Customizing the Active Assembly and Content Explorer Interfaces

Version 7.3

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Percussion Software
600 Unicorn Park Drive
Woburn, MA 01801 U.S.A.
 781.438.9900
Internet E-Mail: technical_support@percussion.com
Website: http://www.percussion.com

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C H A P T E R 1

Introduction

This document is intended for CM System implementers. It is intended to make you both aware of which features are customizable and to give you step by step instructions for performing customizations.

Most customizable features affect one interface primarily, but some affect two or more. The document categorizes topics as follows, but since the categories tend to overlap, section headers are not included in the document:

- Customizations that primarily affect the Active Assembly interface.
- Customizations that affect both the Active Assembly and Content Explorer interface.
- Customizations that primarily affect the Content Explorer interface.

Since some of these customizations also affect other interfaces each topic lists which interfaces the particular customization affects.

This document ends with an appendix of the *CM System interfaces referred to in the document* (see "CM System Interfaces Referenced in this Document" on page 169).

C H A P T E R   2

Customizing Active Assembly

The topics in this section involved direct customizations of the Active Assembly interface.

- Changing the Default Icons/Borders mode - By default, when users open Active Assembly, icons and borders are hidden. You can change this default so that by default, icons and borders are visible.

- Configuring Actions in Active Assembly - Most actions in Active Assembly menus cannot be modified or removed. However, you can configure those listed in this topic using the CM System Workbench.

Changing the Default Icons/Borders Mode

By default, when a user enters the Active Assembly interface, the Icons/Borders mode in the View menu is *Hide Icons/Borders*, and the interface appears as in the following graphic. No icons appear beside page components in Page view, and the only outlined object is the main page, which is selected in Outline view.

Figure 1: Active Assembly Interface

In this configuration, the default option in the View menu is *Show Icons/Borders*. When clicked, this option causes Page view in Active Assembly to show Page, field, Slot and Snippet icons above or beside the objects they represent, and to show all objects with an outline around them.

Figure 2: Active Assembly interface with Show Icons/Borders enabled

You can change the default so that when the Active Assembly interface initially opens, Page view is in *Show Icons/Borders mode* and must manually be changed to *Hide Icons/Borders mode.*

To change the default Active Assembly Mode:

1   In <Rhythmyx root>\rxconfig\Server open the file server.properties.

2   By default the Active Assembly mode is set to 1, indicating that icons and borders are not displayed in Page view:
```
defaultActiveAssemblyMode=1
```

3   Manually change the Active Assembly mode to 0, indicating that icons and borders are displayed in Page view:

```
defaultActiveAssemblyMode=0
```

NOTE: You can also change defaultActiveAssemblyMode to 1 if it has already been changed to 0.

4   Restart the CM System server.

Configuring Actions in Active Assembly

Only those actions which implementers may want to modify or remove from their Active Assembly interface are configurable. The configurable actions are:

- Promotable Version
- Publish Now
- Impact Analysis
- Compare
- Create Translation

For information on how to configure these actions, see the section *Maintaining Menus and Menu Entries* (see page 39).

C H A P T E R   3

Setting up the Active Assembly Tutorial

The Active Assembly interface's Help menu includes an Active Assembly Tutorial option. If you want your users to be able to follow the tutorial using the examples it provides, you must install a copy of CM System with FastForward and follow the instructions below under **Tutorial Setup with FastForward**. If you want to customize the tutorial, follow the instructions under **Customizing the Tutorial**. Otherwise, you can follow the instructions under **Tutorial Without Setup**.

Tutorial Setup with FastForward

Install CM System with FastForward in a sandbox that is accessible to content contributors who take the tutorial.

To allow a content contributor to use the tutorial's examples:

1 Log in as admin1 under the Community *Enterprise_Investments*.

2 To allow a content contributor to create a content item without having to log out and log in as a different user:

In Content Explorer's Workflow tab, assign the QA Role as an Assignee in the Standard Workflow's Draft State. For help performing this task, see the Content Explorer help. You only have to do this the first time you set up the sandbox.

3 Copy the Site you have set up so that after each user takes the tutorial, you can delete the user's modified version and replace it with the copy of the Site that you have just set up. Follow the instructions under *Creating a Test Site* (see page 17).

4 Assign the qa1 FastForward user to the content contributor taking the tutorial to limit access to Content Explorer's Content tab. Be careful not to give content contributors access to content items that you are using for your own testing.

5 After each content contributor has completed the tutorial or at time intervals that you determine, reset the FastForward content to its original state by following the instructions under *Refreshing the Test Site* (see page 24).

Customizing the Tutorial

To customize the Tutorial to refer to your own content, modify the HTML files located in *<Rhythmyx root>/Docs/Rhythmyx/Active_Assembly_Tutorial*. Back up the customized tutorial because each time you upgrade CM System, your copy will be overwritten with the original version. Set up a Site that users can use with the tutorial, and set up content in the Site to reflect the examples in your tutorial.

Copy the Site you have set up so that after each user takes the tutorial or at time intervals that you determine, you can delete the user's modified version and replace it with the copy of the Site that you originally set up. Follow the instructions under *Creating a Test Site* (see page 17).

To delete each tutorial user's modified version of the Site and replace it with your original set up, see *Refreshing the Test Site* (on page 24).

Tutorial Without Setup

If you do not set up FastForward content to work with the original tutorial or customize the tutorial to work with your test content, your content contributors can still follow the tutorial. In the sandbox that you use to train content contributors, you should provide content items with a number of Slots filled in with Snippets that they can work with in Active Assembly. The content items must not be in a public State and must be available for check out by content contributors who take the tutorial. If you use this method, users may not be able to perform every step in the tutorial, but will learn how to use the major features of the interface.

Creating a Test Site

After you set up the tutorial Site in your sandbox, you must copy it to a test Site. Users who take the tutorial will only work on the test Site. The original tutorial Site becomes a backup for refreshing the test Site so that new users who take the tutorial are presented with unmodified content.

In the following instructions, we assume that you are using FastForward. If you are using your own content, follow the instructions, but replace your Communities, Sites, and Site Folders with the ones that we refer to in the following steps.

