Oracle® Workflow Documentation Updates

RELEASE 11.0.1

June 1998

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Oracle Workflow Documentation Update

This section contains important information. Please read this section for the latest updates and additions to your Oracle Workflow Guide.

WFVERCHK.SQL Utility Script

Use the new wfverchk.sql utility script if you suspect that problems arising in your workflow process are due to multiple versions of an activity being active simultaneously. This script identifies and corrects errors in versions of activities that cause multiple versions to appear to be active at once. The script is located in the *sql* subdirectory under $FND_TOP.

Notification Viewer Form

When you view an open notification that does not require a response in the Notifications form, an OK button rather than a Respond button appears in the lower right corner of the window. You can choose OK to close the notification. If you display a closed notification in the Notifications form, the OK button is dimmed.

Find Notifications Web Page

The Submit button on the Find Notifications web page has been renamed to Find. When you choose the Find button, your worklist appears in the Notifications Summary web page.

Deleting Objects in Oracle Workflow Builder

You can now delete an object in Oracle Workflow Builder even if the object is referenced by other objects, assuming the object is not protected against customizations. If the object you want to delete is referenced by other objects, a Workflow Error dialog box appears, warning you about the foreign key references that will break. You can proceed to delete the object anyway or cancel the action. If you choose to delete, then when you save or verify the workflow process definition, a Workflow Error dialog box appears, reporting all broken foreign key references that exist in the definition.

As a result of this change, you can now load workflow definitions with invalid foreign keys into Oracle Workflow Builder to correct. Oracle Workflow Builder preserves the original internal name reference for any missing foreign key, and displays it in a validation error message when

you load the process definition. You can restore a broken foreign key reference in a process definition by recreating the deleted object with its original internal name under its original item type.

Note that you can also now copy item types from one store to another in any order even if the item types reference each other. The final process definition in the new store will be valid as long as all referenced item types are copied to the new destination store.

> **Note:** You can now also delete an entire item type definition in Oracle Workflow Builder.

> **Note:** You can use Oracle Workflow Builder to delete item type attributes loaded from a flat file, but to delete item type attributes in a database, you must still use the script *wfrmita.sql*. See: Workflow Administration Scripts, *Oracle Workflow Guide.*

Oracle Workflow Home Page

The Oracle Workflow home page contains a new link called Find Item Type that takes you to the Find Item Type web page. Use the Find Item Type web page to query for a specific item type definition to display in the Item Type Definition page. See: Item Type Definition Page: page –3.

Also note that the link Find Notification Routing Rules has been renamed to Find Automatic Notification Processing Rules. See: Automatic Notification Processing: page –12.

HTML Help

A new Help button appears on each Oracle Workflow web page to provide you with access to HTML help for that page. Note that the figures in the HTML help may not be accurate as they reflect snapshots of the web pages before the Help button was implemented.

Multi–Lingual Support for Notifications

You can set a user or role's language for their notification session using the Language column of the directory service views WF_USERS and WF_ROLES. However, you must make sure that the E–mail templates used by the Notification Mailer to send notifications has been translated by Oracle to the language you wish to set. The E–mail templates are delivered in a file called wfmail.wft under the subdirectory $ORACLE_HOME/wf/res/<*lang*>. You can check the appropriate language subdirectory to verify if the templates have been translated to the language you wish to set.

Item Type Definition Web Page

The Web–based Item Type Definition page provides you with distributed access to workflow definitions stored in your Oracle Workflow database. The page provides a detailed view of the attributes, processes, notifications, functions, messages, and lookup types that are associated with a given item type, allowing you to present or do a design review of your workflow process.

To display an item type definition, you use the Find Item Type web page to first query for an item type. You can query for an item type based on an effective date and time.

The Item Type Definition page then appears. The information is displayed in two frames, modeled like the Oracle Workflow Builder, so that you can review the contents easily and effectively. The left frame lists all the objects in your item type definition in an expandable navigator tree. The right frame displays the details of the object you select in the navigator tree. You can also select either frame at any time and use your web browser to print all the information in that frame.

