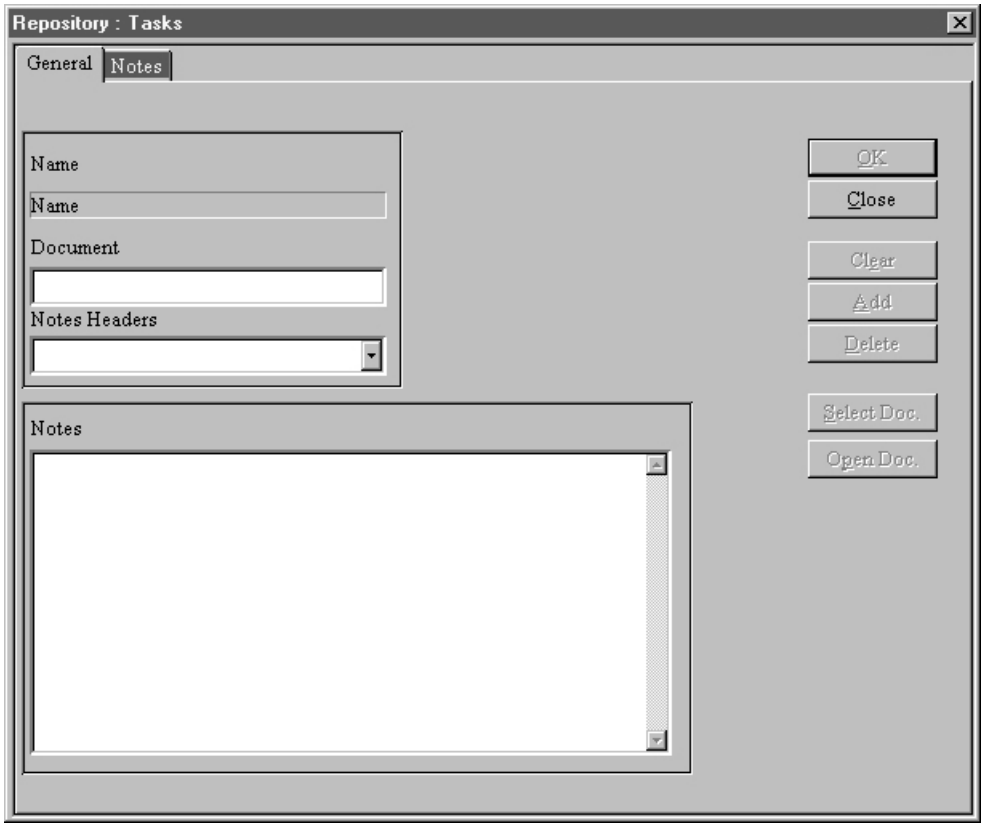
8. Click on the bitmap that looks like a telephone to select it (it is in the third column of the third row of the third set of icons).
   * After you open the **Bitmap Library**, Click the **Next** button *twice* to view the third set of icons.
9. Click **Select** to return to the **Phi Types** dialog box. The bitmap will be displayed.
10. Click **OK** or press **Enter** to return to the **Phis** dialog box.
11. Select "Phone Call" from the **Type** combo box.
12. Click **Add** or type **Alt+A**. The "Phone Order" item will appear in the **Phis** list box and can be selected later if you want to update the name or attributes.
13. Repeat the above steps to add "Work Order." The rest of the Phis will be added later directly from the Process diagram.
    * Create a Phi Type called "Paper Form" for the "Work Order" Phi.
    * Select the bitmap that looks like a form (it is in the seventh column of the third row of the second set of icons) for the Phi Type "Paper Form."
      – After you open the **Bitmap Library**, Click the **Next** button *once* to view the second set of icons.
14. When finished with the "Work Order" Phi, click **OK** or press **Enter.**

Creating Tasks

A Task is the lowest level of work in the Process representation of Workflow•BPR. If you decide not to break down an activity into a lower level of detail, then represent that activity as a Task in an Activity Decision Flow Diagram. If you do decide to break down an activity into a lower level of detail, represent that activity as a process object. In Table 6 on page 10, the data for the following two Tasks is entered: "Check Credit History" and "Approve Customer Order."

To create these two Tasks:

1. Choose **Process Data** from the **Repository** menu. A sub-menu appears.
2. Choose **Tasks**. The **Tasks** dialog box appears—open to the **General** tab (see the figure below).



3. Type "Check Credit History" in the **Name** text box.
4. Select "Order Processing" from the **Organization Unit** combo box to associate the Task with the Organization Unit.
5. Select "Order Processing Clerk" from the **Role** combo box to identify the Role responsible for the Task.

6. ⌨ Type "Accounting" in the **Function** combo box to identify the function associated with the Task. This will create an "Accounting" item in the Repository Function list (instead of going to the **Functions** dialog box and creating the item there).

7. ⌨ Type "30" in the **Elapsed Duration** text box. ⌨ Press **Tab** to move to the next data box.

8. 🖱 Select the "minutes" unit from the **Elapsed Duration** list to identify the Elapsed Duration of a Task. ⌨ Press **Tab** to move to the next data box.

   * The letter "m" can be ⌨ typed in while the **Elapsed Duration** list is highlighted to select the "minutes" unit.

9. ⌨ Type "15" in the **Working Duration** text box. ⌨ Press **Tab** to move to the next data box.

10. 🖱 Select the "minutes" unit from the **Working Duration** list to identify its Working Duration.

11. To identify classifications for the Task, 🖱 click on the following radio buttons:

    * "Business Value-Added" for the **Value-Added** (Classification 1) classification.

    * "Not Quality Control" for the **Quality Control** (Classification 2) classification.

    * "Potential Workflow" for the **Workflow** (Classification 3) classification.

12. 🖱 Click **Add** or ⌨ type **Alt+A**. The "Check Credit History" item will appear in the **Tasks** list box and can be selected later if you want to update the name or attributes.

13. Repeat the above steps for another Task, "Approve Customer Order." Use the information listed in Table 6 on page 10 to fill in the attributes of this Task. The rest of the Tasks will be entered later directly from the Process diagram.

14. 🖱 Click **OK** or ⌨ press **Enter**.

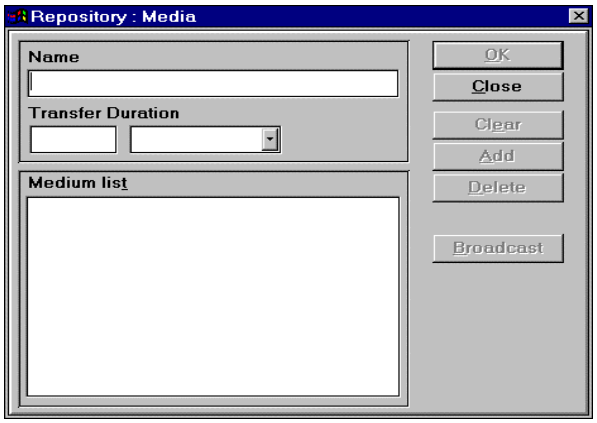
Creating Media

A Medium is an object that represents the method used to transport a Phi from one Task to the next. For example, you can send a document to another location by courier, mail, electronic mail, or by facsimile machine. Each of these methods is an example of media. Media and Phis make up the flow portion of your Activity Decision Flow Diagram.

From Table 4 on page 9, the data for the following two media are entered: "Inter-Office Mail" and "Fax."

To create these two media:

1. Choose **Process Data** from the **Repository** menu. A sub-menu appears.
2. Choose **Media**. The **Media** dialog box appears (see the figure below).



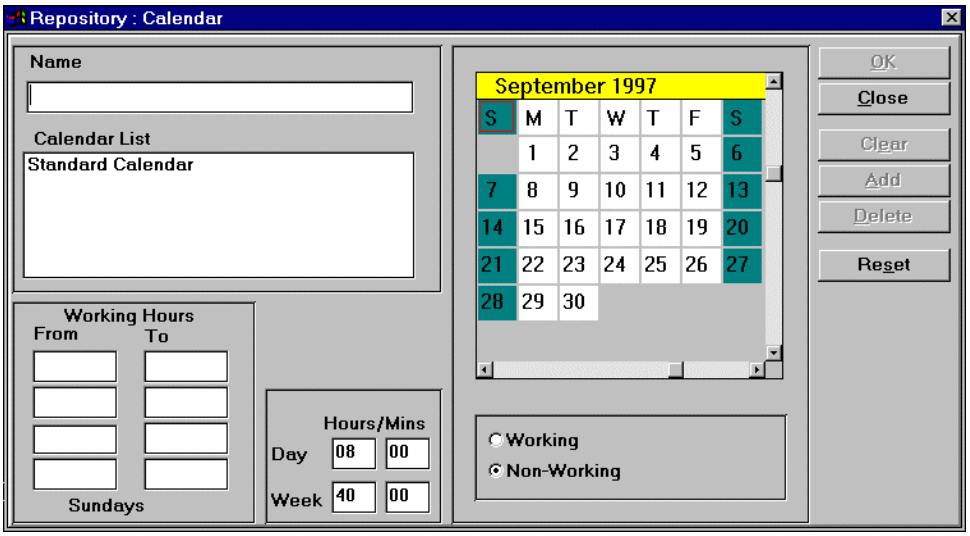
3. Type "Inter-Office Mail" in the **Name** text box.
4. Type "20" in the **Transfer Duration** text box. Press **Tab** to move to the next data box.
5. Select the "minutes" unit from the **Elapsed Duration** list to identify the Elapsed Duration of the Task.
   * You can also type the letter "m" while the **Transfer Duration** list is highlighted to select the "minutes" unit.
6. Click **Add** or type **Alt+A**. The "Inter-Office Mail" item will appear in the **Media** list box and can be selected later if you want to update the name or attributes.
7. Repeat the above steps to add the other Medium. "Fax" should have a Transfer Duration of 1 minute.
8. Click **OK** or press **Enter**.

Creating a Working Calendar

A Calendar defines daily work shifts, weekly working/non-working days, and annual holidays of your organization. Workflow•BPR comes with a standard calendar already installed. This calendar can be used as a default calendar or as a template to create special work calendars customized to meet organizational needs. A different calendar needs to be created for the "Financial Subcontractor" External Entity, beginning at 9:00 a.m. during working days.

To create a new Working Calendar:

1. Choose **Organization Data** from the **Repository** menu. A sub-menu appears.
2. Choose **Calendars**. The **Calendars** dialog box appears (see the figure below).



3. Type "Financial Subcontractor Calendar" in the **Name** text box.
4. To define the hours in your workweek, type "7" in the **Day** (Hours) text box and "35" in the **Week** (Hours) text box.
5. Click on the "M" square of the rectangular calendar to select Mondays.
6. Type "9:00" as the starting time instead of "8:00" in the **Working Hours From** text box.
7. Repeat Steps 5 and 6 for Tuesdays through Fridays.
8. Click **Add** or type **Alt+A**. The "Financial Subcontractor Calendar" item will appear in the **Calendars** list box and can be selected later if you want to update the name or attributes.
9. Click **Close**.

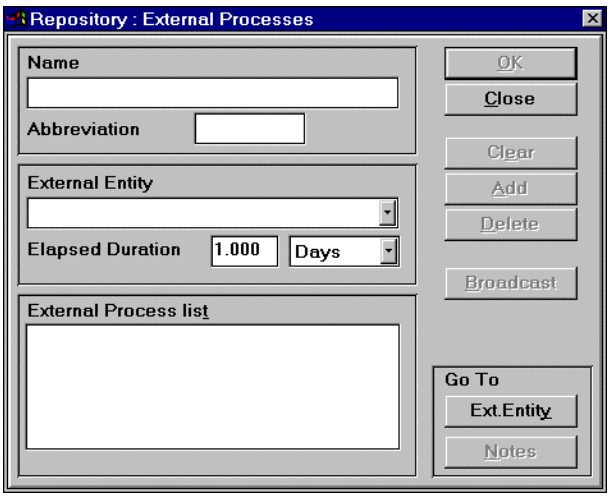
Creating External Processes

An External Process is an activity performed in your Process by an External Entity. Although External Entities are outside the control of your organization, they are an essential part of the Process.

From Table 6 on page 10, the External Process "Run Standard Credit Check" can be identified.

To create the External Process:

1. Choose **Process Data** from the **Repository** menu. A sub-menu appears.
2. Choose **External Processes**. The **External Processes** dialog box appears (see the figure below).



3. Type "Run Standard Credit Check" in the **Name** text box.
4. Select "Financial Subcontractor" from the **External Entity** combo box to identify the responsible External Entity.
5. Type "1.0" in the **Elapsed Duration** text box. Press **Tab** to move to the next data box.
6. Select the time unit "hours" from the **Elapsed Duration** list.
   * You can also type the letter "h" while the **Elapsed Duration** list is highlighted to select the "hours" unit.
7. Click **OK** or press **Enter**.

Creating Decisions and Choices

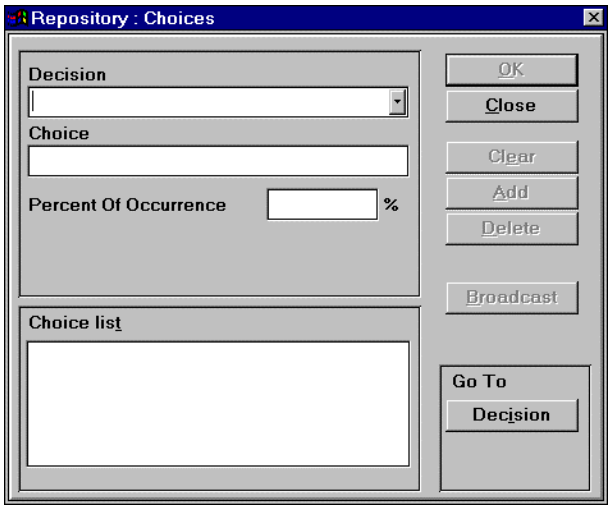
A Decision is a situation with multiple Choices. During the Process, situations may be encountered which result in conditions that influence the routing of work. A selection must be made in these situations to determine the subsequent tasks.

A choice represents a specific value for a Decision. Workflow•BPR uses Choices as the criteria to select the appropriate path through the Process when it generates a particular case.

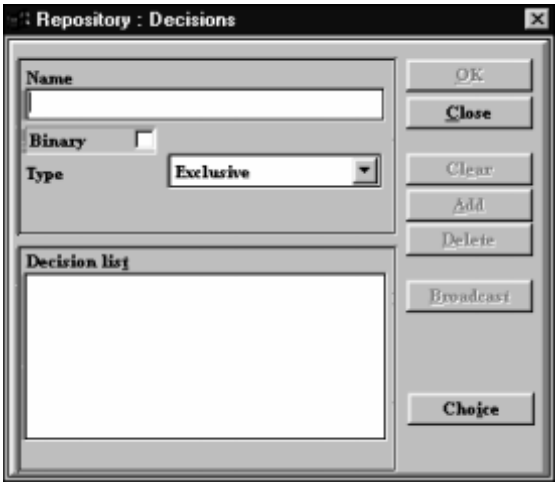
From Table 3 on page 9, the Decision "Customer on file?" can be identified.

To create the Decision:

1. Choose **Process Data** from the **Repository** menu. A sub-menu appears.
2. Choose **Choices**. The **Choices** dialog box appears (see the figure below).



3. Click **Decision** to go to the **Decisions** dialog box and create a new Decision (see the figure below).



4. Type "Customer on file?" in the **Name** text box.
5. Click on the **Binary** check box to specify a Binary Decision.
6. Click **Add** or type **Alt+A**. The "Customer on file?" item will appear in the **Decisions** list box and can be selected later if you want to update the name or attributes.
7. Click **Close** to return to the **Choices** dialog box.
8. Select the Decision you just created from the **Decision** combo box.
9. Select "Yes" from the **Choice** list.
10. Type "70" in the **Percent of Occurrence** text box to designate the "Yes" frequency.
11. Click **Update** or type **Alt+U**.
12. Select "No" from the **Choice** list
13. Type "30" in the **Percent of Occurrence** text box to designate the "No" frequency.
14. Click **OK** or press **Enter**.