To create the test Site:

1   Copy the Enterprise_Investments and Enterprise_Investments_Admin Communities (or whichever Communities are associated with the Site you intend to copy) to other Communities in the Rhythmyx Workbench before creating the test Site. If you want your users to be able to follow the tutorial exactly as it is written, copy Enterprise_Investments to EI_Tutorial and Enterprise_Investments_Admin to EI_Admin_Tutorial. When you subsequently recreate the Site, you do not have to repeat this step. *Note: See the Rhythmyx Workbench Help for help copying the Communities.*

2   In Content Explorer, right-click the EnterpriseInvestments Site folder or your custom Site Folder and choose *Copy*.

3   Right-click on the root Site Folder and choose *Paste > As New Copy*.

The Copy Site wizard opens.
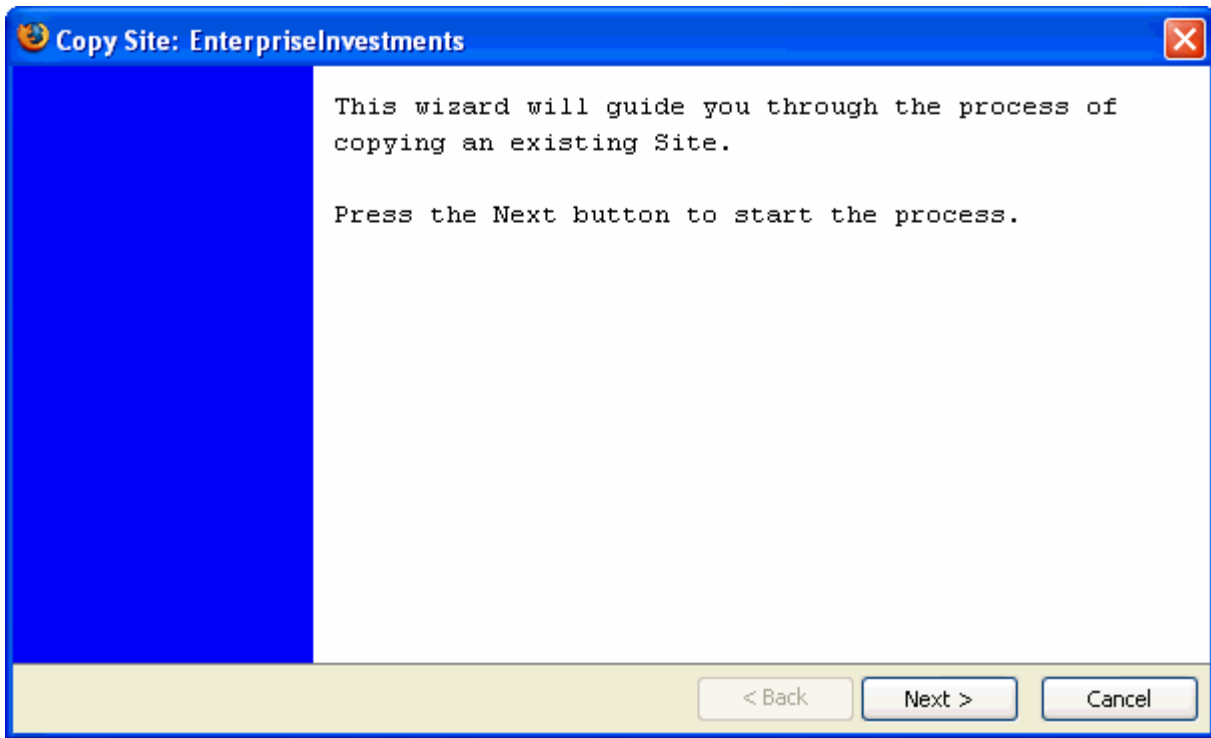
Figure 3: Copy Site Wizard

4   Press [**Next**].

The wizard moves to the next page. The **New Folder Name** and **New Site Name** fields are empty.

5   Enter names in **New Folder Name** and **New Site Name**. If you want your users to be able to follow the tutorial exactly as it is written, enter *EnterpriseInvestmentsTutorial* in **New Folder Name** and enter *Enterprise Investments Tutorial* in **New Site Name**.

Figure 4: Copy Site Wizard, second page

6   Click [**Next**].

The wizard moves to the next page.
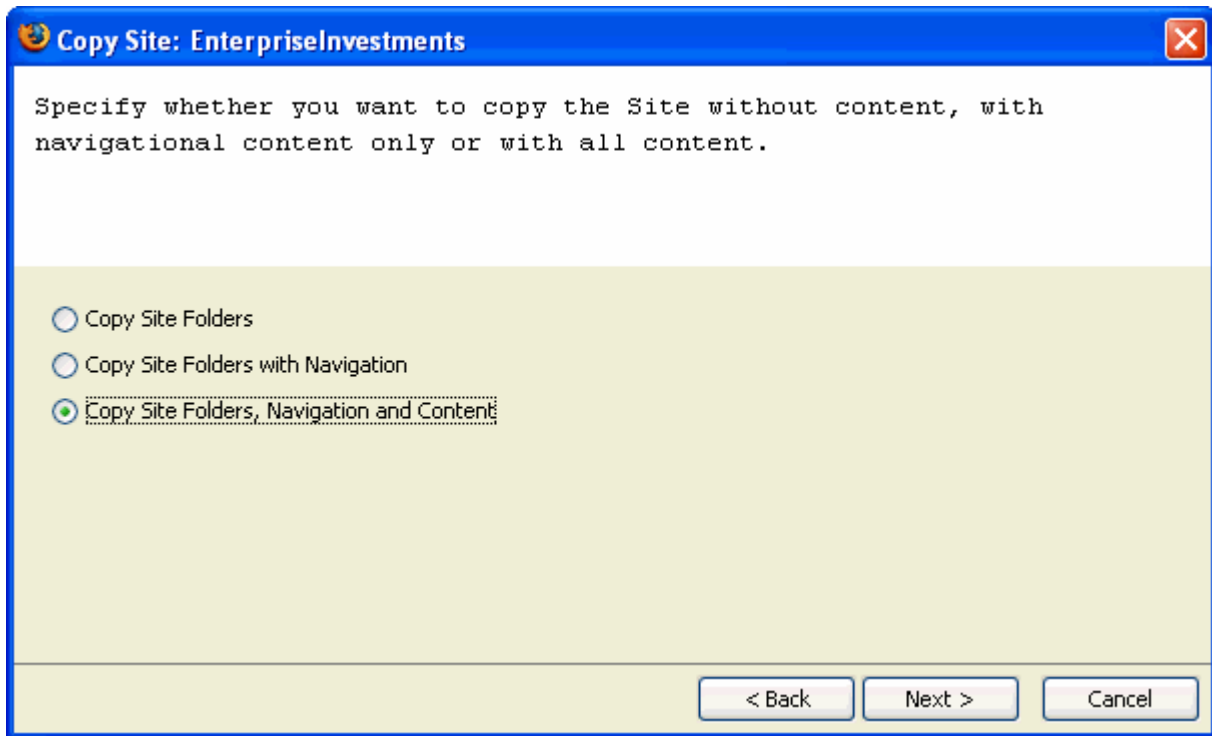
Figure 5: Copy Site Wizard, third page