▶ **To Query an Item Type**

1. Entering the following URL in your web browser:

   <webagent>/wf_item_definition.find_item_type

   Replace the bracketed italicized text as follows:

   <webagent> represents the base URL of the Oracle Web Agent used by Oracle Workflow. It looks something like http://*<server.com:portID>*/*<PLSQL_agent_virtual_path>*. See: Identifying the Oracle Web Agent used by Oracle Workflow, *Oracle Workflow Guide*.

   > **Note:** You can also access the Find Item Type web page from the Oracle Workflow home page. See: Accessing the Oracle Workflow Home Page, *Oracle Workflow Guide*.

   > **Note:** If you are accessing this URL for the first time in your web browser session, Oracle WebServer prompts you for a valid username and password to log on, as this URL is protected. See: Secure the Workflow Database Connection Descriptor (DCD), *Oracle Workflow Guide*.

2. Use the Item Type poplist field to select an item type.

3. Specify the effective date and time of the item type definition you want to display using the format DD–MON–YYYY HH24:MI:SS.

4. Choose Find to display the item type in the Item Type Definition web page.

▶ **To Review an Item Type Definition**

1. The Item Type Definition web page displays two frames. The frame on the left lists the components of an item type definition in hierarchical format similar to the navigator tree in Oracle Workflow Builder. The frame on the right lists the details of each component.

2. Click on any component link in the left hand frame to display the details of that component in the right hand frame.
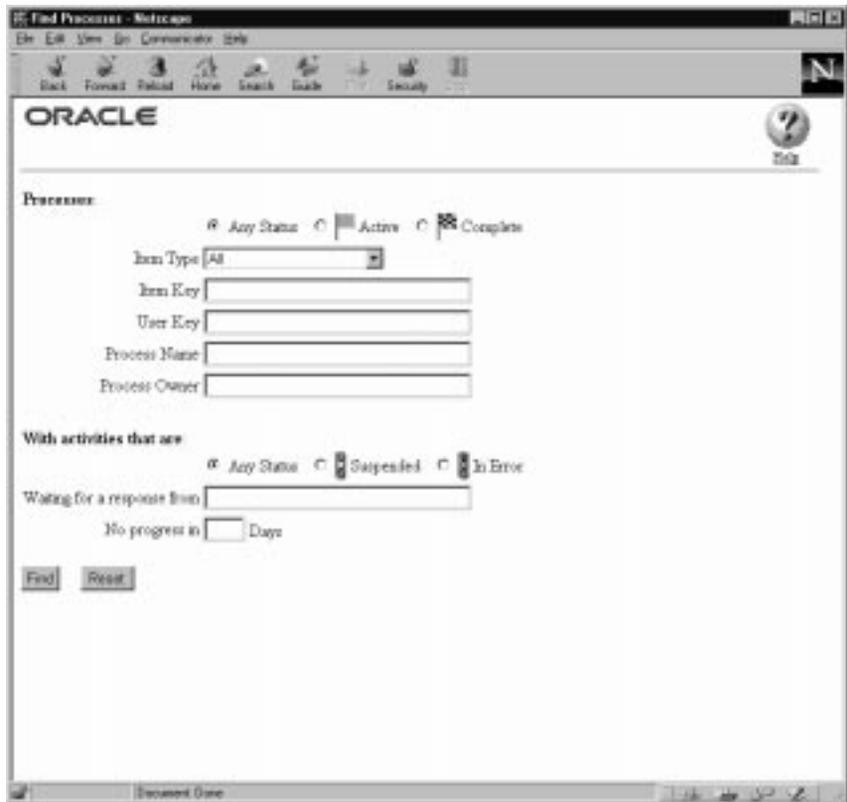
Activities List Web Page

A new Activities List web page is available when you use the Find Processes web page to access the Workflow Monitor. The section titled, Using the Find Processes Web Page in the "Monitoring Workflow Processes" chapter of the Oracle Workflow Guide is updated as follows to reflect the incorporation of this new page.