General Guidelines for Managing and Modeling Diagram Objects

To model a Process element (e.g., a Task) in an Activity Decision Flow Diagram, you need to use the appropriate tool from the ADF Toolbar to draw the object that represents the Process element. You double-click on the object to bring up the dialog box that allows for defining the object. Defining an object in Workflow•BPR generally gives the object a name and a set of data attributes. The association can be done by selecting already-entered data (stored in the Repository) or by entering new data in the dialog box for that object. The following sections present general guidelines on drawing, connecting, and defining objects. For a more detailed explanation of the issues included here, consult your on-line Help file or the User's Guide.

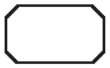
Drawing Objects In Activity Decision Flow Diagrams

In Workflow•BPR, the Process is modeled by a connected diagram. All the objects in a diagram have to be connected. To model a Process, you need to be familiar with key modeling concepts such as how to model a Task with its inputs and outputs, the sequence of activities, and Decisions with their Choices. These key concepts are now discussed in detail.

To place an object in an Activity Decision Flow Diagram:

1. Select a drawing tool from the **ADF Toolbar**. The cursor will change shape to reflect the selected object.
2. Click inside a free grid cell to insert the object inside that cell. Only one object can be inserted in a cell.

The following table shows the objects that can be drawn in an Activity Decision Flow Diagram with their corresponding shapes:

Object Name	*Shape*	*Object*
Connector	an arrow	
Task	a rounded rectangle	
Phi	a circle	
Process	a square	
External Entity	an oval	
External Process	an oval within an oval	
Decision	a diamond	
Choice	a small octagon	
Stop	a traffic stop sign	
Go To	a star	
Annotation	a sticky note	
Partner Interaction	two overlapping ovals	

Defining Diagram Objects in Activity Decision Flow Diagrams

After an object is drawn, it is necessary to name the object and assign attributes or information to the object so that it can be identified within the context of your Process. In Workflow•BPR, this is accomplished by *defining* the object. When an object such as a Task is defined, you connect it to data entries in the Workflow•BPR Repository. The Repository is a storehouse of previously defined data records that can be copied into a diagram object to define that object.

An object is defined through its dialog box so that you can obtain it by double-clicking on the object in the Activity Decision Flow Diagram window. There are two methods to associate data to an object: by making selections from lists of previously created items that are stored in the Repository, or by entering new information in the edit boxes that will be copied into the Repository. The two methods are accomplished through the combo boxes that are in the object dialog boxes. When a data combo box has no value, you can either type in new information to create a new record, or you can select from a list of the current records. If you select a previously defined record and type over or edit the name in any way, you will be prompted with a dialog box asking whether you want to update the originally selected record or add a new record to your current list.

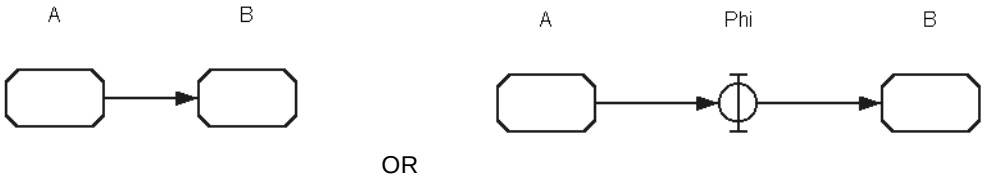
The following is the general procedure for defining an object in an Activity Decision Flow Diagram:

1. Select the Pointer tool, either by clicking the Pointer tool  button on the ADF Toolbar, or by clicking the right mouse button on the diagram.
2. Double-click on an object. Workflow•BPR displays the dialog box for that object.
3. Add or update the Name and other attributes of the objects (refer to Section 2 in Chapter 3 of the User's Guide for the details of defining each type of diagram object).

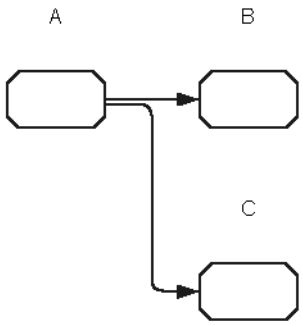
Connecting Objects in an Activity Decision Flow Diagram

In Workflow•BPR, you use connectors to model both the sequence in which activities occur and the Medium by which an input/output (Phi) progresses from one activity to the next. The activities and other objects model what happens and how it happens, and the Connectors model when the activities happen. In a diagram, a connector models the forward progression; therefore, you can only draw a connector from left to right. The connectors allow for the modeling of different situations that might occur in your Process. The following items describe typical types of situations:

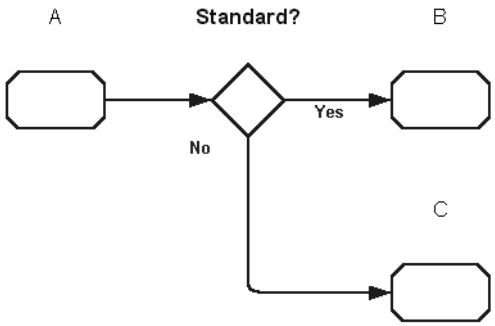
1. Consecutive Activities: When two activities (Tasks "A" and "B") are joined by a connector, you are designating that the activities on the left (Task "A") will precede the activity on the right (Task "B"). You may also insert one or more Phis in-between the two activities.



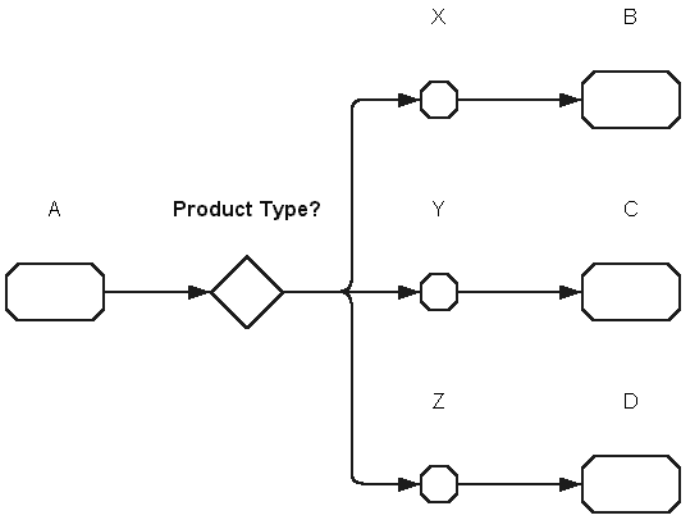
2. Parallel Activities: If an activity (Task "A") has two separate connections to two other activities (Tasks "B" and "C"), then you are designating that the two following activities (Tasks "B" and "C") are performed in parallel.



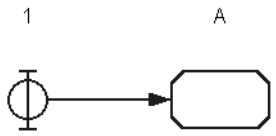
3. Alternative Activities (Binary Decisions): If you have an activity (Task "A") that is followed by a Decision ("Decision Standard?") and the two Choices "Yes" and "No" of the Decisions each lead to activities (Tasks "B" and "C"), then you are designating that only one of the two activities (Tasks "B" or "C") will be performed. The activity that is performed (Task "B" or "C") is determined by the Choice ("Yes" or "No") that is selected when the Process is performed.



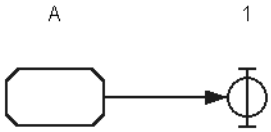
4. Alternative Activities (multiple Decisions): If you have an activity (Task "A") that is followed by a Decision ("Decision Product Type?") and there are three Choices: "X", "Y," and "Z," each type of product leads to unique activities (Tasks "B", "C," and "D"). You are then designating that only one of the three following activities (Tasks "B", "C," and "D") will be performed. The activity that is performed (Task "B," "C," and "D") is determined by the Choice ("X", "Y," or "Z") that is selected when the Process is performed.



5. Inputs: When a Phi (Phi "1") is connected to an activity (Task "A"), you are designating that the Phi (Phi "1") is an input to the activity (Task "A"). Activities can have multiple inputs.



6. Outputs: When an activity (Task "A") is connected to a Phi (Phi "1"), you are designating that the Phi (Phi "1") is an output of the activity (Task "A"). Activities can have multiple outputs.



To connect two diagram objects, draw an arrow between them. Select the **Connector** tool from the **ADF Toolbar**, then click and drag from the *center* of one diagram object to the *center* of another. A connector can also be defined so that it contains information about the transport Medium used to carry the Phi from one Task to the next.

Not all diagram objects can be connected to each other. There are rules that define which connections are allowed and which are not. Most of these rules are intuitive. The following table defines the connections that are allowed between the Activity Decision Flow Diagram objects. The check mark (✓) indicates that the connection *from* the object listed in the row *to* the object listed in the column (from left to right) is valid.

From/To	*Task*	*Process*	*External Process*	*External Entity*	*Phi*	*Binary Decision*	*Multiple Decision*	*Choice*	*Go To: Source*	*Go To: Target*	*Stop*	*Partner Interact.*
Task	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓
Process	✓	✓	✓	✓	✓	✓	✓				✓	✓
External Process	✓	✓	✓	✓	✓	✓	✓				✓	✓
External Entity	✓	✓	✓	✓	✓	✓	✓				✓	✓
Phi	✓	✓	✓	✓		✓	✓		✓		✓	
Binary Decision	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓
Multiple Decision								✓				
Choice	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓
Go To: Source												
Go To: Target	✓		✓			✓	✓					
Stop												
Partner Interact.	✓	✓	✓	✓		✓	✓		✓		✓	

Selecting and Moving Diagram Objects

To change the appearance of the diagram, or to create new objects in the middle of a crowded area, it may be necessary to move objects around.

Moving a Single Object

To select and move a diagram object:

1. Select the Pointer tool, either by clicking the Pointer tool  button on the ADF Toolbar, or by clicking the right mouse button on the diagram.
2. Click and drag an object to an empty cell. The move can only take place when the connectors that go into and out of the selected object will still flow from left to right.

Moving a Group of Objects

To select and move a group of diagram objects:

1. Select the Pointer tool, either by clicking the Pointer tool  button on the ADF Toolbar, or by clicking the right mouse button on the diagram.
2. Click and drag a marquee box around the objects you want to select. Make sure that the box surrounds all the objects.
3. Click inside the marquee box and drag; the marquee box moves with the pointer. Let go of the mouse button in an empty area that has enough free cells to hold all the objects. Workflow•BPR will move the objects inside the marquee box when it moves to the new area. Objects within the marquee box **will not** be moved if the connectors that go into and out of the selected objects do not flow from left to right in the destination cells.

Copying and Pasting a Group of Diagram Objects

Using Workflow•BPR's editing commands (Copy, Paste, and Paste Special) can save time when creating multiple or complex activity diagrams. All three of these commands are located in the Edit menu. They are active only when an Activity Decision Flow Diagram is the active window.

Copy lets you copy the objects that are selected and their associated information from a diagram to the Windows' Clipboard. Clicking the Pointer tool on an object will let you select a single object. You select a set of objects in the diagram by using the Pointer tool to drag a marquee box around all the objects. **Paste** lets you insert only the shape of the selected objects inside any diagram. **Paste Special** lets you insert both the shape and any associated information, such as data attributes or resource requirements, inside any diagram.

To copy and paste a set of diagram objects:

1. Select the Pointer tool, either by clicking the Pointer tool  button on the ADF Toolbar, or by clicking the right mouse button on the diagram.
2. Click and drag a marquee box completely around all the objects you want to select.
3. Choose **Copy** from the **Edit** menu. A copy of the diagram objects with their attributes is put on the Clipboard.

   ☞ **You can access this command by typing Ctrl+C.**
4. If you want to switch diagrams, choose the **Name of the Window** from the **Window** menu.

5. To paste only the shapes of the copied objects, 🖱 choose **Paste** from the **Edit** menu. Notice that your cursor changes from an arrow to a glue pot.

   ☞ **You can access this command by typing Ctrl+V.**

6. To paste the copied objects with their data attributes (e.g., name), 🖱 choose **Paste Special** from the **Edit** menu. Notice that the cursor changes from an arrow to a glue pot.

   ☞ **You can access this command by typing Ctrl+T.**

7. 🖱 Click inside the cell where you want the objects to appear. Workflow•BPR inserts the top-left cell from the Clipboard inside the selected cell (there does not have to be an object in the top-left cell of the original selection). The remaining objects are inserted in order as they flow to the right and down from the selected cell. The Paste or Paste Special will not be performed if there are not enough free cells to hold the copied objects.

Deleting Diagram Objects

To delete diagram objects:

1. Select the Pointer tool, either by 🖱 clicking the Pointer tool  button on the ADF Toolbar, or by 🖱 clicking the right mouse button on the diagram.
2. To delete a single object, 🖱 click on the object. The object will be highlighted.
3. To delete a group of objects, 🖱 click and drag a marquee box around the objects. Make sure that the box surrounds all the objects.
4. 🖱 Choose **Delete** from the **Edit** menu or ⌨ press the **Delete** key. The selected objects will be deleted.

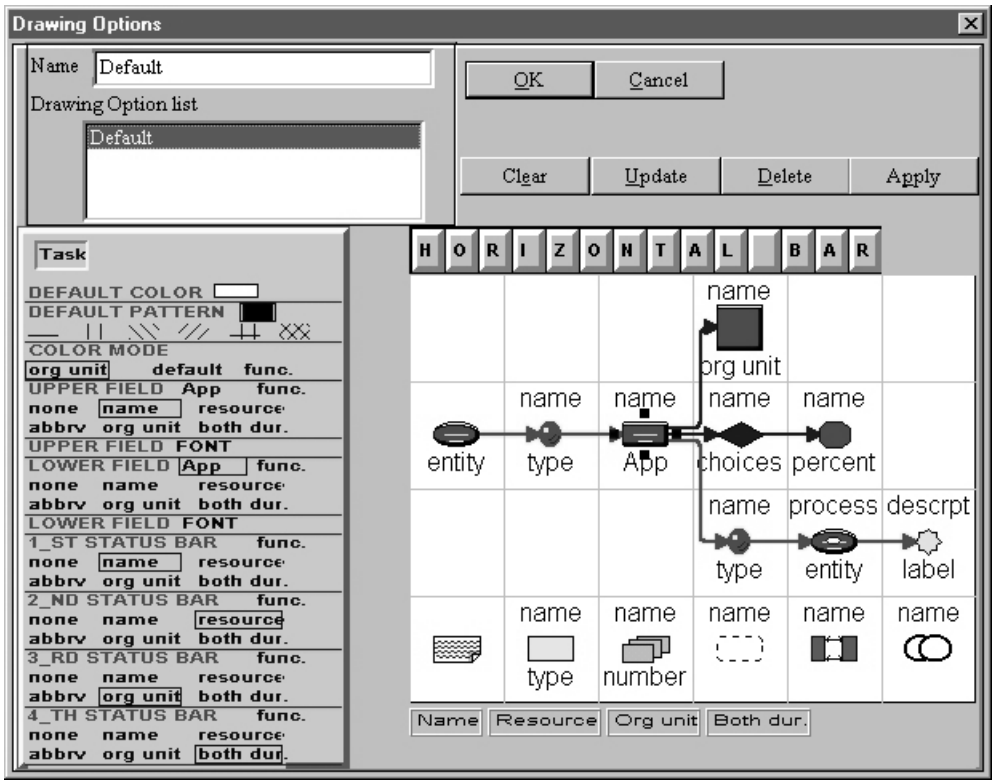
Setting Drawing Options

The **Drawing** command from the Format menu opens the Drawing Options dialog box. In Workflow•BPR, drawing options are used to change the way certain elements in your diagrams and their activity objects appear. Each Drawing Options dialog box contains a representative sample for an activity diagram that shows activity objects, lines, and bars. When an object is 🖱 clicked, the options related to the selected object are displayed in the dialog box. You can then select the options displayed in black and observe their result in the diagram. The drawing objects include External Entity, Phi, Task, Process, Decision, Choice, External Process, Go To, and Annotation. Lines include Marked lines, Unmarked lines, Arrowheads, and Grid lines. Bars include toolbars and status bars. Workflow•BPR comes with a default Drawing Option setting already defined. You can use this as a template to create customized settings. The attributes of the default Drawing Option can be changed, but you cannot delete the option itself.