7 Click *Copy Site Folders, Navigation and Content*.

8 Click [**Next**].

The wizard moves to the next page.
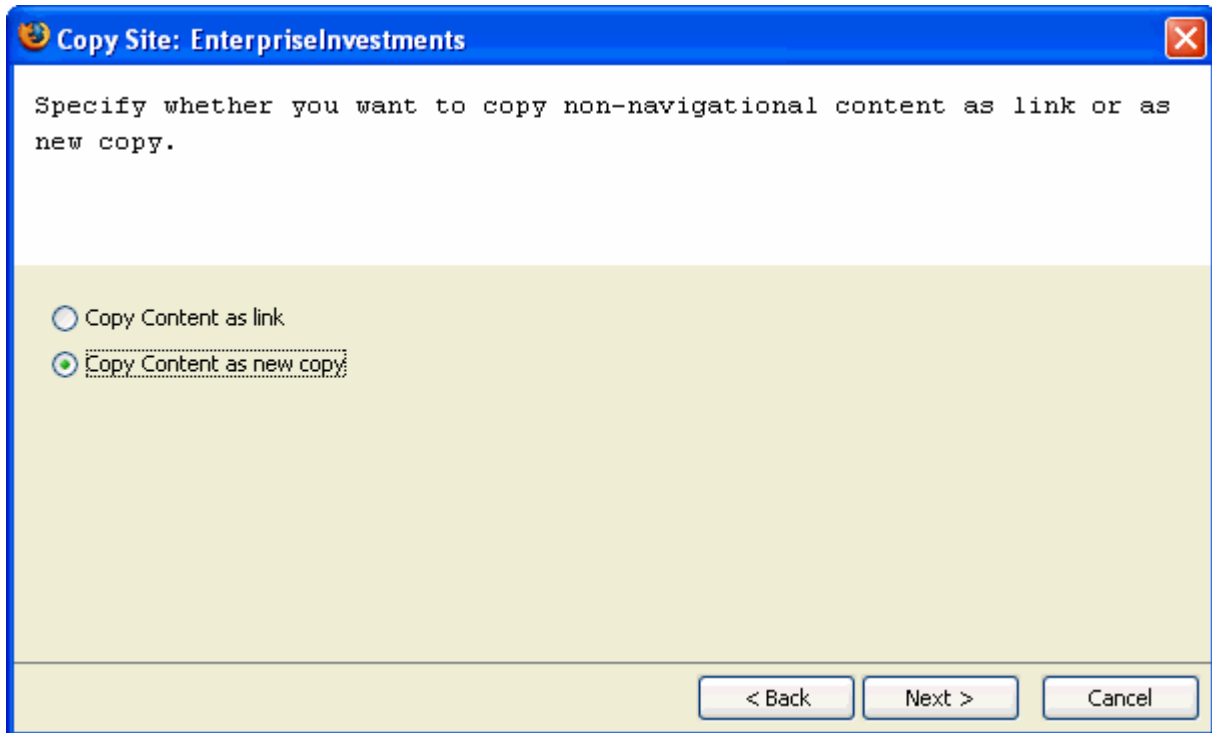
Figure 6: Copy Site Wizard, page 4

9 Click *Copy Content as new copy*.

10 Click [**Next**].

The wizard moves to the next page, which allows you to choose different Communities for your copied folders and content.

11 If you have copied the Enterprise_Investments and Enterprise_Investments_Admin
Communities (or the Communities associated with the Site that you are copying) choose the
copies under **Target Community**.
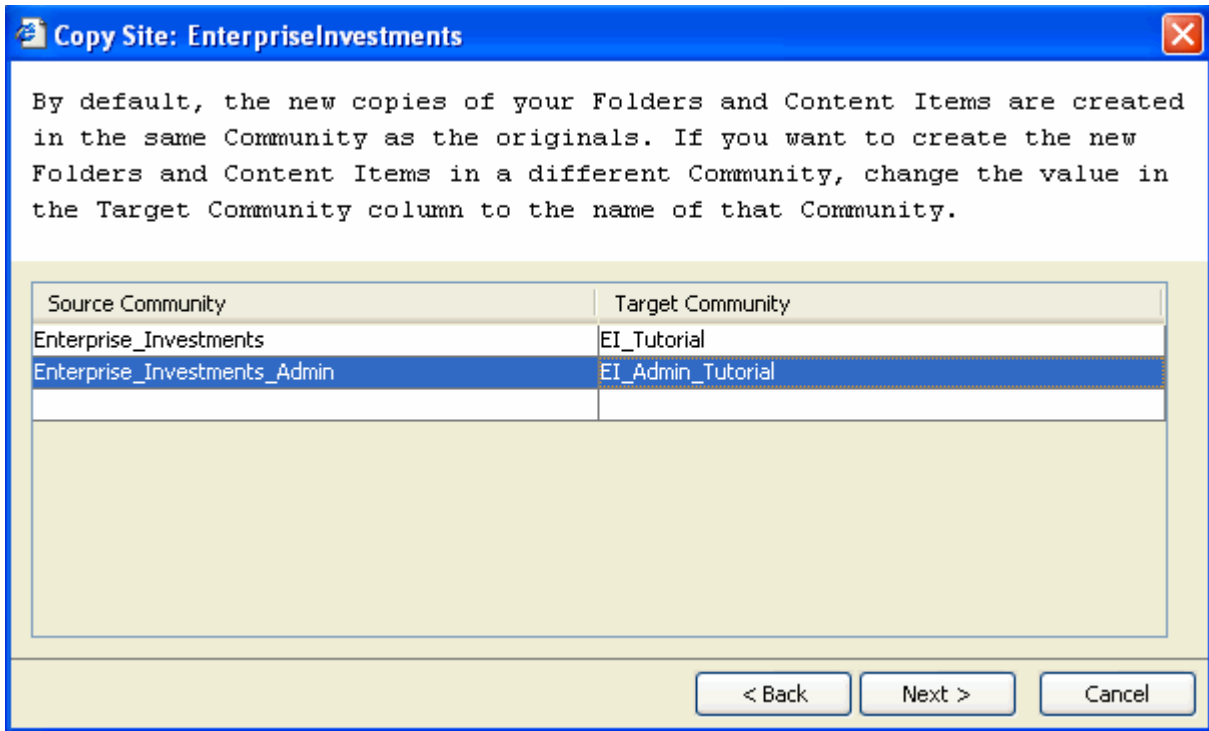
Figure 7: Copy Site Wizard, Map Community Page

12 Click [**Next**].

The wizard moves to the next page, which confirms your choices.

13 Click [**Next**].

After the wizard completes its processing, it closes. Content Explorer displays your new Site folder. Note that the content in this folder is all in the *Draft* State and is created by the user *rxserver*. Our setup instructions and the tutorial take this into account.
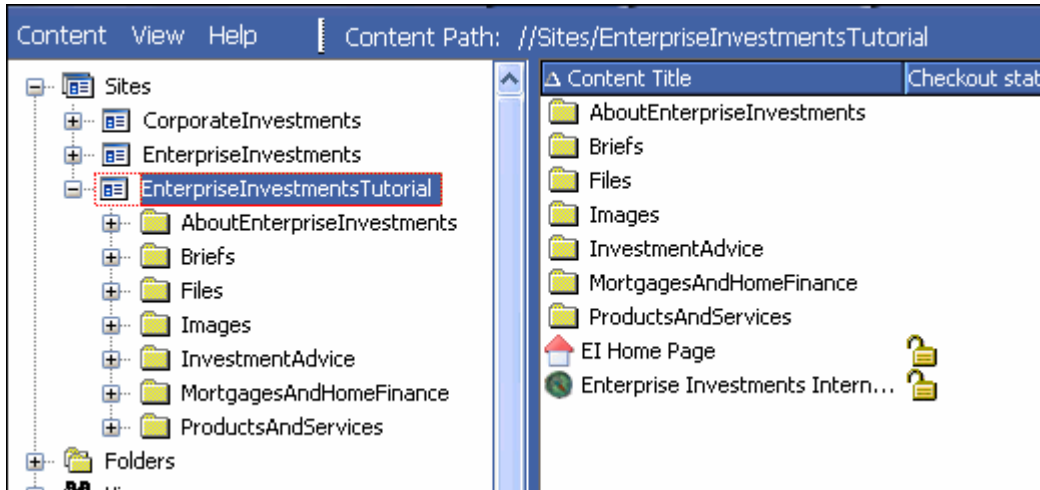
Figure 8: The new EnterpriseInvestmentsTutorial Site

14 Switch your login Community to EI_Tutorial.

Edit the item EnterpriseInvestmentsTutorial/InvestmentAdvice/EI Investment Advice - Category. Delete the contents of the *Body* field including any blank spaces. The item will now be checked out to you. Check it back in.