Using the Find Processes Web Page

The Oracle Workflow Find Processes web page allows you to query for a list of workflow process instances that match certain search criteria. From the Process List that appears, you can select a single process instance to review in more detail.

You can view details about the completed notification activities in the Notifications List web page that appears, or choose Advanced Options to display details about other activities in the Activities List web page. You can also navigate to the Workflow Monitor from the Notifications List to administer the process or see a graphical representation of the process and its status.

► **To Specify Search Criteria in the Find Processes Page**

1. You can enter search criteria using any combination of the following fields to find a subset of workflow process instances:

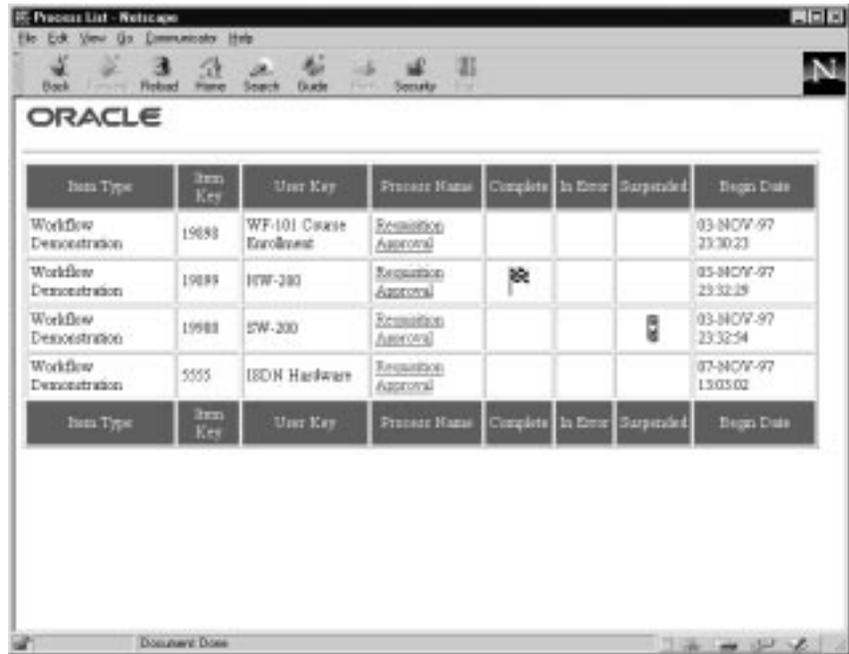   • Process Status—Specify Any Status, Active, or Complete.

- Item Type—Select the item type of the workflow process instances you want to find, or select All to find workflow process instances for all item types.

- Item Key or User Key—Specify an item key or a user key. An item key presents the internal identifier of an item whereas a user key is an end–user identifier assigned to an item. A user key may not necessarily be unique to an item. See: SetItemUserKey, *Oracle Workflow Guide*.

- Process Name—Specify the display name of a process activity.

2. If you log on as a user with Workflow Administrator privileges, you can search for and display any process instance, even if you do not own the process. In the Process Owner field, enter the internal name of any role defined in WF_ROLES to list only processes owned by that role. Alternatively, leave the field blank to list all process instances that match your search criteria regardless of the process owner.

   If you do not have Workflow Administrator privileges, then the Process Owner field reflects the internal name of the role you are logged in as for the current web session and you are allowed to search and display only processes that you initiated or are the primary participant of.

   Note: You can set the owner of a process by making a call to the WF_ENGINE.SetItemOwner API. The owner of a process is the person who initiated the process or is the primary participant of the process.

3. Optionally, you can also find workflow process instances with activities that are Suspended, In Error, or that have Any Status.

4. You can find workflow process instances that have activities waiting for a response from a particular user or role.

5. You can also identify workflow process instances that have not progressed for a specified number of days.

6. When you finish entering your search criteria, choose Find to display all matching process instances in the Process List web page.