Updating the default drawing option setting

To update the default drawing option settings to match the figures in this Tutorial:

1. Choose **Drawing** from the **Format** menu. The **Drawing Options** dialog box appears (see the figure below).



☞ **You can access this command by 🖱🖱 double-clicking on an empty space on the ADF toolbar.**

2. 🖱 Select "Default" from the **Drawing Option list** box.
3. To change the **External Entity** object labels: 🖱 Click on the External Entity (oval) object in the panel on the right side of the dialog box. The panel on the left side of **Drawing Options** dialog box will change to reflect the settings for an External Entity.
   * The **Upper Field** label should be set to "None."
   * The **Lower Field** label should be set to "Entity."
4. To change the **Phi** object labels: 🖱 Click on the Phi (ϕ) object in the panel on the right side of the dialog box. The panel on the left side of **Drawing Options** dialog box will change to reflect the settings for a Phi.
   * The **Upper Field** label should be set to "Name."
   * The **Lower Field** label should be set to "Type."

5. To change the **Task** object labels: Click on the Task (rounded rectangle) object in the panel on the right side of the dialog box. The panel on the left side of **Drawing Options** dialog box will change to reflect the settings for a Task.
   * The **Upper Field** label should be set to "Name."
   * The **Lower Field** label should be set to "Both Dur."
6. Click **Apply** to apply your new settings immediately.
7. Click **Update** to save your settings
8. Click **Close**.

Modeling Your Mini Process

You will now start to build a Process in an Activity Decision Flow Diagram. A mini Process that models only the first part of the entire "Sales Order Fulfillment" Process will be built. This mini Process will detail the "Receive Order" part of the Process Story and use the information that you have just entered into the Repository.

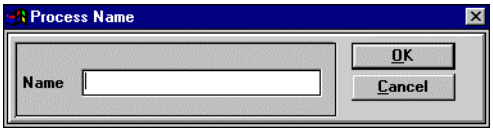
Creating/Saving a Process

When the "MyOrg" Organization File was created, an untitled Process was also created and opened. A Process window has a set of subordinate windows. The default subordinate window of a Process is the Activity Decision Flow Diagram window. Other subordinate windows of the Process can be opened, such as Tables and the Simulation window.

The Activity Decision Flow Diagram window will be used to build your "Receive Order" mini Process. The first activity will be to name the Process.

To name the Process:

1. Choose **Save Process As** from the Workflow•BPR **File** menu with the untitled Process opened. The **Process Name** dialog box appears (see the figure below).



   * For an untitled Process, the **Save Process** command from the **File** menu will also bring up the **Process Name** dialog box.
2. Type "Receive Order" in the **Name** text box.
3. Click **OK** or press **Enter** when you are finished.

You can use other commands of the File menu to open and create new Processes.

Creating Your Mini Process Model Diagram

You are ready now to build a Process Model that contains a set of connected objects. This mini Process Model will model only the "Receive Order" part of the "Sales Order Fulfillment" Process. The next four sections will take you through some of the procedures necessary for building the Process Model, and then will provide you with the information to continue building the Process Model on your own. If you feel comfortable using the tools to create a Process Model, skip to the figures on page 46 and use that as a blueprint for creating your mini Process Model (remember to include the media). Otherwise, proceed through the next five sections.

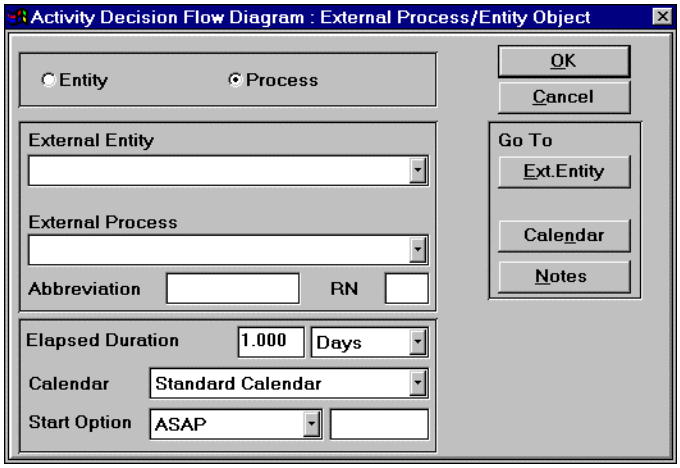
Beginning the Mini Process Model

To begin the mini Process Model diagram:

Defining an External Entity

To define an External Entity:

1. Click the **External** tool button  on the **ADF Toolbar**. Notice that your cursor changes to a plus sign with an External symbol in the upper right quadrant.
2. Click inside a cell on the second row of the grid to insert an Entity Object inside that cell.
3. Select the Pointer tool, either by clicking the Pointer tool  button on the ADF Toolbar, or by clicking the right mouse button on the diagram.
4. Double-click on the Entity Object you have just inserted. The **External Process/Entity Object** dialog box appears (see the figure below).

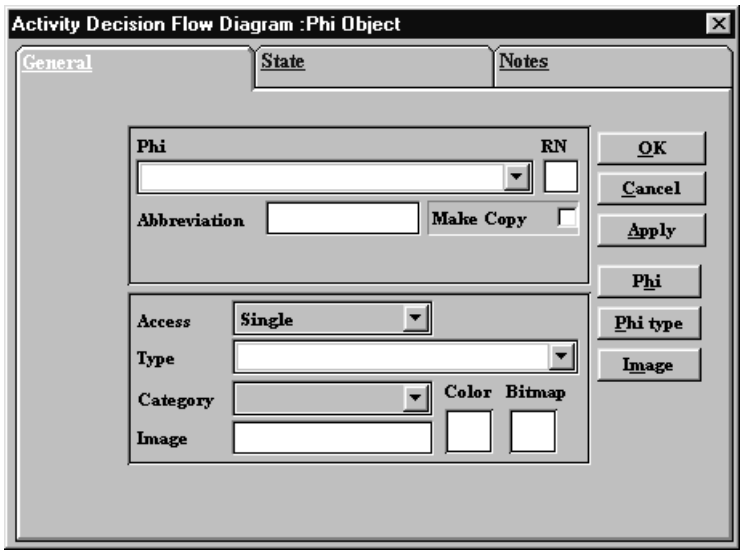


5. Select the **Entity** radio button.
6. Select "Customer" from the **External Entity** list.
7. Click **OK** or press **Enter**.

Defining a Phi

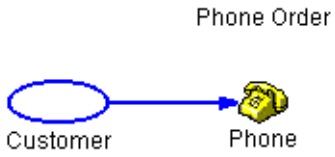
To define a Phi:

1. It is assumed that the customer is making a phone call to place an order; therefore, the output of "Customer" is a "Phone Order" Phi of the Phi Type "Phone Call." Click the **Phi** tool button  to draw a Phi object to the right of the "Customer" object, then double-click on the **Phi** object to define it.
2. Click inside the cell to the right of the "Customer" object to insert a Phi Object inside that cell.
3. Select the Pointer tool, either by clicking the Pointer tool  button on the ADF Toolbar, or by clicking the right mouse button on the diagram.
4. Double-click on the Phi Object you have just inserted. The **Phi Object** dialog box appears—open to the **General** tab (see the figure below).



   * Select "Phone Order" from the **Phi** list.
   * Click **OK** or press **Enter**.
5. Use the **Connector** tool button  to connect the two objects in your diagram.
   * Click from the center of the "Customer" External Entity object to the center of the "Phone Order" Phi object.

After completing the above steps, your mini Process Model should look like the following figure:

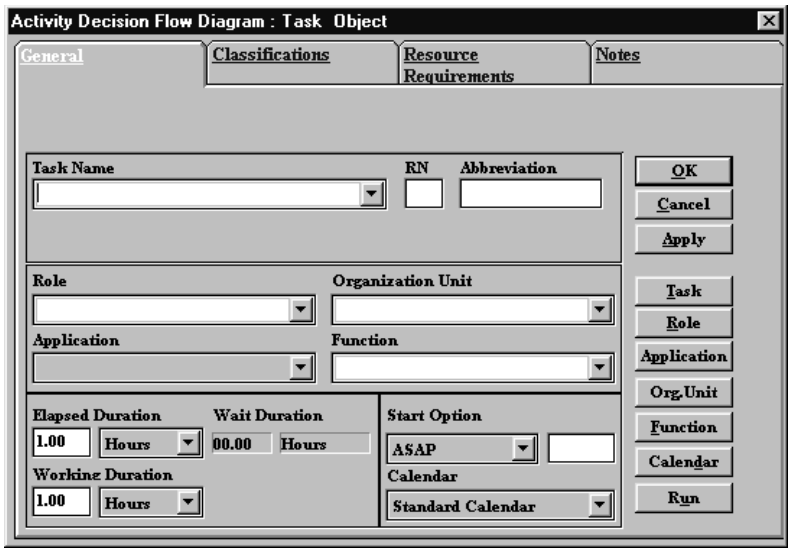


Defining a New Task

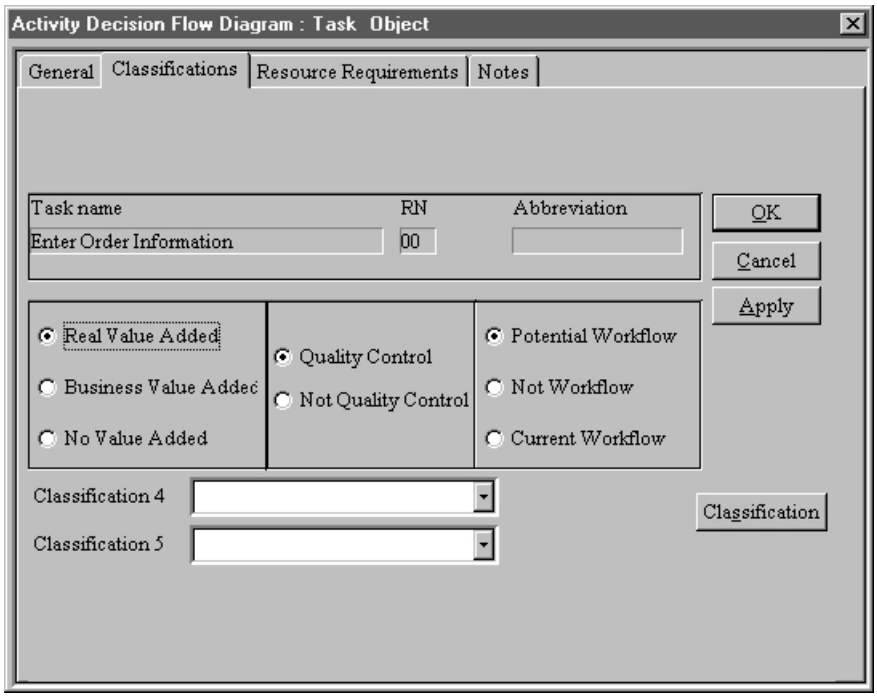
The "Enter Order Information" Task is the next object for your mini Process Model; however, it is one of the Tasks that was not entered into the Data Repository. This was intentional so that you could go through the procedure of entering data while modeling.

To model the "Enter Order Information" Task within the "Receive Order" Process:

1. Click the **Task** tool button on the **ADF Toolbar**. Notice that your cursor changes to a plus sign with a Task symbol in the upper right quadrant.
2. Click inside the cell that is just to the right of the "Phone Order" Phi object to insert a Task Object inside that cell.
3. Select the Pointer tool, either by clicking the Pointer tool button on the ADF Toolbar, or by clicking the right mouse button on the diagram.
4. Double-click on a Task Object you have just inserted. The **Task Object** dialog box appears—open to the **General** tab (see the figure on the next page).

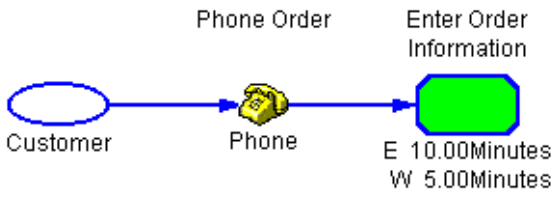


5. ⌨ Type "Enter Order Information" in the **Task Name** combo box.
6. 🖱 Select "Order Processing" from the **Organization Unit** combo box.
7. 🖱 Select "Order Processing Clerk" from the **Role** combo box.
8. 🖱 Type "Sales" in the **Function** combo box. This will be added to the Repository.
9. ⌨ Type "10" in the **Elapsed Duration** text box and then 🖱 select "Minutes" as the appropriate time unit from the **Elapsed Duration** unit list box.
10. ⌨ Type "5" in the **Working Duration** text box and then 🖱 select "Minutes" as the appropriate time unit from the **Working Duration** unit list box.
11. 🖱 Click the **Classification** tab at the top of the **Task Object** dialog box. This tab allows for the selection of classification settings (see the figure on the next page).



12. Click the **Real Value-Added** radio button to set the **Value-Added** (Classification 1) item associated with the Task.
13. Click the **Not Quality Control** radio button to set the **Quality Control** (Classification 2) item associated with the Task.
14. Click the **Potential Workflow** radio button to set the **Workflow** (Classification 3) item associated with the Task.
15. Click **OK** or press **Enter**. The Task Object will be defined with the attributes you have entered and a new Task item, "Enter Order Information," will be stored in the Repository.

After you have created and defined the "Enter Order Information" Task, make a connection from the "Phone Order" Phi to the Task.



If the labels of the objects on your screen do not match the labels that appear in the figure above, then go to the section entitled "Setting Drawing Options" to change settings so that the labels will match.

Continuing the Mini Process Model

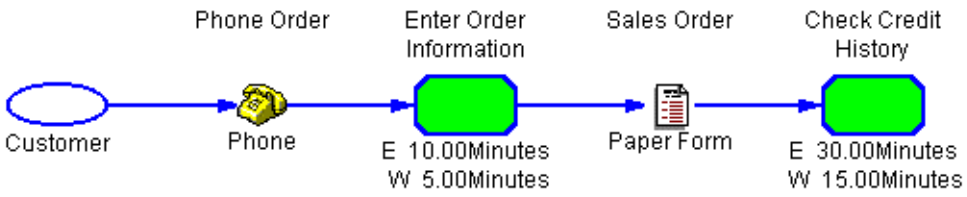
In this stage, two more objects will be added: a Phi and a Task. The names and the order of the objects will be provided and then you will be asked to use the procedures you learned in the previous two sections to create, define, and connect the objects.

The first object is a Phi. This Phi should be inserted after the "Enter Order Information" Task. This Phi has not been entered in the Repository, so you have to create it when you define the Phi object. The following table provides the name and attributes of the Phi:

Phi	*Type*	*Category*
Sales Order	Paper Form	Paper Document

The next object is a Task and should be inserted after the "Sales Order" Phi. The name of the Task is "Check Credit History" and you have already entered it into the Repository; therefore, just select the name to define the Task Objects.

After you have created and defined the two objects, make connections from left to right.