The purpose of doing this is to allow users who take the tutorial to see the Empty Field label on an item.

15 Go to EnterpriseInvestmentsTutorial/MortgagesAndHomeFinance/HomePurchase and check out the item *10 Steps to Demystifying the Mortgage*. You must do this each time you create the test Site.

The purpose of doing this is to allow users who take the tutorial to see the *checked out to someone else* icon overlaid on an item in the Active Assembly interface.

16 Determine how often new users will take the tutorial, and **refresh the test Site** (see page 24) at appropriate intervals.

Refreshing the Test Site

How often you refresh your test Site depends on how many users are taking the tutorial and how long the new Active Assembly interface has been available. For example, when you initially install CM System with the new Active Assembly interface, you might want to refresh the test Site twice a day, but as time goes
on, you may only refresh it every few days. You should keep your users informed of how frequently you are refreshing the Site so they know when to take the tutorial.

To refresh the test Site:

1 In Content Explorer, go to the Publishing Design tab and click Sites.

You should see your test Site (*Enterprise Investments Tutorial*) listed.

Figure 9: Publishing Design tab showing Sites

2 Select the radio button for Enterprise Investments Tutorial and choose *Action > Delete Selected Site* to delete your test Site.

A dialog prompts you to delete the Site or cancel the action.

3 Press *Delete*.

The Site is deleted from the Publishing Design tab.

4 Click the Content tab and locate and right-click on the tutorial Folder (*EnterpriseInvestmentsTutorial*) and choose *Remove from Folder*.
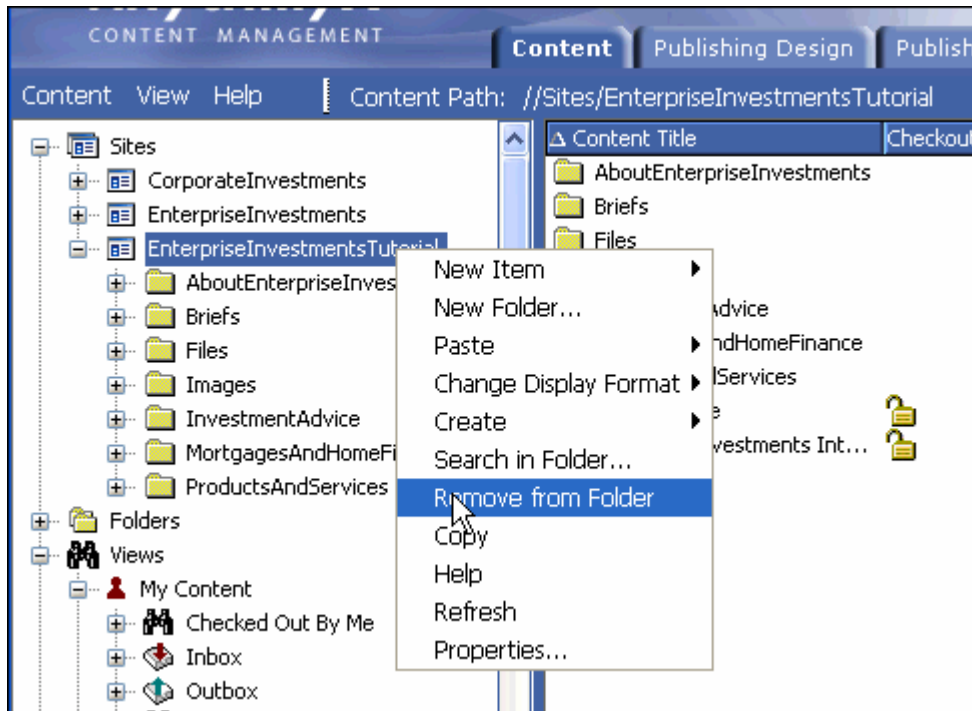
Figure 10: Removing the tutorial folder

The folder and its contents are removed.

5 Follow the procedure under ***Creating a Test Site*** (see page 17), but omit Step 1.

C H A P T E R   4

Maintaining Community Objects

A Community represents a group of roles that require access to similar information in CM System. A role can be associated with more than one Community, and users belong to all of the Communities associated with their roles.

CM System will only grant users access to those Content Editors, Workflows, user interface components, Sites, and Templates that are associated with their Communities. Therefore, if you customize the objects associated with a Community, you affect what users are able to see in *Active Assembly* (on page 170), *Content Explorer* (on page 171), *Active Assembly for Documents* (on page 173), and *Action Panels* (see "Action Panel" on page 172).

You create and edit Communities in the Rhythmyx Workbench. In the Rhythmyx Workbench:

- Use the *Security Design view* (see "CMS Navigator - Security Design" on page 28) to see the
  Communities in your system and the Roles associated with them.
- Use the *Community Visibility view* (see "Community Visibility" on page 30) to associate CM System objects with Communities.
- Use the *Community Wizard* (see "New Community Wizard" on page 32) to create new Communities.
- Use the *Community Editor* (see page 34) to edit and maintain existing

Communities. In the Rhythmyx Workbench, you can:

- *Create a Community* (see "Creating a Community" on page 36).
- *Edit a Community* (see "Editing a Community" on page 37).
- *Delete a Community* (see "Deleting a Community" on page 38).

You associate Roles with Communities in the Rhythmyx Server

Administrator.

A Content Item is automatically associated with the Community of the user who creates

it. The way you configure user's Communities affects each user's login procedure:

- If the user role has one Community or a default Community defined, CM System logs the user in for that Community.
- If users have more than one Community and no default Community defined, CM System displays the Community Login page to them, so they can select a log-in Community.
- If the user clicks the Communities button in the User Status box in the Content Explorer, CM System displays the Community Login page, and the user can select a new log-in Community.
- The Default Community (`sys_defaultCommunity`) is a property of the user's role. Define it in the Server Administrator.

CMS Navigator - Security Design

The Security Design view of the Rhythmyx Workbench's CMS Navigator displays Security objects.