► **To Review the Process List**

1. The Process List provides a summary of all workflow process instances that match your search criteria as specified in the Find Processes web page.

2. The process instances are listed in ascending order first by item type, then by item key.

3. The Process List summarizes the status of each process instance, as indicated by the Complete, In Error, and Suspended columns.

4. Choose a process link in the Process Name column to display the Notifications List for that process instance.

▶ To Review the Notifications List
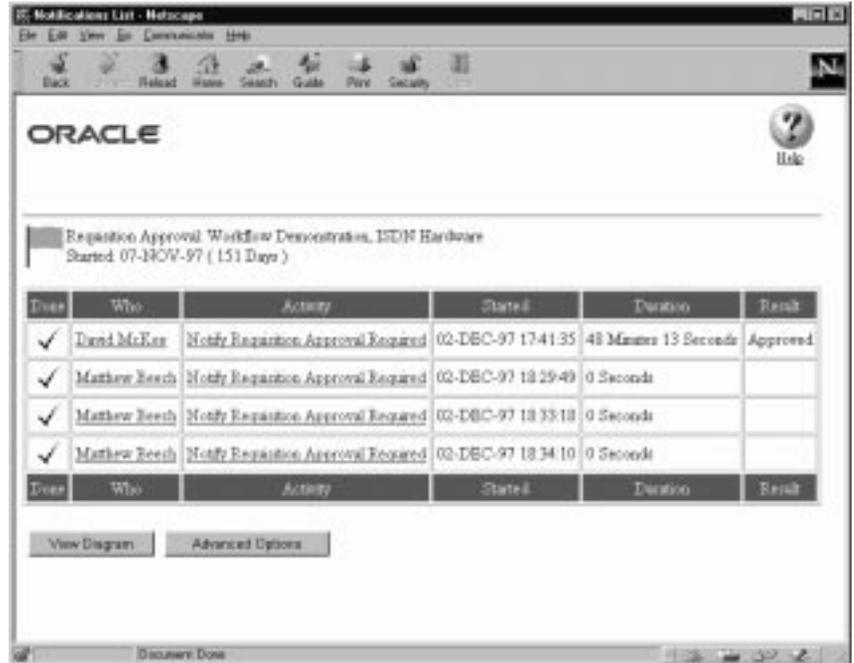
1. The Notifications List shows all the current notifications that have been sent for a process that required a response. The list summarizes what each notification activity is, who it is assigned to, when it was sent, whether it has been completed, how many days have passed before completion, as well as what its result is.

   Note: If the process itself is in an error state, and the cause of the error was from a notification, the result of that notification may appear as a link in the Result column. Choose that link to display the cause of the error.

2. Choose the user link in the Who column if you want to send email to the user that the notification has been assigned to.

   Note: You can display a helpful hint about any link on the Notifications List web page by placing your cursor over the link. The hint appears in your web browser's status bar.

3. Choose Advanced Options to go to the Activities List web page where you can specify different filtering criteria to display specific activities of interest. See: To Filter Activities in the Activities List: page –10.

4. You can also choose the View Diagram button to display the process instance in the Workflow Monitor for a graphical representation of the process status. If you connected to the current web session as a user with Workflow Administrator privileges, the Workflow Monitor displays the process in 'ADMIN' mode, otherwise the process is displayed in 'USER' mode. See: Workflow Monitor, *Oracle Workflow Guide.*

▶ **To Filter Activities in the Activities List**

1. The Activities List web page lets you specify various criteria to filter for specific activities of interest.

2. Use the Activity Status Options checkboxes to specify any activity status of interest. A status of Active also includes activities that are in the Notified, Deferred and Waiting state.

3. Use the Activity Type checkboxes to specify the types of activities you want to view. You can choose to display notification activities that require a response, notification activities that do not require a

response, process or function activities, and/or activities that belong to the Standard item type.

4. Once you finish selecting your criteria, choose Filter Activities to display the activities that match your criteria.

5. The resulting activities summary list includes the following columns of information:

- Status—the status of the activity, which is either Active, Complete, Error or Suspend.