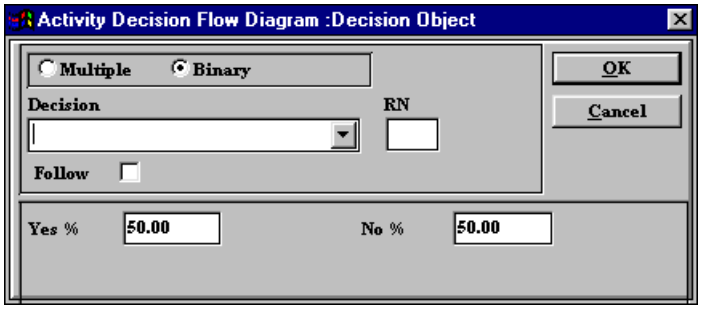


Modeling a Decision

After the Accounts Receivable Clerk checks the credit history of the customer, there are two possible paths for the Process. The path depends on whether the customer is on file or not. Therefore, the next object in the Process is a Binary Decision called "Customer on File?" If the customer is on file, then the next Task would be "Approve Customer Credit," with the "Credit Report" Phi as an input. If the customer is not on file, then the next activity would be the "Run Standard Credit Check" External Process, with the "Customer Credit Information" Phi as an input.

To add the Binary Decision and connecting it to the appropriate Phis:

1. Click the **Decision** tool button  on the **ADF Toolbar**. Notice that the cursor changes to a plus sign with a Decision symbol in the upper right quadrant.
2. Click inside the grid cell to the right of the "Check Credit History" Task. A Decision object will be inserted inside that cell.
3. Select the Pointer tool, either by clicking the Pointer tool  button on the ADF Toolbar, or by clicking the right mouse button on the diagram.
4. Double-click on the Decision object. The **Decision Object** dialog box appears (see the figure below).



* The **Binary** radio button is set by default, so you do not have to select it.

5. Select "Customer on File?" from the **Decision** combo box (you have already entered this Decision in the Repository). The percentages for the **Yes** and **No** Choices will be automatically filled in.
6. Click **OK** or press **Enter**. The Decision object will be defined as "Customer on File?"
7. Connect the "Check Credit History" Task to the "Customer on File?" Decision.
8. Insert a new Phi one (1) grid cell to the right of the "Customer on File?" Decision. Define this Phi as "Credit Report," with a Phi Type of "Paper Form" and a Phi category of "Paper Document."

9. Create a **Yes** connection from the "Customer on File?" Decision to the "Credit Report" Phi.

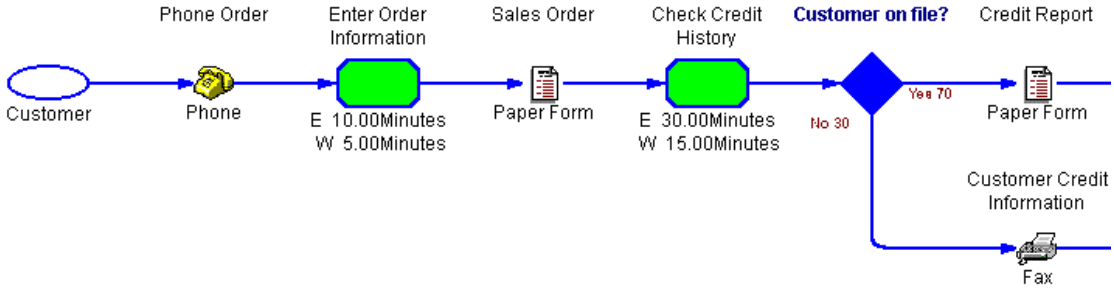
   * Click and drag from the *area near the right point of the Decision diamond icon* of to the *center* of the Phi. Workflow•BPR draws a connector from the right point of the diamond to the Phi.

10. Insert a new Phi one (1) grid cell below the "Credit Report" Phi. Define this Phi as "Customer Credit Information," with a Phi Type of "Fax" and a Phi category of "Paper Document."

    * You will have to attach a bitmap to the "Fax" Phi Type. Refer to the figure at the end of these instructions to see which bitmap.

11. Create a **No** connection from the "Customer on File?" Decision to the "Customer Credit Information" Phi.

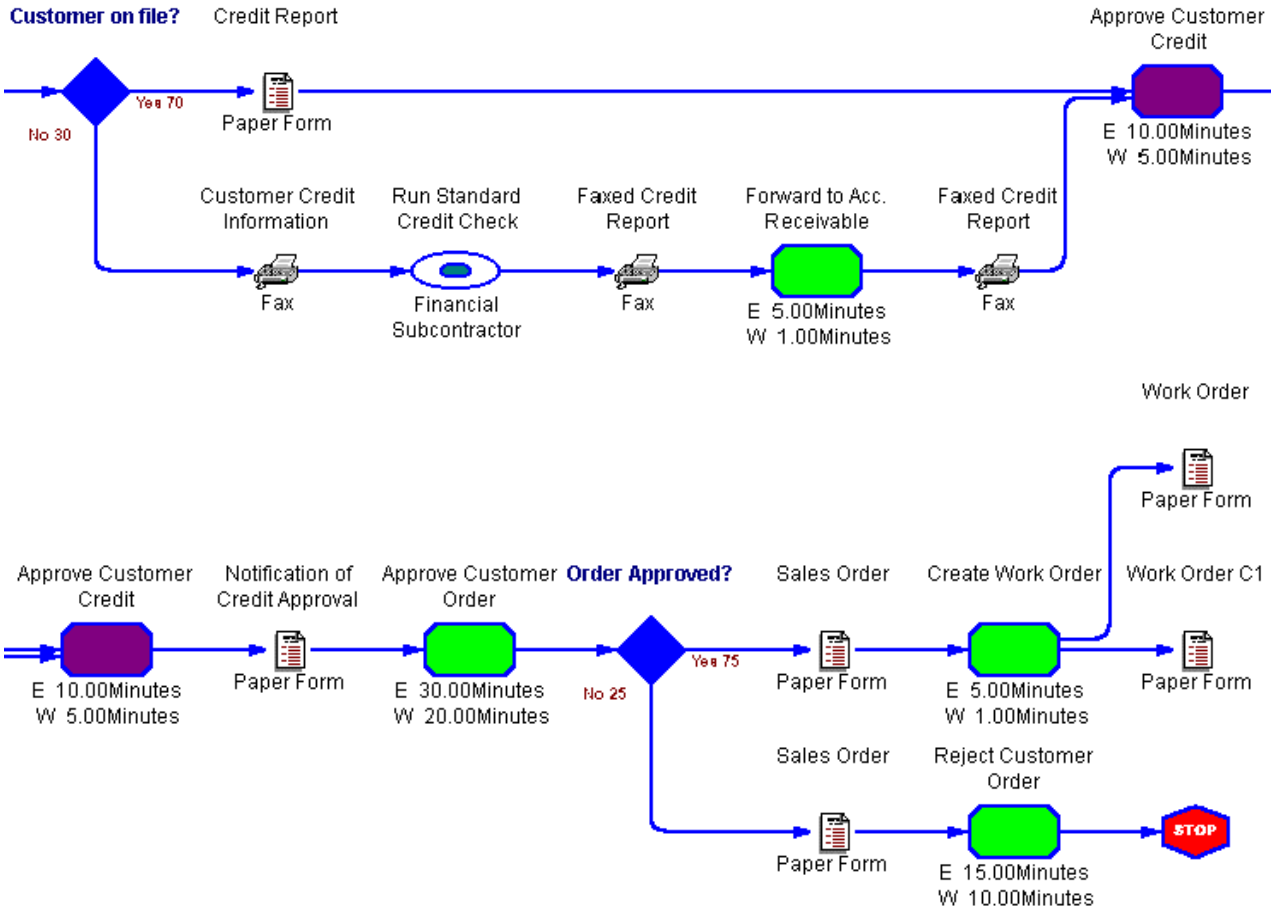
    * Click and drag from the *area near the bottom point of the Decision diamond icon* of to the *center* of the Phi. Workflow•BPR draws a connector from the bottom point of the diamond to the Phi.



Completing the Mini Process Model

The figures below display how your final mini Process Model should appear. The task now is to complete the model using the techniques you have learned in the last four sections. Refer to the tables in the section entitled "Identifying Relevant Data." Begin on Page 8 for any additional information needed to define the objects.

✍ **The Process Model you will be creating is too long to be displayed in one figure. Therefore, the next two figures display the Process in two stages. As you build the Process, the last Task in the first figure is actually the same object as the first Task in the second figure. You should connect the objects appropriately to create one Process.**



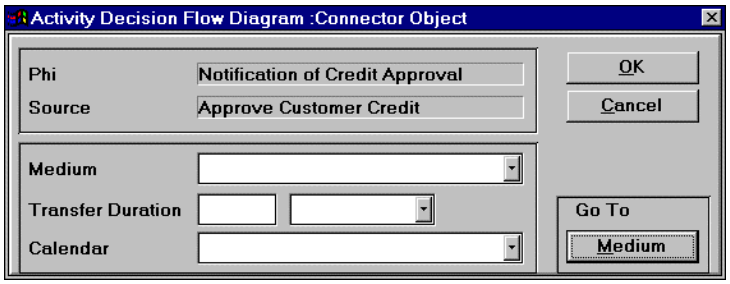
The data for the media is not displayed in the figure presented above, so you have to use Table 5 on page 10 to enter this information. If the Phi listed on the table has a source and a destination activity, then you can double-click on the connector on either side of the Phi in the drawing to enter the media information. Otherwise, you can only double-click on the source or destination side of the Phi, as indicated in the table.

The following procedure is an example of modeling a Medium:

1. Select the Pointer tool, either by clicking the Pointer tool button on the ADF Toolbar, or by clicking the right mouse button on the diagram.
2. Double-click on the connector between the "Approve Customer Credit" Task and the "Notification of Approval of Credit" Phi.

   OR

   Double-click on the connector between the "Notification of Approval of Credit" Phi and the "Approve Customer Order" Task. The **Connector** dialog box appears (see the figure below).



3. Select "Inter-Office Mail" from the **Medium** list box. The 20 minutes Transfer Duration will appear in the **Transfer Duration** text and list boxes.
4. Click **OK** or press **Enter**.

The output of the "Create Work Order" Task at the end of the Process is a "Work Order" Phi and a copy of the "Work Order" Phi. Thus, you have to make a copy of the Phi.

To make a copy of the "Work Order" Phi (you have already created the original).

1. Insert a Phi object in the location indicated by the figure above.
2. 🖱🖱 Double-click on the Phi object. The **Phi Object** dialog box appears.
3. 🖱 Select "Work Order" from the **Phi** list.
4. 🖱 Click the **Make Copy** check box. A **Copy Number** text box and a **Copy Color** box will appear below the Phi name.
5. ⌨ Type "1" in the **Copy Number** text box.
6. 🖱 Click **OK** or ⌨ press **Enter**. A message box will appear that says, "The Copy Number exceeds the Maximum Copies currently allowed for the Phi." Click OK to change the maximum copies allowed or Cancel to return."

Saving Your Mini Process

When you are finished with modeling your mini Process Model, save it. We recommended that you save your file frequently. To save a Process:

🖱 Select **Save Process** from the **File** menu.

☞ **You can access this command by typing Ctrl+S.**

Analyzing Your Mini Process

Workflow•BPR provides two powerful methods of Process analysis: Cases and Simulation. In addition to these two methods, Workflow•BPR provides a set of pre-defined analysis outputs in the form of tables, charts, and diagrams. These outputs allow for viewing the results of your model analysis.

Performing Case Analysis

As a result of reviewing the completed mini Process, you will discover it is possible to perform the Process in four ways. This is true because the Process includes two Decisions, and each Decision causes a fork in the road or path of activities. Only one path of activities can be followed when a Process is performed. The Choice that is selected when a Decision occurs determines which fork or path of activities is to be performed. Each Choice has a probability of occurrence, which means that the path taken by the Choice will have that probability. Each Choice creates a unique path through the Process, with only one path being performed at a time. Workflow•BPR provides a unique facility of separating and analyzing the individual paths that comprise the complexity of a Process. These individual paths are called **Cases**.

One possible Case (Case 1) for the "Receive Order" Process would have the following Tasks:

1. Enter Order Information
2. Check Credit History
3. Approve Customer Credit
4. Approve Customer Order
5. Create Work Order

The Choices that are made to lead to Case 1 are:

Decision	*Choice*	*Probability*
Customer on file?	Yes	.70
Order Approved?	Yes	.75

As you can see, Case 1 has two Decisions that determine its path of activities. Therefore, the probability that Case 1 will occur (out of the four possible cases) is determined by multiplying the probability of each Choice that was selected for the Case. This can be done for all four cases:

Case	*Customer on file?*	*Order Approved?*	*Probability*
Case 1	Yes (.70)	Yes (.75)	0.70 x 0.75 = 0.525
Case 2	No (.30)	Yes (.75)	0.30 x 0.75 = 0.225
Case 3	Yes (.70)	No (.25)	0.70 x 0.25 = 0.175
Case 4	No (.30)	No (.25)	0.30 x 0.25 = 0.075
			Total = 1.000

Being able to isolate and analyze each Case provides a way to validate your Process and evaluate the relevant aspects characterizing the behavior of each Case. Some of the most relevant aspects that characterize a Case are percentage of occurrence, cost, and cycle time.

For each Case, a separate Activity Decision Flow Diagram that contains only the activities that occur in the path of that Case can be generated. In the Activity Decision Flow Diagram, you can create and review a number of pre-defined analysis outputs in the form of tables, charts, and diagrams. A sample of these types of analyses is discussed in the section entitled "Reviewing Tables, Charts, and Diagrams" on Page 54.

Since there are only four Cases that can be easily traced in your Process Activity Decision Flow Diagram, it might not be justified to perform Case analysis. However, for Processes that have thousands of Cases, this analysis will prove very useful. The following sections describe how to analyze the individual Cases.

Opening the Process Cases Window

To open the Process Cases window, it is first necessary to go through an intermediate window. This intermediate window, the Expanded Process window, displays an expanded version of your Process. If the Process contains Process objects which model other lower-level Processes, all the activities in the lower-level Processes will be brought up to the top-level. There are no Process objects in the "Receive Order" Process, so the Expanded Process window will just display the same Process.

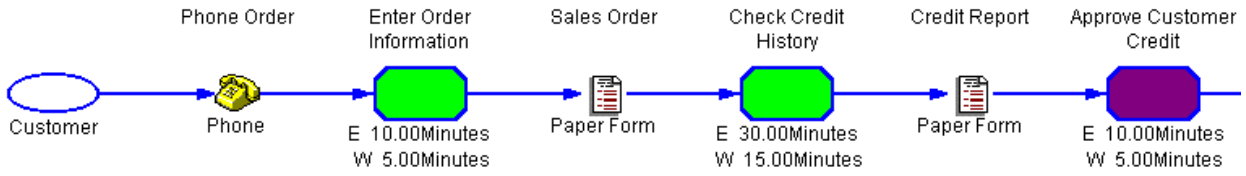
To open the Process Cases window:

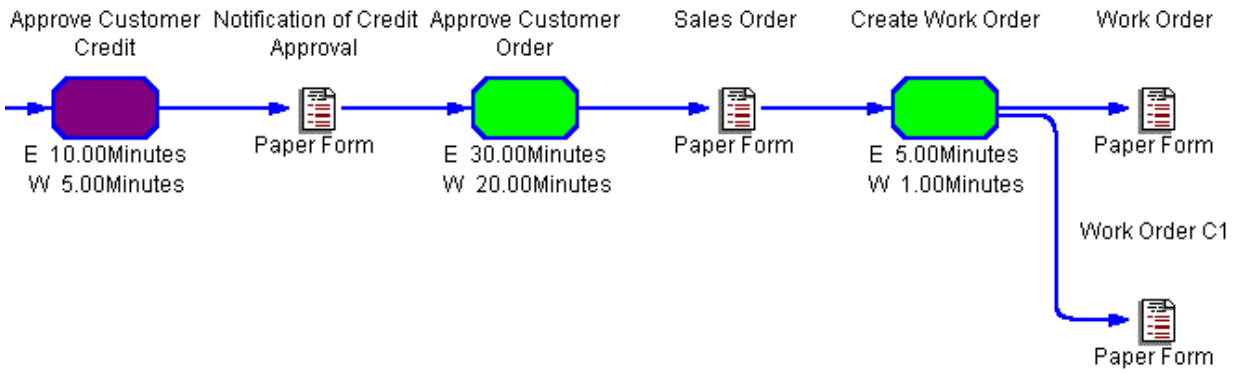
1. Click on the **Expand Process** tool button  from the **ADF Toolbar**. The **Expanded Process** window appears.
2. Click on the **Case** tool button  from the toolbar in the **Expanded Process** window. The **Select Number of Cases** dialog box appears. This dialog box will prompt you to determine whether to display either all the cases or a subset of them (the default is to display all cases).
3. Click **OK** to choose all cases. The **Process Cases** window appears.