The main objects in the Security Design view are Communities and Roles. Below, descriptions of these objects and their children follow the graphical representation of the view.
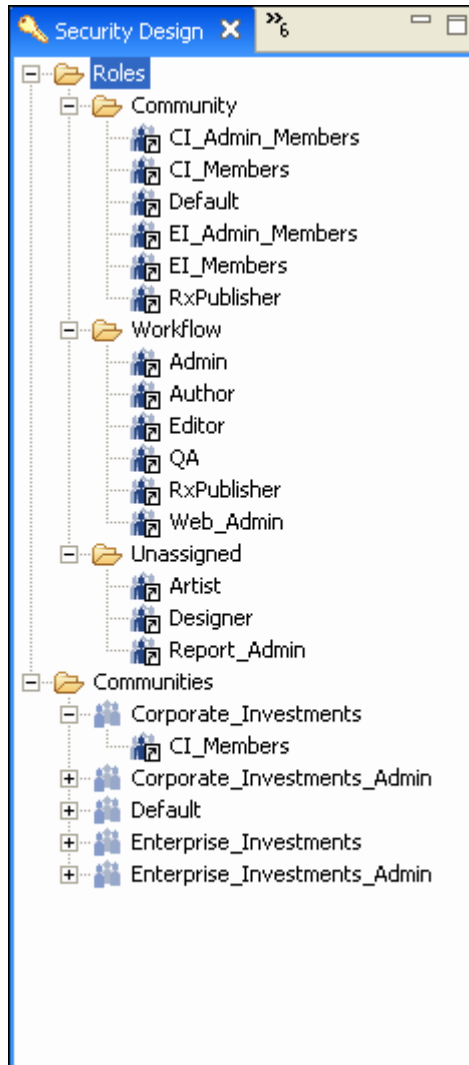
Figure 11: SecurityDesignView

Roles Folder

Roles folder includes folders representing three categories of Roles. Theoretically, users should not associate Roles with both a Community and a Workflow; however, associating a Role with both is permitted.

- Communities - contains references to Roles that are members of a Community.
- Workflow - contains references to Roles that have access to a Workflow.

Community roles are normally only assigned to communities in the Security Design view. These roles are not workflow roles and only define the communities that a user can log in to. If a workflow role is added to the community in the Security Design View then that role will effectively be filtered out of the workflow for a user logged into any other community that the role is not assigned to. This allows for a design approach where there can be community specific workflow roles e.g. CommunityA_Author, CommunityB_Author where both can be given assignee access to a given workflow state, but the effective role is filtered by the community.

If this filtering of workflow roles is not being used do not assign workflow roles to any community. If a developer in workbench mistakingly adds a workflow role to a community they may find that users can no longer access their content as the role may be filtered out in their community.

If you want to prevent issues caused by users accidentally adding a workflow role to a community you can add the following line to turn off this feature in the rxconfig/Server/server.properties file

assignmentTypeCalculationFilterCommunityRoles=false

- ▪ Unassigned - contains references Roles that are not members of a Community and do not have access to a Workflow.

In all Rhythmyx Workbench views, references to Roles rather than actual Roles are listed because Roles are edited in the Rhythmyx Server Administrator rather than the Rhythmyx Workbench.

Communities Folder

The Communities folder contains all Communities in the CMS. Each Community contains references to the Roles that are associated with it. For a more detailed view of Communities, see *Community Visibility* (on page 30).

Community Visibility

Use the Rhythmyx Workbench's Community Visibility view to view or edit the objects that are visible to the members of a Community. The Community Visibility view lists all Communities on the CM System Server and displays the objects to which each Community has access.

To access the Community Visibility View, in the Menu bar, choose *Window > Show View > Other*. On the Show View dialog, choose *Community Visibility*.
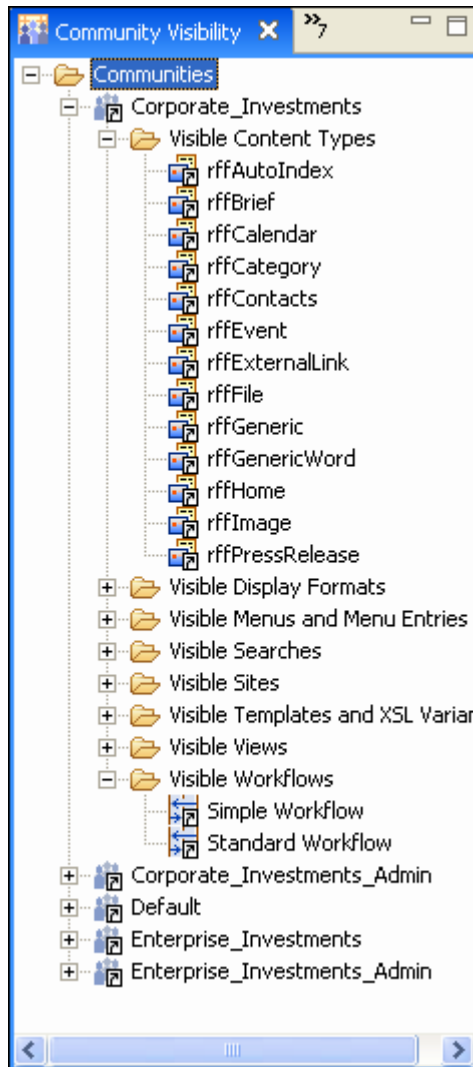
Figure 12: Community Visibility View

The types of objects that can be visible to a Community are Content Types, Display Formats, Menus and Menu Entries, Searches, Sites, Templates and XSL Variants, Views, and Workflows. If you have modify ACL access to the object, you can drag and drop (or copy and paste) it from the following views to the Community which has access to it:

Object	Drag from . . .
Content Types	Content View
Templates	Assembly View
Menus and Menu Entries, Display Formats, Searches, Views	User Interface Elements View
Sites, Workflows	System Design View
XSL Variants	XML Server

New Community Wizard

The New Community wizard creates new Communities in *Security Design view* (see "CMS Navigator - Security Design" on page 28).

To access the New Community wizard:

- In *Security Design view* (see "CMS Navigator - Security Design" on page 28), right-click on the Communities folder and choose *New > Community*.
- From the Menu bar choose *File > New > Other*. In the Select a Wizard dialog, expand the CM System CMS folder and choose *Community*. Click [**Next**].

Figure 13: New Community Wizard

Field Descriptions

Community name - The name of the Community.

Description - An explanation of the Community and its purpose.

Available roles - The roles that are accessible for assignment to the Community.

Assigned roles - The roles that are allocated to the Community.

Community Editor

Use the Community editor to add or remove roles that are associated with a Community.