- Who—the performer of the activity. If the activity is a function activity, the Workflow Engine is the performer. If the performer is a person, you can click on the link to that person's name to send mail to that individual.

- Parent Activity—the process activity that this activity belongs to, unless the activity itself is the top level process. The parent activity provides a link to the details of its definition.

- Activity—the name of the activity. This activity provides a link to the details of its definition.

- Started—the date and time when the activity was initiated.

- Duration—the amount of time taken to complete the activity, shown as one unit lower than the most significant unit of time taken. If the activity took only seconds to complete, then only seconds are shown.

- Result—the result of the activity. If the activity has a status of Error, then the result provides a link to the error name, error message, and error stack associated with the error.

   Note: You can display a helpful hint about any link on the Activities List web page by placing your cursor over the link. The hint appears in your web browser's status bar.

6. You can sort the activities summary list based on any column by clicking on a column header. An asterisk (*) appears next to the column title to indicate that it is being used for sorting. If the asterisk is to the left of the column title, the sort order is ascending. If the asterisk is to the right of the column title, the sort order is descending. Clicking multiple times on the same column title reverses the sort order.

Automatic Notification Processing

The web interface for Automatic Notification Processing has been enhanced. The section titled, <u>Defining Rules for Automatic Notification Handling</u> in the "Viewing Notifications and Processing Responses" chapter of the Oracle Workflow Guide is updated as follows to reflect the enhancements.

Defining Rules for Automatic Notification Processing

Use Oracle Workflow Automatic Notification Processing to automatically forward your notifications to another role or respond to incoming notifications with a predefined response when you are not available to manage your notifications directly, such as when you are on vacation.

The Automatic Notification Processing web page lets you define the rules for automatic notification processing. Each rule is specific to a role and can apply to any or all messages of a specific item type and/or message name. A rule can result in one of three actions: reassigning the notification to another user, responding to or closing the notification, or simply delivering the notification to the original recipient with no further action.

Each time the Notification System sends or reassigns a notification to a role, Oracle Workflow tests the notification against that role's list of rules for the most specific match based on the criteria in the order listed below:

ROLE = <*role*> and:

1. MESSAGE_TYPE = <*type*> and MESSAGE_NAME = <*name*>

2. MESSAGE_TYPE = <*type*> and MESSAGE_NAME is null

3. MESSAGE_TYPE is null and MESSAGE_NAME is null

As soon as it finds a match, Oracle Workflow applies the rule and discontinues any further rule matching.

If a rule reassigns a notification, Oracle Workflow performs rule matching again against the new recipient role's list of rules. Oracle Workflow maintains a count of the number of times it forwards a notification to detect perpetual forwarding cycles. If a notification is automatically forwarded more than ten times, Oracle Workflow assumes a forwarding cycle has occurred and ceases executing any further forwarding rules, marking the notification as being in error.

▶ **To Define a Rule for Automatic Notification Processing**

1. Use a web browser to connect to one of two URLs.

   To display the list of routing rules for your current role, enter:

   `<webagent>/wf_route.list[?user=<rolename>]`

   This URL can include an optional argument, as denoted by the square brackets []. You should omit the square brackets to pass the optional argument.

   Replace the bracketed italicized text in the above URL as follows:

   - `<webagent>` represents the base URL of the Oracle Web Agent used by Oracle Workflow. It looks something like http://`<server.com:portID>/<PLSQL_agent_virtual_path>`. See: Identifying the Oracle Web Agent used by Oracle Workflow, *Oracle Workflow Guide*.

   - `<rolename>` represents an internal role name that you want to query routing rules for. Note, however, that you can query for roles other than your current role only if your current role has workflow administrator privileges. See: Identifying the Oracle Workflow Administration Role, *Oracle Workflow Guide*.