Reviewing Your Cases

The Process Cases window is tiled into two windows, with the upper window displaying the Case View. This is a passive view, in which you can move and rearrange icons, but you can not edit its contents nor perform analyses. The figures below are a sample of the Case View:

> ✍ **The Generated Case you will be viewing is too long to be displayed in one figure. Therefore, the next two figures display the Case in two stages. The Case you will see will be connected appropriately to create one Process.**





The lower part of the Process Cases window displays the Cases Table (see the figure below); the first column displays the Case number and the second column displays the percent probability that each Case will occur (the Cases are sorted from highest to lowest probability). The remaining columns display the Decisions in the column headings and the Choices that were selected for each Case in the rows. Not all Decisions are applicable for each Case and, therefore, there may be no listing of a Decision Choice for some Cases. The figure below is the Cases Table, which you should consider for your mini Process Model, as it contains the four possible Cases:

	Percent	Customer on file?	Order Approved?
1	52.50000	Yes	Yes
2	22.50000	No	Yes
3	17.50000	Yes	No
4	7.500000	No	No

Generating a Case

A Generated Case is an Activity Decision Flow Diagram resulting from your Process Model. A Generated Case is a file that can be saved, renamed, and deleted. You normally do not need to save the file, since you can generate it as required. In order to generate a Case, you need to be in the Process Cases window.

To generate a Case for a particular set of Choices (situations):

1. 🖱 Click on a row from the **Cases** table to select a **Case** (the default is Case 1). The diagram appropriate to the selected Case will appear in the **Case View**.
2. 🖱 Click the **Generate** tool button  on the **Cases** toolbar. The **Process Name** dialog box appears.
3. ⌨ Type "Case 1" in the **Name** edit box to name your generated Case.
4. 🖱 Click **OK** or ⌨ press **Enter**. The **Activity Decision Flow Diagram** of the selected Case appears.
5. 🖱 Choose **Save Process** from the **File** menu to save the Generated Case.

   ☞ **You can access this command by typing Ctrl+S.**
6. Repeat the above steps for Case 2 and Case 3. However, it is not necessary to save these Cases.

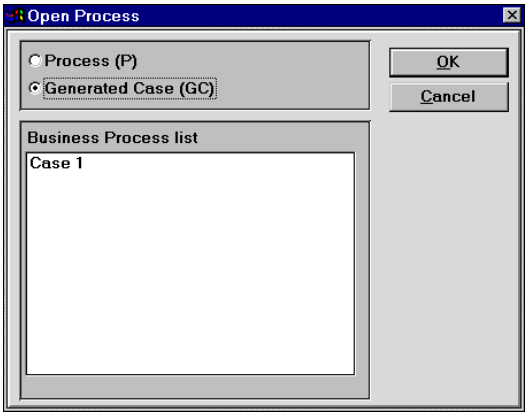
   * Note that you can switch between the **Cases** window and the **Generated Case** window by using the files listed in the **Window** menu.

Reviewing Tables, Charts, and Diagrams

For any generated Case, the data can be reviewed in different formats depending on its type and the purpose that is served. The three types of formats are tables, charts, and diagrams. In this section, we will illustrate an example of each type. It is necessary to open one of the Cases you generated and saved in the previous section.

To open a Generated Case:

1. Choose **Open Process** from the **File** menu. The **Open Process** dialog box appears (see the figure below).



☞ **You can access this command by typing Ctrl+O.**

2. Click the **Generated Case (GC)** radio button.
3. Select "Case 1" from the **Process** list.
4. Click **OK** or press **Enter**. The **Case,** in an **Activity Decision Flow Diagram** window, appears.

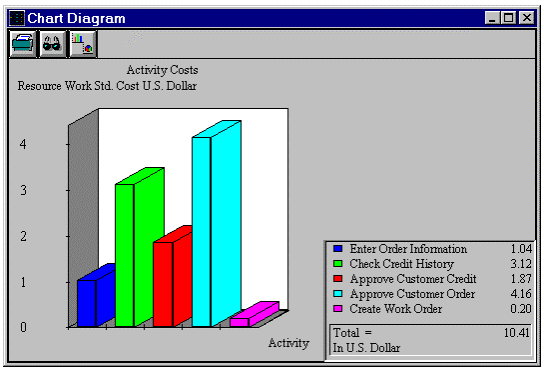
Leave this Case window open, because it will be used for the next two sections.

Viewing the Activity Costs Chart

Quick Table Charts are provided to allow for quickly displaying table information in a chart format. The Activity Costs chart is one of several quick table charts, and it shows the total costs due to Resources for each Task in a Generated Case. Refer to Section 1 of Chapter 6 of the User's Guide for more information about charts.

To open the Cost chart with the "Case 1" Generated Case as the active window:

1. Choose **Quick Charts** from the **View** menu. A sub-menu appears.
2. Choose **Activity Costs**. The **Activity Costs** chart appears (see the figure below).



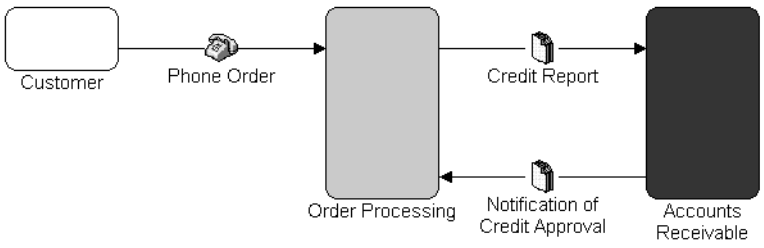
Viewing the Communication Diagram

Communication Diagrams show a Process diagram from the perspective of a specified Entity—for example, an Organization Unit—and its interdependencies with other Entities. Workflow•BPR defines these interdependencies by the Phis that flow between the Entities. The Response Entity is the focal point of the diagram. Communication Diagrams are used to validate the flow between Organization Units in your organization; as such, the Communication Diagrams can be used for enterprise modeling.

To create a Communication Diagram, you must first open a Generated Case. When you select the Communication Diagram command from the View menu, Workflow•BPR opens a Communication Diagram window as a subordinate window inside the Generated Case window. The Generated Case window has precedence over the Communication Diagram window. Otherwise, this window has all of the characteristics of a standard window, including its own toolbar.

To open a Communication Diagram with the "Case 1" Generated Case as the active window:

1. Choose **Communication Diagram** from the **View** menu. The Communication Diagram window appears with the default Communication Diagram View.
2. To select a Response Entity, which is the focal entity for the diagram, click the Response Entity button. The Response Entity dialog box appears.
3. Select "Order Processing" from the Response Entity list. The Communication Diagram displays the dialog box for that particular Response Entity.



Performing Process Simulation Analysis

A Simulation of the Process is one of the two major ways that Workflow•BPR allows for analyzing the Process. The other way to analyze a Process is to use a Weighted Average analysis, which will be covered in the section entitled "Performing Weighted Average Analysis" on Page 80. This section will provide a brief glimpse of simulation. For a more thorough review, please refer to Section 2 in Chapter 4 of the User's Guide.

A Simulation analysis will provide measurements that reflect a short period of time and a specific throughput:

7. Short-term Resource (staffing) requirements (e.g., the Christmas rush).
8. Bottleneck analysis: What Tasks in the Process have the largest number of items in the queue.

To move to the Process Simulation Window:

1. Open the "Receive Order" Process.
2. Click on the **Expand Process** tool button from the **ADF Toolbar**. The **Expanded Process** window appears.
3. Click on the **Simulation** tool button  from the toolbar in the **Expanded Process** window. The **Process Simulation** window appears.

Setting up the Simulation Initial Conditions

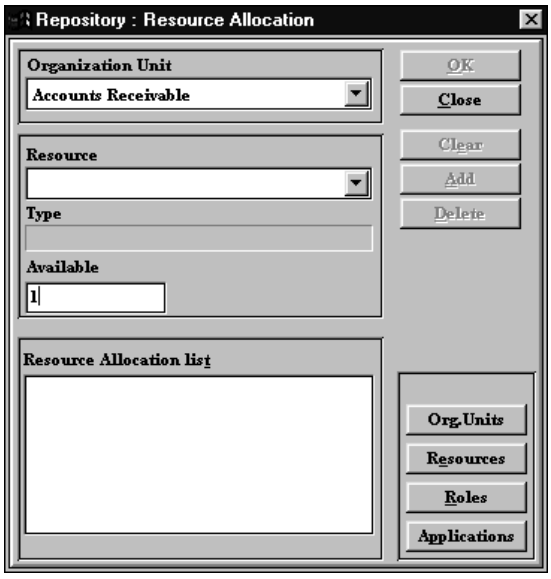
You can set many options for running a Simulation. Examples are the number of jobs to be simulated and the frequency at which they arrive. The simulation options will not be reviewed at this time (refer to Chapter 5 of the User's Guide for more information). You will use the Simulation Option dialog box to change the initial conditions of a Simulation.

To simulate your model, it is necessary to set up the Resource allocation for the Organization Units that are involved in the Process. You have already assigned the Roles to the Tasks. Resource allocation is a distribution of the Roles to the Organization Units so that they are available to do the Tasks. There are two ways to do Resource allocation: through the **Repository Resource Allocation** dialog box and through the **Simulation Setup** dialog box.

Using the Resource Allocation Dialog Box

To create your Resource allocations:

1. Close the Process Simulation window.
2. Choose **Organization Data** from the **Repository** menu. A sub-menu appears.
3. Choose **Resource Allocation**. The Resource Allocation dialog box appears (see the figure below).



4. Select "Accounts Receivable" from the **Organization Unit** box**.**
5. Select "Accounts Receivable Clerk" from the **Role** box to associate it with the selected Organization Unit.
6. Type "2" in the **Available** text box.
7. Click **Add**.
8. Repeat steps 4 through 6 for the following:
   * "Accounts Receivable Manager" with "1" available.
9. Repeat steps 3 through 6 for "Order Processing" with the following Roles:
   * "Order Processing Clerk" with "3" available.
   * "Order Processing Manager" with "1" available.
10. Click **Close**.
11. Re-open the **Process Simulation** window.

Using the Simulation Setup Dialog Box

To set a Resource Allocation from the Simulation Setup dialog box:

1. Open the "Receive Order" Process.
2. Move to the **Process Simulation** window.
3. Click on the **Simulation Setup** tool button  from the **Simulation** window toolbar. The **Simulation Setup** dialog box appears.
4. Click on the **Resource Allocation** tab. The "Accounts Receivable Clerk" is listed in the table.
5. Type "2" in the cell under the **Allocated** column in the row for "Accounts Receivable Clerk."
6. Click **OK** or press **Enter**. Two "Accounts Receivable Clerks" will be available for the "Order Processing" Organization Unit.

Running the Simulation

To run a Simulation:

1. Open the "Receive Order" Process.
2. Move to the **Process Simulation** window.
3. Click on the **Simulation Setup** tool button from the **Simulation** window toolbar. The **Simulation Setup** dialog box appears.
4. Click on the **Animation** tab. De-select the **No Animation** option.
5. Click **OK** or press **Enter**.
6. Click on the **Run** tool button  from the **Simulation** window toolbar. The "Receive Order" Process will be simulated. Because you have selected the animation option, you will be able to see the Phis move through the process. Use the **Animation Speed** option under the **Animation** tab in the **Simulation Setup** to adjust the speed of the simulation.
7. Once the Simulation Completed message appears, click **OK** or press **Enter** to display the results of the simulation.

During the Simulation, jobs will be started that show the Phis moving between Tasks. Queues will be filled with the Phis, Resources will drop down to the Tasks to Process the Phis, and the Simulation result tables will be updated dynamically.

Reviewing Simulation Analysis

Simulation analysis can be seen during the Simulation Process and the results shown immediately after a Simulation. The four types of tables are generated by the Simulation are:

- **Job Table**: includes cycle duration, working duration, Process duration, and total cost.
- **Resource Table**: includes utilization, busy time, idle time, and total costs.
- **Activity Table**: includes total, working, and blocked durations, and total costs.
- **Queue Table**: includes the maximum queue and queue duration.

The data will not be the same each time a Simulation is performed, because Simulations reflect a short period of time with a specific throughput. Any reports can be exported to Microsoft® Excel for comparison and analysis.

Completing Your Process Model

John, one of your colleagues on the BPR team, decided to complete the entry of information obtained during the interviews and meetings. Using a copy of Workflow•BPR, he created an Organization File called "HisOrg" to enter the organization and Process Repository data. He then completed the data entry at the same time that you were analyzing your mini Process. Kim, from the Personnel office, also used another copy of Workflow•BPR to create an Organization File called "HerOrg" to enter salaries for employees based on their titles. Now, all that needs to be done is to combine the data created by John and Kim with your work.

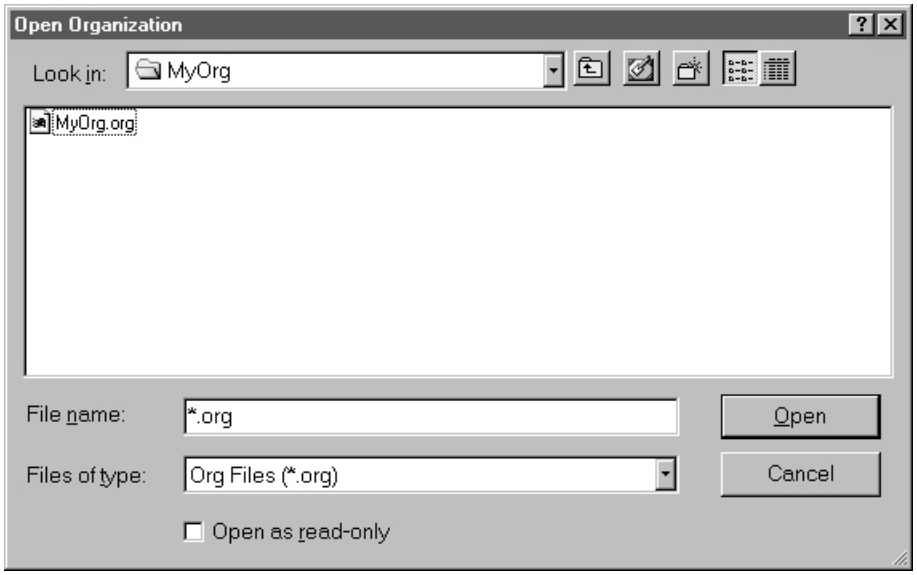
Importing Your Mini Process

Workflow•BPR is a single-user application, however, it has a special feature that allows users to work in parallel and merge their work so that they can collaborate in Process Modeling. This feature allows for importing Processes from one organization directory to another. When importing a Process Model, you also import all the data that is in the Repository of the source Organization File.

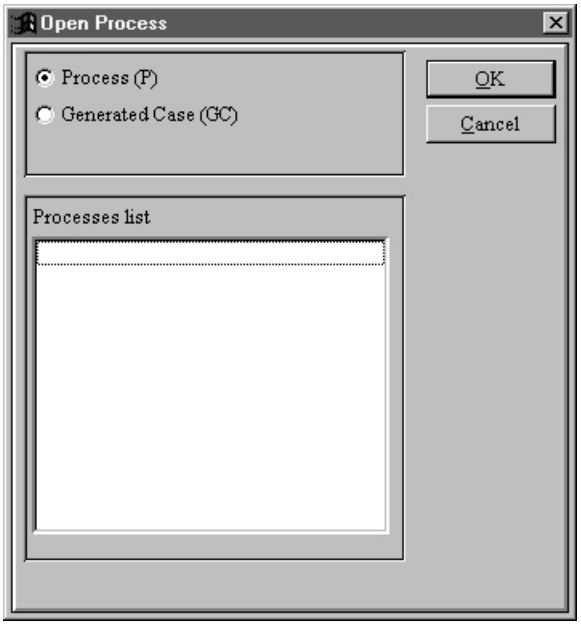
You will now use the Import Processes feature to combine all the data created by John and Kim with your work. You will start with the "HisOrg" Organization File created by John and import your work into his Organization File. Then you will take the "HerOrg" Organization File created by Kim and import the combined work of John and yours into her Organization File.