To access the Community editor:

- After completing the Community wizard, click [**Finish**].
- Right-click on the Community object in any view that displays it and select *Open*.
- Double-click on the Community object in any view that displays it.
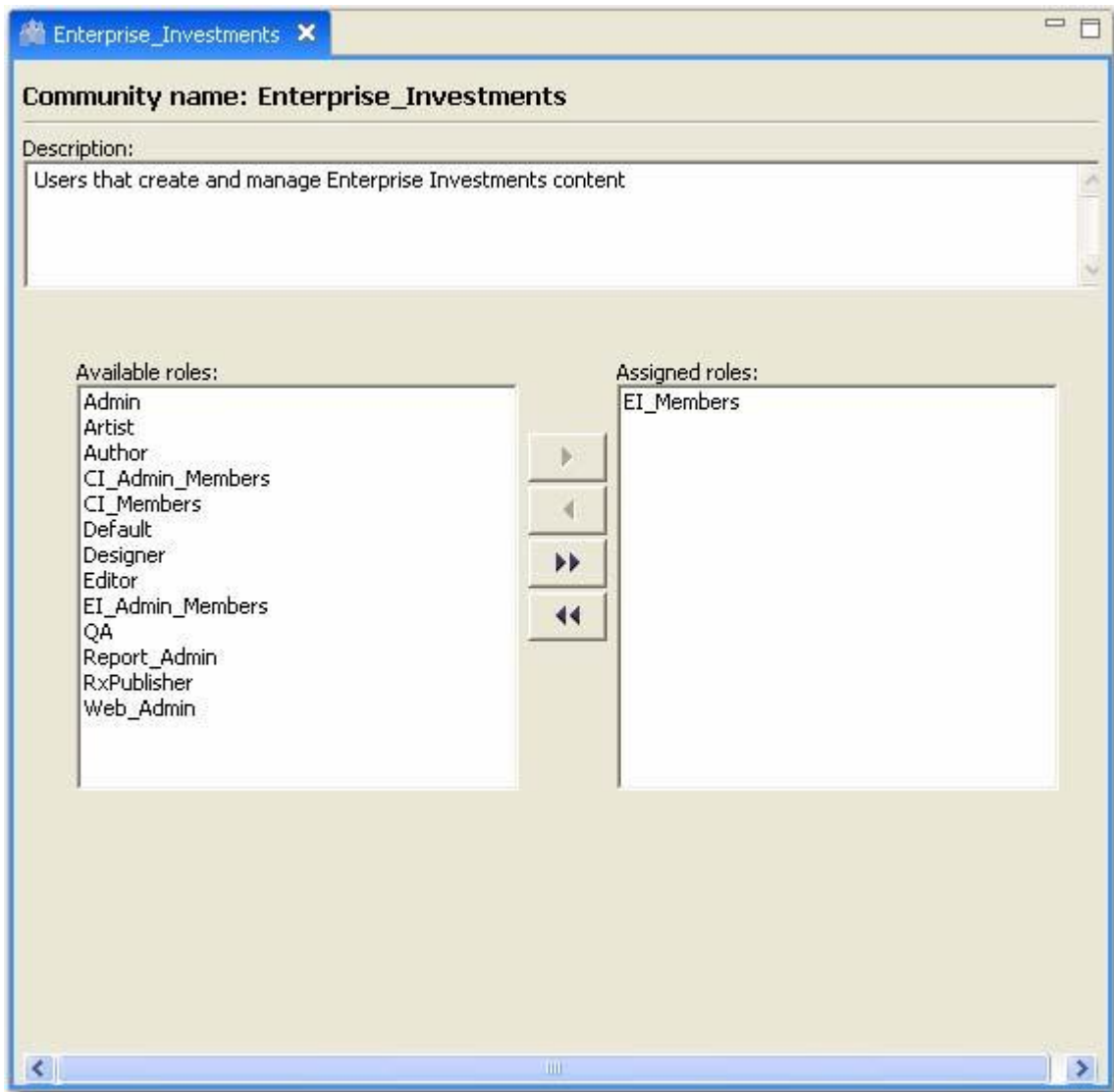
Figure 14: Community Editor

Field Descriptions

Community name - Read only. The name of the Community.

Description - An explanation of the Community and its purpose.

Available roles - The roles that are accessible for assignment to the Community.

Assigned roles - The roles that are allocated to the Community.

Creating a Community

Use the New Community wizard to create a new Community and assign Roles to it.   Note that when you create a new Community, any object whose Access Control List specifies that it is available to All Communities will automatically be added to the new Community.

For a graphic of the wizard and definitions of the fields discussed below, see *New Community Wizard* (on page 32).

To create a Community:

1   In *Security Design view* (see "CMS Navigator - Security Design" on page 28), right-click on the Communities folder and choose *New > Community*.

   The New Community wizard opens.

2   Enter a unique name in the **Community name** field.

3   Optionally, enter a **Description**.

4   In **Available roles**, select the Roles you would like to add to the Community. Use [ALT + click] to select multiple Roles. Click [▶] to move them to **Assigned roles**.

5   If you want to move a Role back to the **Available roles** column, select the Role in the **Assigned roles** column and click [◀].

6   You can also move all of the Roles from one column to the other by clicking [◀◀] or [▶▶].

7   Click [**Finish**].
   The New Community wizard closes and the Community editor opens. The Community appears under the Community folder in *Security Design view* (see "CMS Navigator - Security Design" on page 28).

The Community editor displays the same fields as the New Community wizard.

Now you can:

▪   Save and close the Community editor, since it does not include any additional fields.

▪   Go to *Community Visibility view* (see "Community Visibility" on page 30) and modify the CM System components available to the Community.

Editing a Community

For a graphic of the editor and definitions of the fields discussed below, see *Community Editor* (see page 34).

To update or edit a Community:

1 Change the **Description**.

2 Make the necessary changes to the community and click the Finish button when you are done. CM System will validate that the name is unique name among all communities. You will not be allowed to proceed to the next step if the name you enter is already in the system.

3 Click the Close button to exit the Update Community dialog box.

4 In **Available roles**, select Roles that you would like to add to the Community. Use [ALT + click] to select multiple Roles. Click ▶ to move them to **Assigned roles.**

5 If you want to move a Role back to the **Available roles** column, select the Role in the **Assigned roles** column and click ◀ .

6 You can also move all of the Roles from one column to the other by clicking ◀◀ or ▶▶ .

7 Save and close the editor.

Deleting a Community

You cannot delete a Community that contains any Content Items. Purge all Content Items associated with the Community before deleting the Community.

To delete a Community:

1   In *Security Design view* (see "CMS Navigator - Security Design" on page 28), right-click on the Community and choose *Delete*.

2   The Community is deleted from CM System.

When you delete a Community, any associations of CM System elements with that Community are also removed. However, the elements are not deleted from CM System. Likewise, If Roles are assigned to Communities, the assignments are removed but the Roles are not removed from CM System.

C H A P T E R 5

Maintaining Menus and Menu Entries

Menus provide the functions available to Content Items and Folders in *Active Assembly* (on page 170), *Content Explorer* (on page 171), *Active Assembly for Documents* (on page 173), and *Action Panels* (see "Action Panel" on page 172).

Menu entries are the choices that are listed in menus. Menu entries are not children of any Menu and can be associated with multiple menus. Typical menu entries enable functions such as editing Content Items, performing Workflow Transitions, and implementing Relationships (for example, creating new Active Assembly Relationships, or new Copies, Versions, or Translation Copies of Content Items). Menus may be nested to any number of layers.

Most frequently, menus appear as pop-ups that open when you right-click on a Content Item or Folder or as sub-menus of other menus. In some circumstances, menus appear as Action Panels. Action Panels behave in the same way as Menus, but some menu entries for action panels have required names.