   To display a web page that lets you find the routing rules for a specified role, enter:

   `<webagent>/wf_route.find`

   Enter the user ID of a role and choose Find.
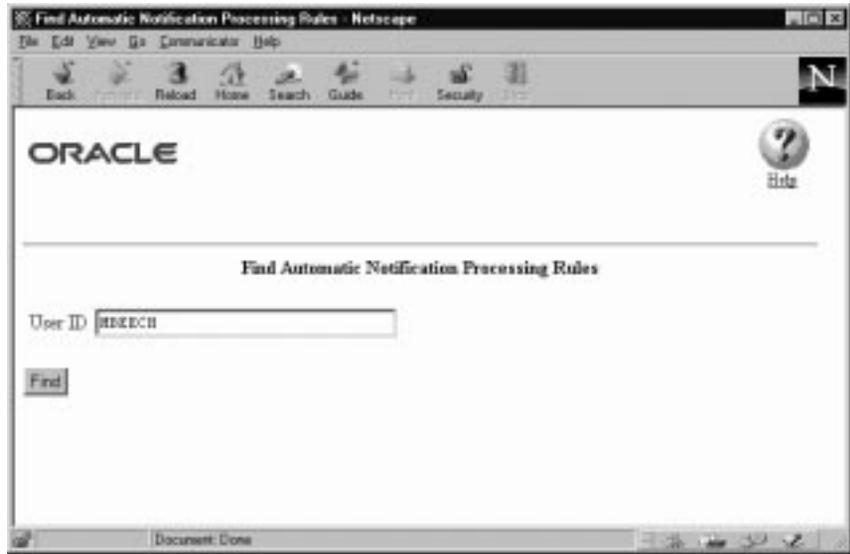
> ☞ **Attention:** Both of these URLs access secured pages, so if you
> have not yet logged on as valid user in the current web session,
> you will be prompted to do so before the page appears. See:
> Secure the Workflow Database Connection Descriptor (DCD):
> *Oracle Workflow Guide.*
>
> **Note:** You can also access the Find Automatic Notification
> Processing Rules web pages from the Oracle Workflow home
> page. See: Accessing the Oracle Workflow Home Page: *Oracle
> Workflow Guide.*

2. The Automatic Notification Processing page for the role appears,
   listing all existing rules for the current role. Choose Create Rule.

3. In the Item Type poplist field, select the item type to which this rule applies or select <All> if you want this rule to apply to notifications associated with any item type.

4. Choose Next to proceed or choose Cancel if you want to cancel this rule and return to the Automatic Notification Processing page.

5. If you selected <All> as the item type to apply the rule to, then skip to step 8. If you selected a specific item type, then proceed to the

next step to choose a notification from that item type to which you want your rule to apply.

6. In the Notification field, select the notification message to which this rule applies or select <All> if you want this rule to apply to all notifications in the item type.

7. Choose Next to proceed or choose Cancel if you want to cancel this rule and return to the Automatic Notification Processing page.

8. The final Create New Rule page appears. The fields in this page vary depending on the item type(s) and notification(s) that you are creating this rule for. For example, if your rule pertains to all item types, you can automatically reassign all the notifications to another user, but you cannot define an automatic response to all the notifications since different notifications have different response attributes.

9. Enter values in the Start Date and End Date fields to specify the period that this rule should be active. Specify the date using the default date format of your database and specify a time using the format HH24:MI:SS.

   If you leave Start Date blank, the rule is effective immediately. If you leave End Date blank, the rule is effective indefinitely.

   ⚠ **Warning:** Since you can define different rules for the same notification(s) to be effective at different times, the Automatic Notification Processing web page does not prevent you from defining multiple rules for the same notification(s). You should be careful to ensure that rules for the same notification(s) do not overlap in their effective dates. If multiple rules are effective for the same notification, Oracle Workflow picks one rule at random to apply.

10. In the "Comments to include in notification" field, enter any text that you want to append to the notification when the rule is applied. The comments appear in a special "Prior comments" field when the notification is reassigned or automatically responded to.

11. Choose the action that you want this rule to perform:

- "Reassign to"—forward the notification to a designated role.

- "Respond"—respond to the message with a set of predefined response values.