To import Process data from one Organization File to another:

1. Choose **Open Organization** from the **File** menu. The "MyOrg" Organization File will automatically close, and will prompt you if any changes you made were not yet saved. The **Open Organization** dialog box appears (see the figure on the next page).



2. Click the **Up One Level** button to go up the tree. You should see four (4) folders: "Complete," "HisOrg," "HerOrg," and "MyOrg."
3. Double-click on the "HisOrg" folder from the list. You should see "HisOrg.org" listed.
4. Select "HisOrg.org" from the list.
5. Click **Open** or press **Enter**. Workflow•BPR opens the Organization File and displays the **Open Process** dialog box in order for you to open a Process diagram (see the figure below).



* There are no Process Models in this Organization File, so click **Cancel** to close the **Open Process** dialog box.

6. Choose **Import/Export** from the **File** Menu. A sub-menu will appear.

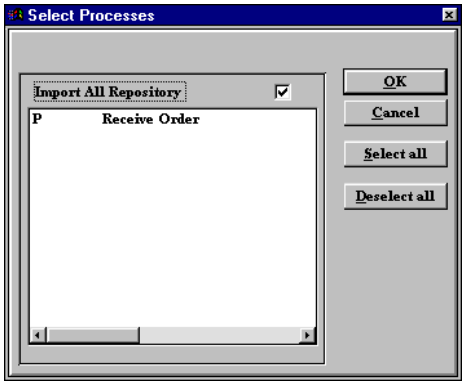
7. Choose **Import Processes** from the sub-menu. The **Select Source Organization** dialog box appears (see the figure below).

* Navigate through the tree chart in the **Directories** box and then select the "MyOrg" folder.

8. Click the **Up One Level** button to go up the tree. You should see four (4) folders: "Complete," "HisOrg," "HerOrg," and "MyOrg."

9. Double-click on the MyOrg" folder from the list. You should see "MyOrg.org" listed.

10. Double-click on the Organization File "MyOrg.org." The **Select Process** dialog box appears (see the figure below).



11. Select the **Import All Repository** check box.
10. Select the "Receive Order" Process you previously modeled.
11. Click **OK**. The "Receive Order" Process is imported into the "HisOrg" Organization File.

Now you have combined your Process and Repository data with John's Repository data. To add Kim's Repository data, repeat the above steps by opening her Organization File *c:\wfbpr\samples\tutorial\herorg* and importing the "Receive Order" Process residing in folder *c:\wfbpr\samples\tutorial\hisorg* (remember, do not import the Process residing in folder *c:\wfbpr\samples\tutorial\myorg*). Note that the final destination is *c:\wfbpr\samples\tutorial\herorg*. Your Process, with all the combined data, now exists in the *c:\wfbpr\samples\tutorial\herorg* folder.

Modeling the Rest of Your Process

Up to this point, you have been working on the "Receive Order" portion of the whole Process. Now you will complete the remainder of the Componex Process. To accomplish this action, you create a new Process Model called "Sales Order Fulfillment," incorporate the "Receive Order" Process Model you developed, and then finish the model.

> ✍ **If you want to skip this phase of the tutorial and continue with the analysis of the As-Is and then the creation of the To-Be Process, then skip to the section entitled "Verifying and Editing Your Process Data" on page 73 and continue the tutorial. In that case, you should use the processes from *c:\wfbpr\samples\tutorial\complete\ complete.org*.**

To create a new Process:

1. 🖱 Choose **New Process** from the **File** menu. An untitled Process is created and opened.

   ☞ **You can access this command by typing Ctrl+N.**

2. 🖱 Choose **Save Process** from the **File** menu or 🖱 choose **Save Process As** from the **File** menu. The **Process Name** dialog box appears.
3. ⌨ Type "Sales Order Fulfillment Process" for your new Process in the **Name** text box.
4. 🖱 Click **OK** or ⌨ press **Enter**. A new Process named "Sales Order Fulfillment" will be created.

You will be using the "Sales Order Fulfillment" Process Model from now on.

There will be no need for further data entry at this point, unless you choose to experiment with some deviation from the Process Model. All the data required are already present in the Repository of HerOrg.

The next four sections will walk you through some of the steps necessary to complete the Process Model. If you had difficulty modeling any part of the Process, or if you would like to check and verify your model, you can open a completed version of this Process in the folder *c:\wfbpr\samples\tutorial\complete\complete.org*.

Modeling a Process Object

A Process in an Activity Decision Flow Diagram is a representation of another Activity Decision Flow Diagram that contains objects such as Tasks, Phis, Decisions, and perhaps, other Processes. By including Processes within other Processes, a hierarchical tree structure is created, with Processes as the branches and Tasks as the leaves. You are not required to use Process objects within a drawing. That is, you can model all the work of the organization at the Task level within one drawing, even if this drawing is very complex. In this way, it is a simple matter for you to keep track of and update all your Tasks and easily print the entire Process for viewing. However, it may be difficult to understand the process because of all the details that are shown.

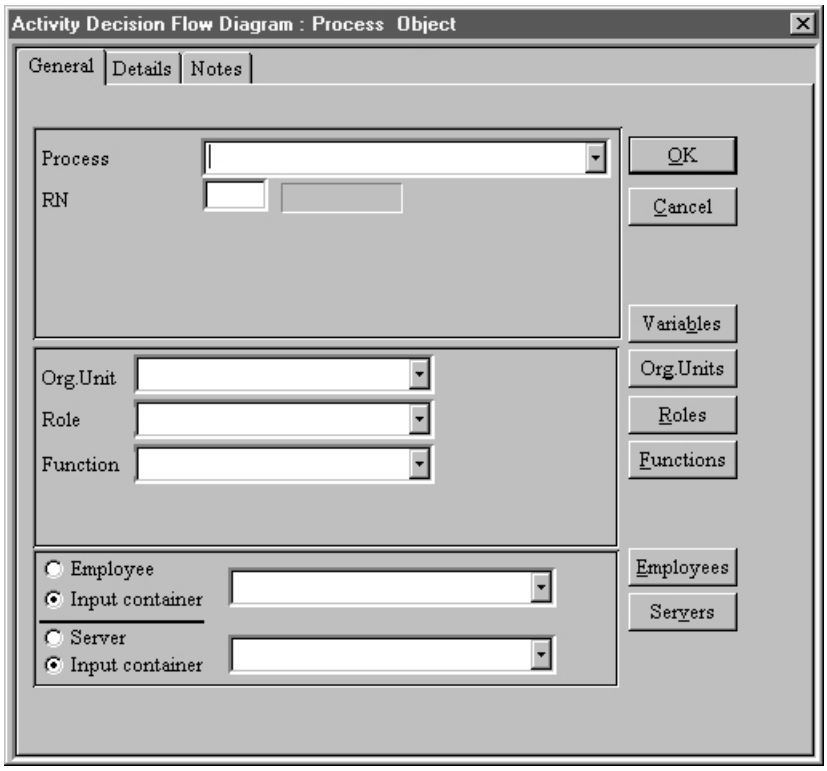
If you decide to use Process objects, you can print higher-level drawings without all the clutter of Task details. It is also possible to expand the Process in order to print the entire Process at the Task level. So, you can select a part of a large Process diagram and hide or encapsulate it in another Process diagram, reducing the size and the complexity of the diagram. This feature is extremely useful to manage an ever-growing Process diagram.

The "Sales Order Fulfillment" Process is not large, but you will use the "Receive Order" mini Process Model that was developed as a nested Process and modeled by a Process object, as a demonstration of how they are used. The "Receive Order" Process is really the start of the Process and, thus, will be the first object in the "Sales Order Fulfillment" Process. The remaining objects will be added after you have inserted the "Receive Order" Process object.

To draw a Process object:

1. Click the **Process** tool button  on the **ADF Toolbar**. Notice that the cursor changes to a plus sign with a Process symbol in the upper right quadrant.
2. Click inside a grid cell on the left side of the diagram to insert a Process object inside that cell.
3. Select the Pointer tool, either by clicking the Pointer tool  button on the ADF Toolbar, or by clicking the right mouse button on the diagram.

4. Double-click on a **Process** object. Workflow•BPR then displays the **Process Object** dialog box—open to the **General** tab (see the figure below).

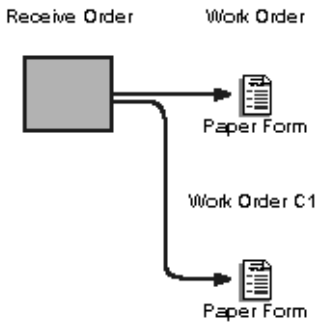


5. Select "Receive Order" from the **Process** combo box.

6. Click **OK** or press **Enter**. The Process object will be defined as "Receive Order."

A Process that is modeled as a Process object within another Process can be complex, with multiple entry and exit points. Workflow•BPR uses matching Phis at the higher- and lower-level Processes to define the entry and exit points of the Process modeled by a Process object. With the matching Phis, Workflow•BPR can properly insert the lower-level Process into the higher-level Process during Process expansion.

At the end of the "Receive Order" Process Model, there are two output Phis. If you want to include "Receive Order" as a Process object in the "Sales Order Fulfillment" Process Model, it has to have the same two Phis as outputs of the Process object.



To accomplish this action, you will open the "Receive Order" Process Model, copy the last two Phis, then paste the two Phis in the "Sales Order Fulfillment" Process Model. The next two sections will walk you through this Process.

Using the Open Process Command

To open a Process object:

1. Select the Pointer tool, either by 🖱 clicking the Pointer tool button on the ADF Toolbar, or by 🖱 clicking the right mouse button on the diagram.
2. 🖱 Click on the "Receive Order" Process object.
3. 🖱 Click the **Open Process** tool button on the **ADF Toolbar**. The **Activity Decision Flow Diagram** for that Process will be opened.

Copying and Pasting Objects

To copy and paste a Process object:

1. Select the Pointer tool, either by 🖱 clicking the Pointer tool button on the ADF Toolbar, or by 🖱 clicking the right mouse button on the diagram.
2. Scroll to the end of the "Receive Order" Process
3. 🖱 Click and drag a marquee box completely around all of the "Work Order" and "Work Order C1" Phis.
4. 🖱 Choose **Copy** from the **Edit** menu. A copy of the diagram objects is put on the Clipboard, along with their attributes.

☞ **You can access this command by typing Ctrl+C.**

5. Choose "**P: Sales Order Fulfillment**" from the **Window** menu. The "Sales Order Fulfillment" Process will become the active window.

6. Choose **Paste Special** from the **Edit** menu. Notice that the cursor changes from an arrow to a glue pot.

   You can access this command by typing Ctrl+T.

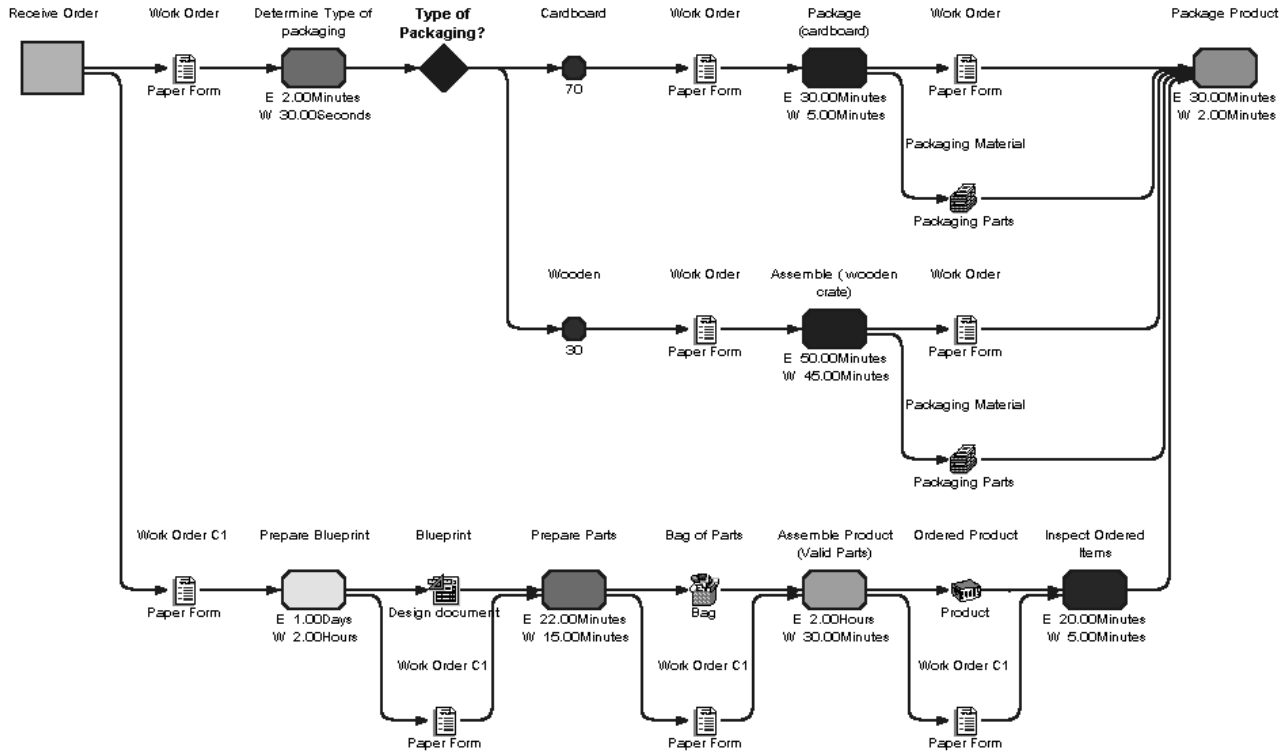
7. Click inside the cell that is one column to the right of the "Receive Order" Process object. The "Work Order" and "Work Order C1" Phis will be inserted in the diagram.

8. Connect the "Receive Order" Process object to the two Phis.

Building the Rest of the Model

You are now ready to complete the "Sales Order Fulfillment" Process Model. Use the next two (2) figures and Table 7, page 70, as a basis for completing the model.

The Process Model you will be creating is too long to be displayed in one figure. Therefore, the next two figures display the Process in two stages. As you build the Process, the last Task in the first figure is actually the same object as the first Task in the second figure. You should connect the objects appropriately to create one Process.



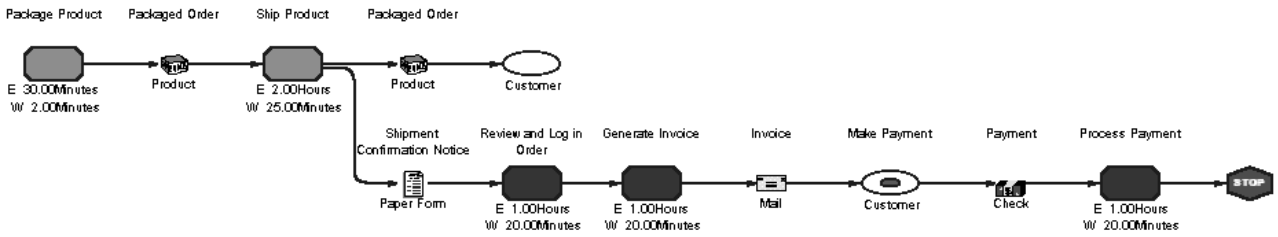


Table 7: "Sales Order Fulfillment" Connector data

Source	*Phi*	*Target*	*Standard Transfer Medium*
Receive Order**	Work Order	Determine Type of Packaging	Inter-Office Mail
Receive Order**	Work Order C1	Prepare Blueprint	Inter-Office Mail
Prepare Blueprint	Work Order C1	Prepare Parts	Inter-Office Mail
Prepare Blueprint	Blueprint	Prepare Parts	Inter-Office Mail
Prepare Parts	Work Order C1	Assemble Product (Valid Parts)	Inter-Office Mail
Prepare Parts	Bag of Parts	Assemble Product (Valid Parts)	Hand Delivery
Assemble Product (Valid Parts)	Work Order C1	Inspect Ordered Items	Inter-Office Mail
Assemble Product (Valid Parts)	Ordered Product	Inspect Ordered Items	Hand Delivery
Assemble (Wooden Crate)	Work Order	Package Product	Inter-Office Mail
Assemble (Wooden Crate)	Packaging Material	Package Product	Hand Delivery
Package (Cardboard)	Work Order	Package Product	Inter-Office Mail
Package (Cardboard)	Packaging Material	Package Product	Hand Delivery
Package Product	Packaged Order	Ship Order	Hand Delivery
Ship Order	Packaged Order	Customer***	Air Mail
Ship Order	Shipment Confirmation Notice	Review and Log-in Order	Inter-Office Mail
Generate Invoice	Invoice	Make Payment****	Air Mail
Make Payment****	Payment	Process Payment	Air Mail

** Process Object
*** External Entity
**** External Process

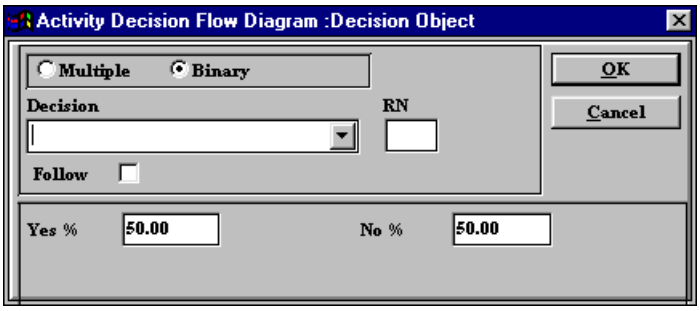
Modeling Multiple Decisions

The only modeling technique that you have not done in the "Sales Order Fulfillment" Process Model is creating multiple Decisions. Multiple Decisions have no default Choices; therefore, you can create and update your Choices for the Decision. However, because you can have more than two (or three) Choices for multiple Decisions, the Choices are modeled as separate objects. You then make connections between the Decision object and the Choice objects.

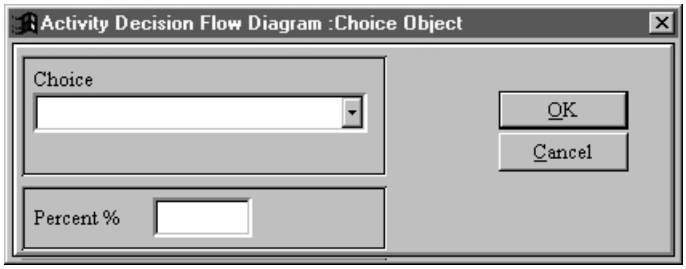
In the "Sales Order Fulfillment" Process Model, there is a multiple Decision called "Type of Packaging," which has two Choices: "Cardboard" and "Wooden." This section will lead you through the creation of this Decision and its Choices.

To add the multiple Decisions and connect them to the Choice objects:

1. Click the **Decision** tool on the **ADF Toolbar**. Notice that the cursor changes to a plus sign with a Decision symbol in the upper right quadrant.
2. Click inside the grid cell to the right of the "Determine Type of Packaging" Task. A Decision object will be inserted inside that cell.
3. Select the Pointer tool, either by clicking the Pointer tool  button on the ADF Toolbar, or by clicking the right mouse button on the diagram.
4. Double-click on the **Decision** object. The **Decision Object** dialog box appears (see the figure below).



5. Select the **Multiple** radio button.
6. Select "Type of Packaging?" from the **Decision** combo box.
   * The Type of the Decision should remain **Exclusive**.
7. Click **OK** or press **Enter**. The Decision object will be defined as "Type of Packaging?"
8. Click the **Choice** tool button  on the **ADF Toolbar**. Notice that the cursor changes to a plus sign with a Choice symbol in the upper right quadrant.
9. Click inside the cell to the right of the "Type of Packaging?" Decision to insert a Choice object inside that cell.
10. Click inside the cell that is one row lower than the Choice object just added to insert a Choice object inside that cell.
11. Connect the "Type of Packaging?" Decision to both Choice objects.
    * Click and drag from the *center* of the Decision diamond icon to the *center* of each of the Choice objects. Workflow•BPR draws a connector from the right point of the diamond to the Choice objects.
12. Select the **Pointer** tool, either by clicking the **Pointer** tool button on the **ADF Toolbar** or by clicking the right mouse button on the diagram.
13. Double-click on the first Choice object. Workflow•BPR displays the **Choice Object** dialog box (see the figure below).



14. Select "Cardboard" from the **Choice** combo box.
15. Click **OK** or press **Enter**.
16. Double-click on the second Choice object. Workflow•BPR displays the **Choice Object** dialog box.
17. Select "Wooden" from the **Choice** combo box.

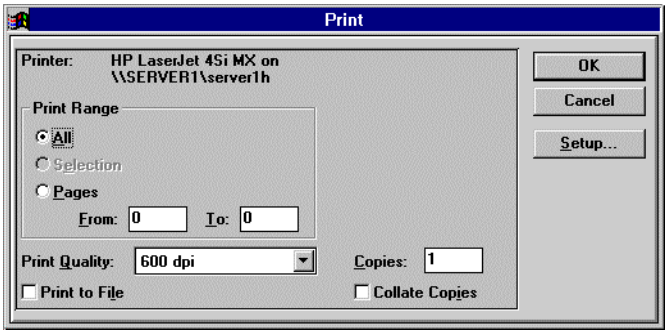
Verifying and Editing Your Process Data

Verifying your Process data is a natural step to take right after you have completed the Process Model. Therefore, you have arranged for meetings with the participants and the BPR team to verify the data and the flow of the model. To facilitate the meeting, a copy of the Process Models, along with three tables for each model, were printed out. With the printed materials in hand, you reviewed the data that had been entered into the model to verify accuracy.

Printing Your Process Model

To print the Process Model:

1. Open the "Sales Order Fulfillment" Process.
2. Choose **Print Preview** from the **File** menu. The **Print Preview** window appears.
   * Click << to move left, >> to move right, **Up** to move up, and **Down** to move down if the Process is spread across more than one page.
   * To change your document's page setup, click **Setup**. The **Page Setup** dialog box appears (refer to Section 6.1 in Chapter 7 of the User's Guide).
   * To see the size of the printed diagram, select Show Printer Grid from the Format menu. Adjust the size of the diagram with the **Zoom In** and **Zoom Out** tools of the **Activity Decision Flow Diagram**. The Print Preview option in the File menu can be used to get a view of what the print-out will look like.
3. Click **Print**. The **Print** dialog box appears (see the figure below).



4. Click **OK** or press **Enter**. The Process Model will be printed.
5. Repeat the above steps for the "Receive Order" Process.

Opening and Printing Tables

The following are three tables that can be printed out to verify the most important data of your Process Model:

- **Resource Requirements Table**: Contains information about the Tasks: the Organization Unit, the assigned Resources, the cost of the Resources, the Elapsed Duration, the Working Duration, the Function, and the Classifications.
- **Process Decision Choices Table**: Contains the Decisions, their Choices, and the probability of the Choices.
- **Connectors Table**: Contains the media information that was used to define the connectors.

To open and print the tables:

1. Open the "Sales Order Fulfillment" Process.
2. 🖱 Choose **Preferences** from the **Format** menu. 🖱 Select **Default** from the **Preference List**, and set **Units of Output** to **As Inputs** by 🖱🖱double clicking on the appropriate **Value** cell. This ensures that the output in the tables will be displayed in the appropriate units.
3. 🖱 Choose **Process Data** from the **Table** menu. A sub-menu appears.
4. 🖱 Choose **Resource Requirements**. The **Resource Requirements** table appears.
   * You can adjust the width of the columns and rows and change other formatting within the table (refer to Section 4.4.1 of Chapter 6 of the User's Guide).
5. 🖱 Choose **Print** from the **File** menu. The **Print** dialog box appears.
   * To view how the table will print, first 🖱 choose **Print Preview** from the **File** menu.
6. 🖱 Click **OK** or ⌨ press **Enter**. The **Resource Requirements** table will be printed.
7. Repeat steps 2 through 5 for the **Process Decision Choices** table and the **Connectors** table.
8. Repeat the above steps for the "Receive Order" Process.

During the meeting with your team, you discovered that some of the data entered was not accurate. You managed to get the accurate data and created the following table for the changes to be entered.

Activity	*Elapsed Duration*	*Working Duration*
Approve Customer Credit	30 Min.	15 Min.
Check Credit History	30 Min.	20 Min.
Create Work Order	15 Min.	5 Min.
Enter Order Information	10 Min.	7 Min.
Reject Customer Order	15 Min.	10 Min.

Table 8: Updated Task Durations for the Sales Order Fulfillment Process

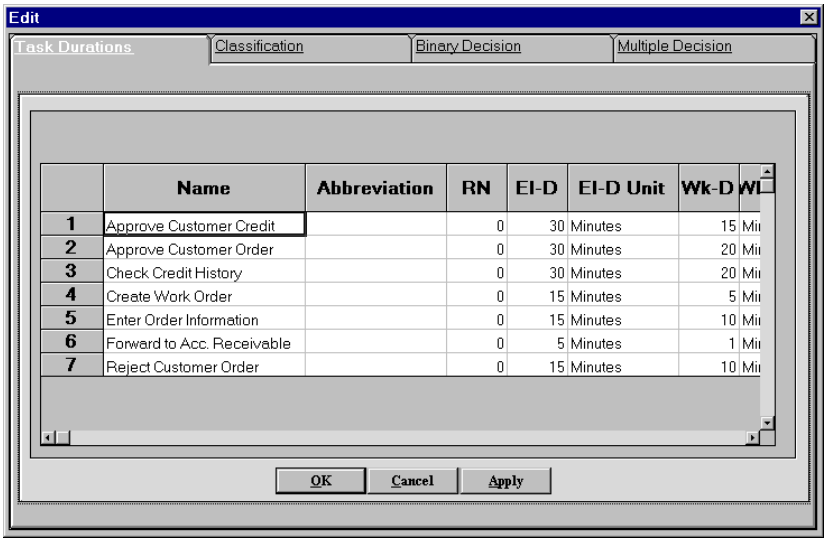
In the verification phase, Workflow•BPR offers an **Edit Process** feature that can assist you to quickly edit the data associated with your Process diagram objects. Another feature that is also useful in this phase is the **Find** navigation feature. The use of both features is demonstrated in the following sections.

Using the Edit Process Feature

The Edit command can be used to enter all the changes indicated. However, for demonstration purposes, we will use it only to modify the Elapsed Duration of Tasks. All the Tasks that require modification are in the "Receive Order" Process.

To use the Edit Process feature:

1. Open the "Receive Order" Process.
2. Choose the **Edit** command from the **Process** menu. The **Edit** dialog box appears (see the figure below).



☞ **You can access this command by typing Ctrl+D.**

* The **Task Durations** tab is the default tab of the **Edit** dialog box. This tab displays the Task Names, Abbreviations, RNs, Elapsed Durations and Units, and Working Durations and Units. You can edit the Elapsed Duration and Working Duration of any Task.

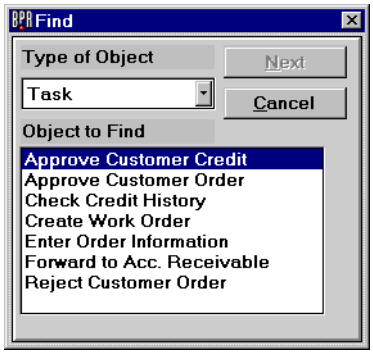
3. Click on the cell in the **EL-D** (Elapsed Duration) column for the "Approve Customer Credit" Task. A **Duration** text box appears at the top of the dialog box.
4. Type "30" in the **Duration** text box.
5. Click on the cell in the **Wk-D** (Working Duration) column for the "Approve Customer Credit" Task. A **Duration** text box appears at the top of the dialog box.
6. Type "15" in the **Duration** text box.
7. Repeat Steps 3 and 4 to update the Elapsed Duration of the remaining Tasks listed in Table 8 on page 75.
8. Click **Apply** at any time to save the data you have entered and leave the **Edit** window open for more editing.
9. Click **OK** or press **Enter** to save the data you have entered and close the **Edit** window.

Using the Find Navigation Feature

In a large, complex diagram, it can be difficult to find objects that you want to edit. Workflow•BPR provides a Find feature that is useful for locating objects. You can leave the Find dialog box open while making edits to the diagram, including opening object dialog boxes. This feature can be used to enter all the changes needed. However, for demonstration purposes, we will use it only to modify the Working Duration of Tasks.

To use the Find feature:

1. Open the "Receive Order" Process.
2. Choose the **Find** command from the **Edit** menu. The **Find** dialog box appears (see the figure below).



☞ **You can access this command by typing Ctrl+F.**

3. Select "Approve Customer Credit" in the **Task** list. Workflow•BPR will highlight this Task and move the drawing so that the selected object is visible.
4. You can leave the **Find** dialog box resident while you make corrections or additions to your diagram by double-clicking on the selected Task. The **Task Object** dialog box appears.
5. Type "15" in the **Working Duration** text box.
6. Click **OK** or press **Enter**.
7. Repeat steps 3 through 6 to update the **Working Duration** of the remaining Tasks listed in Table 8 on page 75.
8. Click **Cancel** to exit the **Find** dialog box.

Analyzing Your As-Is Process Model

In this section, you will learn how to perform Weighted Average analysis, view reports, and create a Process workbook for a Process Model. Weighted Average analysis is a Workflow•BPR tool that allows users to calculate important Process data, such as cost and cycle time, by taking into consideration the percentage of occurrence of each possible Case. The results of these calculations can then be viewed through the Reports sub-menus.

You can complete the exercises in this chapter either by using the Process Model you have developed in the previous chapters of the tutorial or by using the "Sales Order Fulfillment" Process found in the Organization File *c:\wfbpr\samples\tutorial\complete\complete.org*.

Expanding the Process Model

After completing your mini Process Model, you briefly looked at the Expanded Process window on your way to do some Case analysis. The "Receive Order" Process Model did not include a Process object, so the expansion did not show anything new. However, The "Sales Order Fulfillment" Process Model includes the "Receive Order" Process object. Therefore, the expansion of the "Sales Order Fulfillment" Process Model will include the Tasks that are within the "Receive Order" Process Model.

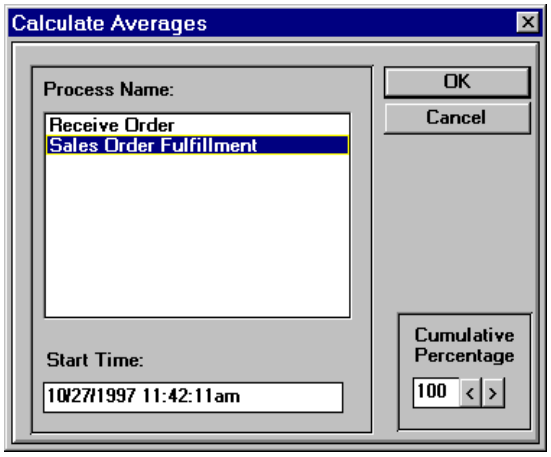
Open the "Sales Order Fulfillment" Process now and expand it to see the entire Process on one level.