- "Deliver Notifications to me, regardless of any general rules"—leave the notification in the your inbox and do nothing. You can define a rule with this action to exclude a certain subset of notifications from a more encompassing rule. For example, suppose you have a rule that forwards all your notification messages to another role, but you want to exclude a subset of notifications from that rule. To accomplish this, you can define a new rule that applies only to that subset of notifications, whose action is to 'Deliver Notifications to me,...'.

12. If your rule action is "Respond", set the response values that you want to automatically reply with.

13. If your rule action is "Reassign to", enter the role display name that you want to forward the notification(s) to.

14. Choose Done to save this rule. When you get a confirmation that the rule is successfully processed, choose the <u>Return to Automatic Notification Processing</u> link to display an updated list of your role's routing rules. You can also choose Cancel at any time if you want to cancel this rule and return to the Automatic Notification Processing page.

▶ **To Update or Delete an Automatic Notification Processing Rule**

1. Connect to the URL for the Automatic Notification Processing web page:

   <webagent>/wf_route.list

   <webagent> represents the base URL of the Oracle Web Agent used by Oracle Workflow. It looks something like http://*<server.com:portID>/<PLSQL_agent_virtual_path>*. See: Identifying the Oracle Web Agent used by Oracle Workflow: *Oracle Workflow Guide*.

2. The Automatic Notification Processing page for the role appears. In the "Result of Applying Rule" column, click on the rule you wish to update.

3. In the Modify Rule page make your changes to the rule and choose OK to save your changes.

You can also choose Cancel to undo your changes and reset the rule back its most recently saved state.

4. To delete a rule, in the "Delete Rule" column, choose 'X' for the rule you wish to delete.

Customizing Oracle Workflow's Web Pages

The section titled <u>Setting Up the Workflow Monitor and Oracle Workflow's Web Pages</u> in the "Setting Up Oracle Workflow" section/chapter is incorrect and should be replaced by the following text:

To use Oracle Workflow's web pages and the Workflow Monitor at your site, you must first install Oracle WebServer. Refer to your Oracle WebServer documentation for additional information.

Once Oracle WebServer is installed and set up, you can customize the company logo that appears on Oracle Workflow's web pages.

Use a web browser that supports JavaScript to connect to the Notification Web page or a web browser that supports Java Development Kit (JDK), Version 1.1.4 and Abstract Windowing Toolkit (AWT) to connect to the Workflow Monitor.

▶ **To Customize Oracle Workflow's Web Pages:**

■ Copy or rename your company logo file (in .gif format) to **WFLOGO.gif** located in the following directory:

`<java_directory_tree>/oracle/apps/fnd/wf/icons`

`<java_directory_tree>` represents the java directory tree that you map to the `/OA_JAVA/` virtual directory in Oracle WebServer.

If you are using Oracle Workflow embedded in Oracle Applications, this mapping is completed as part of the Oracle Applications installation and setup steps. If you are using the standalone version of Oracle Workflow, this mapping is completed after installing the Oracle Workflow server, when you set up the Workflow Monitor.

Defining Document–type Attributes

The Oracle Workflow Guide and online help describe support for the new PL/SQL document attribute type. Specifically, it states that when you define the attribute as type Document, you must specify the following syntax in the Default Value field:

`plsql:<procedure>/<document_identifier>`

To clarify the above syntax, `<procedure>` should be replaced with the Pl/SQL package and procedure name in the form of package.procedure. The phrase `<document_identifier>` should be replaced with the PL/SQL argument string that you want to pass directly to the procedure. The argument string should identify the document. For example:

```
plsql:po_wf.show_req/2034
```

If you wish to generate the PL/SQL argument string value dynamically, create another item attribute, and reference that item attribute as "&*item_attribute*" in place of the PL/SQL argument string. Then before any activity that references this other item attribute gets executed, call the WF_ENGINE.SetItemAttribute API to dynamically set the PL/SQL argument string value. For example:

```
plsql:po_wf.show_req/&POREQ_NUMBER
```