Performing Weighted Average Analysis

To measure the attributes (e.g., time and costs) of a Process accurately, you must measure the attributes of the individual Cases that make up the Process and then factor in the probability that each Case will occur. The result of this is a Weighted Average of the time and cost attributes of a Process.

To calculate the weighted averages of the "Sales Order Fulfillment" Process:

1. Open the "Sales Order Fulfillment" Process, or click on the **Exit** button to go back to the Activity Decision Flow Diagram.
2. Choose **Calculate Averages** from the **Reports** menu. The **Calculate Averages** dialog box appears with "Sales Order Fulfillment" highlighted in the **Process Name** list (see the figure below).



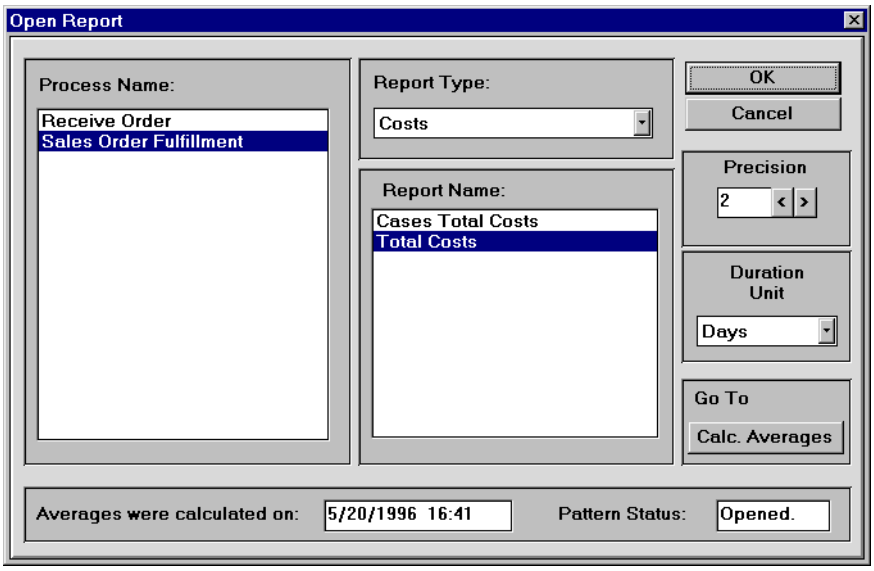
3. Click **OK** or press **Enter**. The **Calc. Average of Sales Order Fulfillment** dialog box appears, which displays a thermometer showing the progress as the Cases are added to the calculation. The calculations are complete when the dialog box disappears.

Reviewing Key Reports

After you have calculated the averages for the "Sales Order Fulfillment" Process, the Reports that summarize the time, costs, and other metrics are available for viewing. There are two basic types of Reports: one type displays the weighted average of a particular metric (e.g., costs), and the other type displays the value of the metric for each Case of the Process, and then displays the weighted average of the metric. This section will show you how to open one of the many available Reports.

To open the Total Costs report:

1. Open the "Sales Order Fulfillment" Process.
2. 🖱 Choose **Costs** from the **Report** menu. A sub-menu appears.
3. 🖱 Choose **Total Costs**. The **Open Report** dialog box appears with the "Sales Order Fulfillment" Process highlighted in the **Process Name** list, and the "Total Costs" Report highlighted in the **Report Name** list (see the figure below).



4. 🖱 Click **OK** or ⌨ press **Enter**. The **Total Costs** report appears.
5. Repeat Steps 2 through 4 for the **Cycle Time** report that is accessed through the **Times** sub-menu of the **Report** menu.

Modeling Your To-Be Process

Your BPR team, encouraged by Componex top executives, decided to examine the effect of replacing the paper forms, such as sales orders, by an electronic form through the implementation of a workflow engine. They wanted to see the impact on cost and cycle time "As Is" in the current Process. In this chapter, you will learn how to modify the current Process by:

- Changing the Office Mail estimated duration from 20 min. to 2 sec, reflecting an average network request Processing time. This will substantially reduce the overall Process cycle time.
- Changing the Phi Type from **Paper Form** to **Electronic Form**. This will only visually emphasize the recommended Process improvement.
- Identifying and eliminating activities that can be performed by the workflow application. This will reduce the overall cost, as well as the overall cycle time of the Process.
- Reducing the employee's work duration on data entry and approval Tasks by 10-20% to reflect the efficiency of electronic form data entry and approval. This will reduce the overall cost, as well as the overall cycle time of the Process.

You can perform these changes on either the Process Model you have developed in the previous sections of the tutorial, or on the "Sales Order Fulfillment" Process found in the Organization File *c:\wfbpr\samples\tutorial\complete\complete.org*.

Creating Your To-Be Process

There are two methods to create a To-Be Process out of the As-Is Process. The first method is by using the Save Process As command from the File menu to create a copy of the As-Is Process under a new name. The second method, which will be demonstrated here, is to use the Save Organization As command from the File menu to create a copy of the whole organization folder under a different name, then rename the As-Is Process. The first method seems more straightforward; but the second has an advantage that will be discussed later in this section. You will begin working with the "HerOrg" Organization File.

To create a copy of an Organization File:

1. 🖱 Choose **Save Organization As** from the **File** menu. The **New Organization** dialog box appears.
2. Navigate through the tree chart in the **Directories** box and then 🖱 select the "Samples" folder that was installed in the WFBPR folder with the Workflow•BPR application. You should see four (4) other folders: "Componex," "Minittrl," "Tutorial," and "Sbac."
3. 🖱 Select the "Tutorial" folder that is inside the "Samples" folder. You should see three (3) other folders: "Complete," "HisOrg," and "HerOrg."
4. ⌨ Type "To-BeOrg.org" in the **File Name** text box.
5. 🖱 Click **OK** or ⌨ press **Enter**. The "To-BeOrg" will be created as a copy of the "HerOrg" Organization File and inserted in a newly created folder of the same name.
6. Open the "Sales Order Fulfillment" Process Model.
7. Rename this Process Model as "Sales Order Fulfillment (To-Be)."
   * Use the **Info** command from the **Process** menu to open the **Info** dialog box. Edit the name in the **Process** text box.
8. Open the "Receive Order" Process Model.
9. Rename this Process Model as "Receive Order (To-Be)."

Modifying Media

The media (carriers of inputs/outputs) associated with paper form Phis in your diagram can be modified in two ways. In the first method, which is workable, yet tedious, you could do the following (*but it is not recommended*):

1. Open the Repository Media dialog box and add a new media called "Network" with a Transfer Duration of "2 seconds."
2. In the "Sales Order Fulfillment (To-Be)" Process, identify a Phi that has a "Paper Form" type.
3. Double-click on the connector that is connected to the Phi. The **Connector Object** dialog box appears.
4. Select "Network" in the **Media** combo box.
5. Repeat Steps 2 through 4 for every Phi that has a "Paper Form" type in the "Sales Order Fulfillment (To-Be)" Process and the "Receive Order (To-Be)" Process.

Because you are working in a new Organization File and will be importing this data back to the HerOrg Organization File, there is an easier method. The second method can accomplish the same thing through one update of the Medium from the Data Repository (*recommended*):

1. Choose **Process Data** from the **Repository** menu. A sub-menu appears.
2. Choose **Media**. The **Media** dialog box appears.
3. Select "Inter-Office Mail" from the **Media** list.
4. Change the name to "Network" in the **Name** text box.
5. Change the current duration to "2 Seconds" in the **Duration** text and list boxes.
6. Click **Broadcast**. Any connector that had the "Inter-Office Mail" medium will now have the "Network" medium.
7. Click **Close** to make the Media dialog box disappear.

All the data in the diagram associated with "Inter-Office Mail" will reflect this change. If the "As-Is" and "To-Be" Processes were in the same organization folder, this change would have affected both Processes. Obviously, we do not want that to happen. That is why you created a copy of the "HerOrg" Organization File to work with while creating the "To-Be" model changes. You will then import the To-Be Processes back to the same Organization File as the "As-Is" Processes for direct comparison. The "Network" medium will be added to the HerOrg Organization File along with the To-Be Processes. The "Inter-Office Mail" will also be there for the As-Is Processes.

Modifying Phis

Because a Workflow Engine will be installed, many of the paper documents used in the Process will be changed to electronic documents. You will convert the "Paper Form" Phi Type into an "Electronic Form." By doing this conversion, all the Phis that had the Phi Type of "Paper Form" will now have the Phi Type of "Electronic Form."

To rename and change the Phi Type:

1. Choose **Process Data** from the **Repository** menu. A sub-menu appears.
2. Choose **Phi Types**.
3. Select "Paper Form" from the **Phi Types** list.
4. Change the name to "Electronic Form" in the **Name** text box.
5. Click the < button next to the **Bitmap** box to display the **Bitmap Library** dialog box to select a bitmap to represent your Phi Type.
6. Click on the bitmap that looks like an electronic document to select it (it is in the fifth column of the first row of the second set of icons).
   * After you open the **Bitmap Library**, Click the **Next** button *once* to view the second set of icons.
7. Click **Select** to return to the **Phi Types** dialog box. The bitmap will be displayed.
8. Select "Electronic Document" from the Category list.
9. Click **Update**. The "Paper Form" Phi Type will be converted to an "Electronic Form" Phi Type in all locations where the Phi Type is used (in all drawings).
10. Click **Close** to make the Phi Types dialog box disappear.

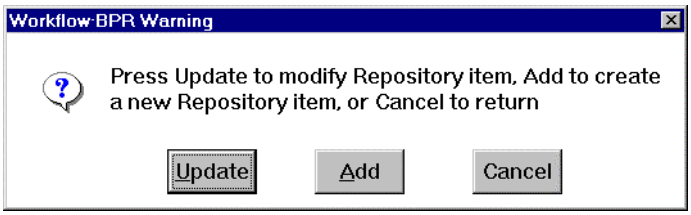
Eliminating Activities

In our Process we have just two activities (Tasks), "Determine Type of Packaging" and "Prepare Blueprint," that can be eliminated and delegated to the workflow application to perform them. You will replace these Tasks with two new Tasks that are "performed" by the Workflow Engine. This will reduce the cycle time and cost of the Process.

To find and replace the two obsolete Tasks:

1. Open the "Sales Order Fulfillment (To-Be)" Process Model.
2. Choose **Find** from the **Edit** menu. The **Find** dialog box appears.
3. Select "Determine Type of Packaging" from the **Tasks List** window. The **Find** dialog box takes you to the "Determine Type of Packaging" Task Object and highlights it with four dark squares.
4. Double-click on the Task Object you have just inserted. The **Task Object** dialog box appears.
5. Change the name to "Determine Type of Packaging-Auto" in the **Task Name** combo box.
6. Select "Information Systems" from the **Organization Unit** combo box.
7. Select "Workflow Application" from the **Role** combo box.
8. Type "2" in the **Elapsed Duration** text box and then Select "Seconds" as the appropriate time unit from the **Elapsed Duration Unit List** box.
9. Type "2" in the **Working Duration** text box and then select "Seconds" as the appropriate time unit from the **Working Duration Unit List** box.
10. Click the **Classification** tab at the top of the **Task Object** dialog box. This tab displays the Task Name, Abbreviation, and RN. It also allows you to select the classification settings.

    * A message box appears that will ask if you want to update the Repository item, add a new Repository item, or cancel (see the figure below).



11. 🖱 Click the **Add** button to add a new task and return to the **Classification** Tab.
12. 🖱 Click the **Current Workflow** radio button to set the **Workflow** (Classification 3) item associated with the Task.
13. 🖱 Click **OK** or ⌨ press **Enter**.
14. Apply the above steps in a similar manner to replace the "Prepare Blueprint" Task with a "Prepare Blueprint-Auto" Task.
    * Use "Information Systems" for the **Organization Unit**, "Workflow Application" for the **Application**, "2 Seconds" for the **Elapsed Duration**, "2 seconds" for the **Working Duration**, and **Current Workflow** for the **Workflow** (Classification 3) item.

Modifying Task Work Duration

The next step is to identify the Tasks whose time can be reduced due to the use of a Workflow Engine, then reduce their Working Duration by 80-90% and add the Resource Workflow Application to its Resource list. All the Tasks that were classified as "Potential Workflow" in the As-Is Process Models can have their Working Duration reduced. This will reduce the cost of the Process.

To find and modify the Tasks that are classified "Potential Workflow:"

1. Open the "Sales Order Fulfillment (To-Be)" Process Model.
2. 🖱 Choose **Trace Classifications** from the **Process** menu. The **Trace Classifications** dialog box appears.
3. 🖱 Select "Workflow" from the **Classification Number** list box.
4. 🖱 Select "Potential Workflow" from the **Classification List**.
5. 🖱 Click **OK** or ⌨ press **Enter**. The border around Tasks that are classified Potential Workflow are drawn (marked) in red.
6. 🖱🖱 Double-click on any of the marked Tasks.
7. ⌨🖱 Change the Working Duration by 80-90%.
8. 🖱 Select the **Resource Requirements** tab.
9. 🖱🖱 Double-click on the row below the current Resource(s) in the **Resources List** box.
10. 🖱 Select "Workflow Application" to add it to the current list of Resources.
11. 🖱 Click **OK**.
12. Repeat steps 4 through 9 for all of the marked Tasks.
13. Repeat all the steps for the "Receive Order (To-Be)" Process Model.

Saving Your To-Be Process

When you are finished modeling your To-Be Process, it needs to be saved. *It is recommended that you save your file frequently.* To save a Process, choose **Save Process** from the **File** menu or type Ctrl+S.

Rejoining the As-Is and To-Be Process Models

The main reason for creating your To-Be Process Models in a separate Organization File was to make some global changes that would affect the To-Be Process Models, but not the As-Is Process Models. Now that you have created the To-Be Process Models, you can rejoin these models with the As-Is Process Models. To do this you have to:

- Close the **To-BeOrg** Organization File.
- Open the **HerOrg** Organization File.
- Choose the **Import Processes** command from the **File** menu.
    - Locate the **To-BeOrg** Organization File.
    - Import both the "Sales Order Fulfillment (To-Be)" and the "Receive Order (To-Be)" Process Models.

After this has been accomplished, the "HerOrg" Organization File will contain four Process Models: "Sales Order Fulfillment," "Sales Order Fulfillment (To-Be)," "Receive Order," and "Receive Order (To-Be)." The modifications you have made to the To-Be Process Models will be incorporated into the "HerOrg" Organization File. Now you can analyze both the As-Is and To-Be Process Models at one time.

Comparing the As-Is and To-Be Process Models

Now that the As-Is and the To-Be Processes are in one Organization File, you can compare their analysis outputs. This section will only describe how to open two cost reports for comparison. The Appendix of the Workflow•BPR User's Guide describes the support for additional analyses that is provided with Workflow•BPR. Additional analyses, including Process comparisons, can be done with Microsoft Excel workbooks that are included with Version 2.1 of Workflow•BPR.

To compare the Costs of the As-Is and To-Be Processes:

1. Perform a Weighted Average Analysis on the "Sale Order Fulfillment (To-Be)" Process. You have already done this for the As-Is Process.
   - Follow the procedures listed in the section entitled "Performing Weighted Average Analysis" on page 80.
2. Open the Total Costs report for the "Sale Order Fulfillment" Process.
   - Follow the procedures listed in the section entitled "Reviewing Key Reports" on page 81.
3. Open the Total Costs report for the "Sale Order Fulfillment (To-Be)" Process.
4. Notice that the Costs for the To-Be Process were lower than the As-Is Process.
   - You can switch between the two reports through the Window menu.

Summary

This tutorial is intended as a brief introduction to Workflow•BPR. By following the instructions in this tutorial, you will gain a better understanding of some of the basic components of Workflow•BPR and how to use it for your organization:

- Preparation for Process Modeling
- Process Modeling—Working with Activity Decision Flow Diagrams.
- Weighted Average Analysis of a Process
- Simulation and Simulation Outputs
- Basic Reengineering Techniques

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