For more information about Relationships in CM System, see the documents *Implementing the Relationship Engine*.
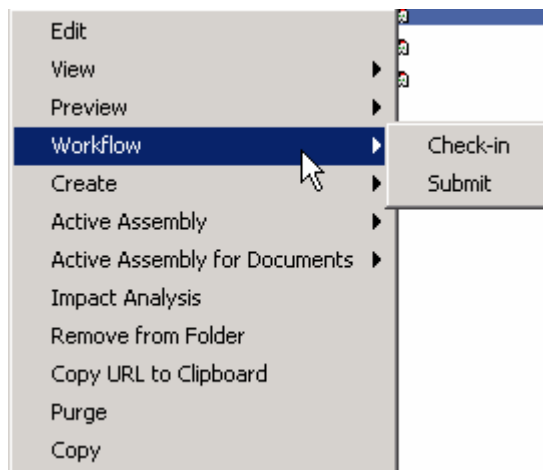
Create Menus and Menu Entries in the Rhythmyx Workbench:

- Use the *New Menu wizard* (see page 41) to create a new menu.
- Use the *New Menu Entry wizard* (on page 43) to create a new menu entry.
- Use the *Menu and Menu Entry editor* (see page 45) to complete and maintain menus and menu entries.

You can:
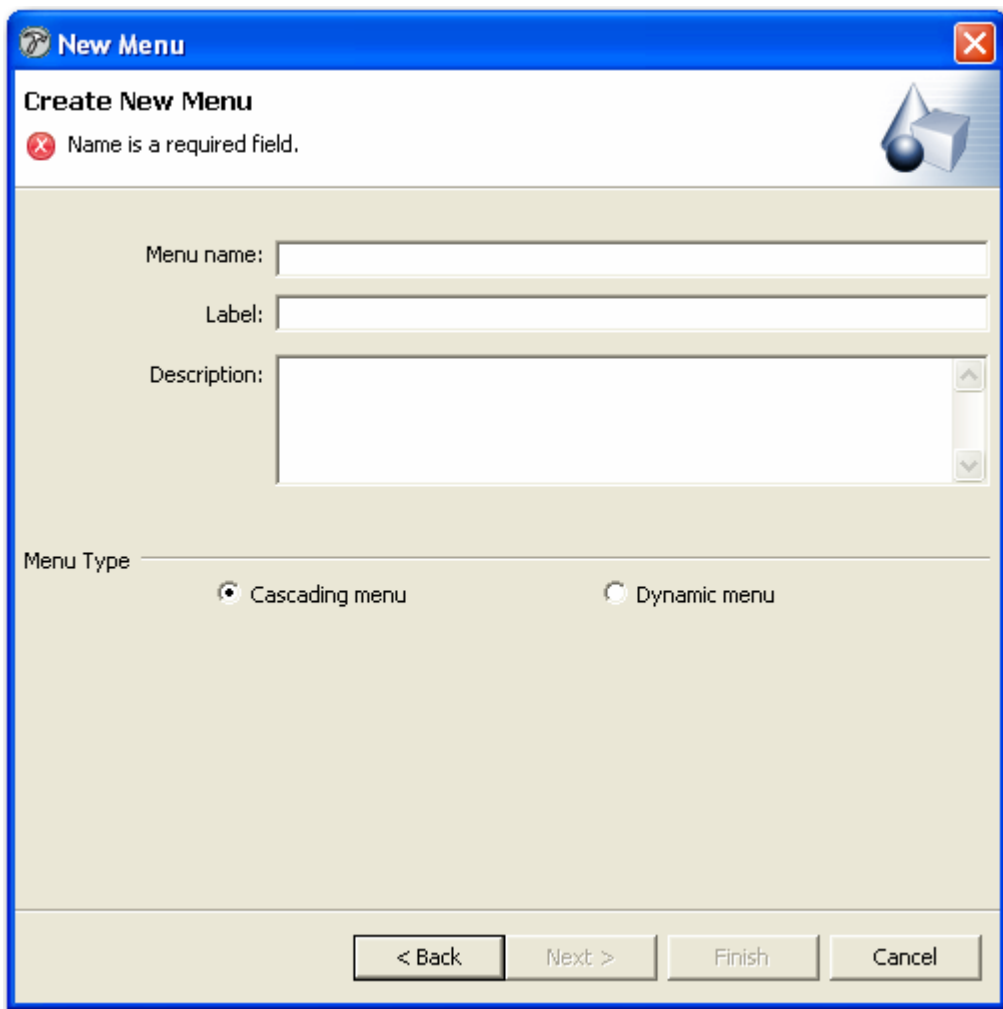
- *Create a basic menu object* (see "Creating a Menu" on page 61)
- *Create a basic menu entry object* (see "Creating a Menu Entry" on page 62)
- *Add properties to menus and menu entries* (see "Adding Properties to a Menu or Menu Entry" on page 63).
- *Edit properties of menus and menu entries* (see "Editing a Menu or Menu Entry" on page 65).
- *Delete menus* (see "Deleting a Menu" on page 68)
- *Delete menu entries* (see "Deleting a Menu Entry" on page 69)

New Menu Wizard

The Rhythmyx Workbench's New Menu wizard allows you to create a new menu object that appears in the UI Elements Design view; however, you must add properties in the *Menu and Menu Entry editor* (see page 45) to make the menu usable.

To access the New Menu wizard:

- From the Menu bar choose *File > New > Other*. In the Select a wizard dialog, choose *Menu*.
- In UI Elements view, expand the Content Explorer folder. Right-click on Menus and choose *New > Menu*.

Figure 15: New Menu Wizard

Field Definitions

Menu name - Required. System name of menu.

Label - Required. Name displayed to users for menu.

Description - Description of menu.

Menu Type - One of the following options is required:

Cascading menu	A menu whose entries are manually assigned to it.
Dynamic menu	A menu whose entries are selected by an application when the menu is accessed.
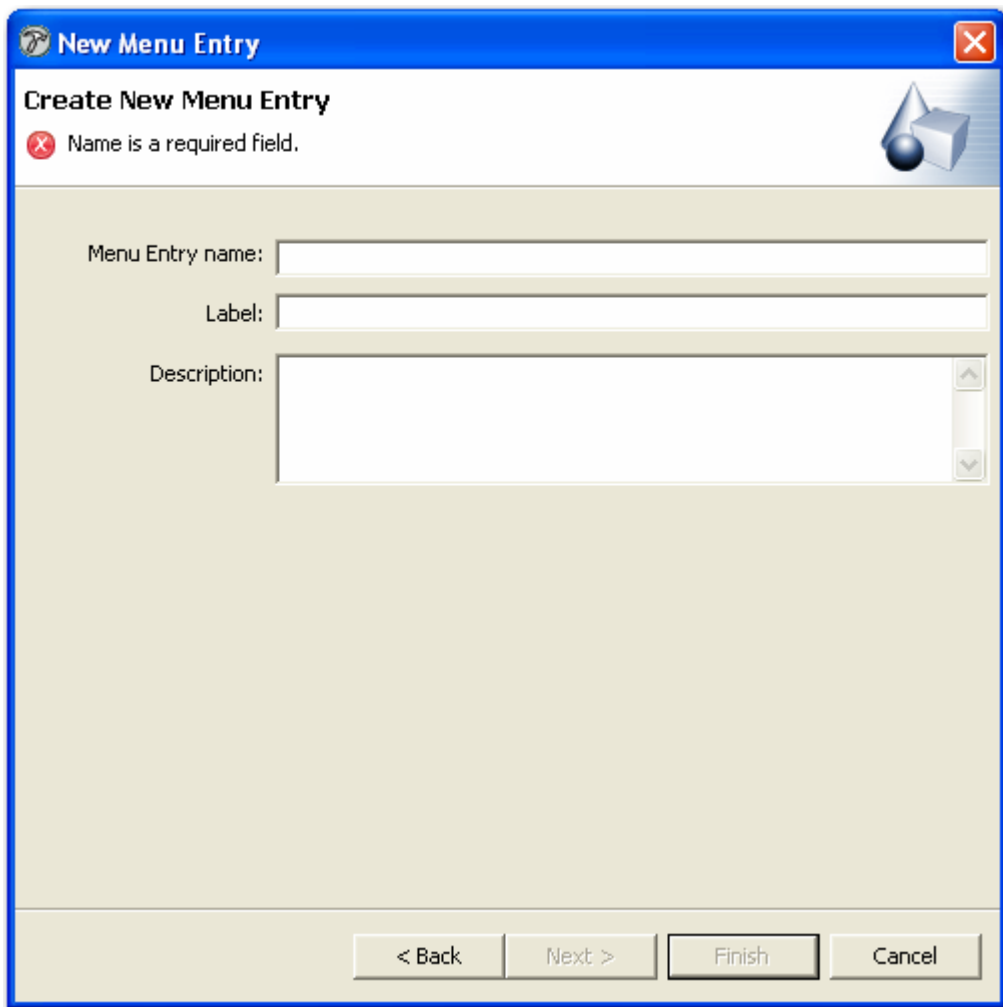
New Menu Entry Wizard

The Rhythmyx Workbench's New Menu Entry wizard allows you to create new menu entries that appear in the UI Elements Design view under the Menu Entries' User Folder; however, by default new Menu Entries are not available for any Content Explorer components; you must make it available in the *Menu and Menu Entry editor* (see page 45).

To access the Menu Entry wizard:

- In UI Elements view, from the Menu bar choose *File > New > Other*. In the Select a wizard dialog, choose *Menu Entry*.
- In UI Elements view, expand the Content Explorer folder. Right-click on Menu Entries and choose *New > Menu Entry*.

Figure 16: New Menu Entry Wizard

Field Definitions

Menu entry name - Required. System name for menu entry.

Label - Required. Name displayed to users for menu entry.

Description - Description of menu.

Menu and Menu Entry Editor

The Rhythmyx Workbench's Menu and Menu Entry editor allows you to add and edit properties of Menus and Menu Entries, including where they are accessible in Content Explorer.

To access the Menu and Menu Entry editor:

- After completing the *New Menu wizard* (see page 41) or the *Menu Entry wizard* (see "New Menu Entry Wizard" on page 43), click [**Finish**].
- Right-click on the menu or menu entry object in any view that displays it and select *Open*.
- Double-click on the Menu or Menu Entry object in any view that displays it.

The Menu and Menu Entry editor includes four tabs:

- General tab, which differs for *Menus* (see "Menu and Menu Entry Editor, General Tab for Menus" on page 46) and for *Menu Entries* (see "Menu and Menu Entry Editor, General Tab for Menu Entries" on page 48)
- *Usage tab* (see "Menu and Menu Entry Editor, Usage Tab" on page 51)
- Command tab
- *Visibility tab* (see "Menu and Menu Entry Editor, Visibility Tab" on page 58)

Menu and Menu Entry Editor, General Tab for Menus

When a menu opens in the Menu and Menu Entry Editor, the General tab displays general properties of the menu.

Use this tab to:

- ▪ *add general properties of a Menu.* (see "Adding Properties to a Menu or Menu Entry" on page 63)
- ▪ *edit general properties of a Menu* (see "Editing a Menu or Menu Entry" on page 65).

Figure 17: Menu and Menu Entry Editor, General tab for menus

Field Descriptions

Menu name - Read-only. System name for menu.

Menu label - Required. Name displayed to users for menu.

Description - Description of menu.

Type - One of the following options is required:

Cascading menu	A menu that only includes menu entries that are manually dragged and dropped into the menu.
Dynamic menu	A menu whose menu entries are generated by an application when the user accesses the menu. For example, a Workflow menu is dynamic because CM System uses an application to generate its entries depending on the Content Item's State.

Accelerator - Keyboard shortcut for opening this menu after choosing it. The keys `control`, `shift,ctrl,meta,alt and altGraph` are supported and can be combined with a character. The keys `DELETE` and `INSERT` are supported

as well. Examples are: `"INSERT"`, `"control DELETE"`, and `"alt shift X"`.

Case is sensitive the modifier is all lower case. The key is in Caps.

Sort rank - Sort order of menu label when it is listed in another menu. If several menus have the same **Sort rank**, they are sorted alphabetically within that rank. By default, **Sort rank** is 1, which causes a menu label to be placed first within a menu or alphabetically among other menus with a **Sort rank** of 1.

Mnemonic - Letter or character for selecting this menu when it is listed in another opened menu. An accessibility feature.

Tooltip - Brief description of the menu displayed when the mouse hovers over the menu label.

Icon path - The path, relative to the CM System root, to the graphic for the menu icon. For example,

`../rx_resources/images/edit.gif`. CM System displays the specified graphic beside the menu

label: .

Menu and Menu Entry Editor, General Tab for Menu Entries

When a menu entry opens in the Menu and Menu Entry Editor, the General tab displays general properties of the menu entry.

Use this tab to:

- *add general properties of a Menu Entry.* (see "Adding Properties to a Menu or Menu Entry" on page 63)
- *edit general properties of a Menu Entry.* (see "Editing a Menu or Menu Entry" on page 65)

Figure 18: Menu and Menu Entry editor, General tab

Field Descriptions

Menu entry name - Read-only. System name for menu entry.

Menu entry label - Required. Name displayed to users for menu entry.

Description - Description of menu entry.

Accelerator - Keyboard shortcut for opening this menu entry after choosing it. The keys `control`, `shift` and `alt` are supported and can be combined with a character. The keys `DELETE` and `INSERT` are supported as well. Examples are: `"INSERT"`, `"control DELETE"`, and `"alt shift X"`.

Sort rank - Sort order of menu entry label when it is listed in a menu. If several menu entries have the same **Sort rank**, they are sorted alphabetically within that rank. By default, **Sort rank** is 1, which causes a menu entry label to be placed first within a menu or alphabetically among other menu entries with a **Sort rank** of 1.

Mnemonic - Letter or character for selecting this menu entry. An accessibility feature.

Tooltip - Brief description of the menu entry displayed when the mouse hovers over it.

Icon path - The path, relative to the CM System root, to the graphic for the menu entry icon. For example, `../rx_resources/images/edit.gif`. CM System displays the specified graphic beside the menu

entry label: .

Options

Support multi-select - If checked, the user can select multiple items on which to perform the menu entry's action.

Refresh hint - A "hint" telling the CM System client what window(s) to refresh after executing the action associated with the menu entry. Options are:

None (do not refresh any window).
Default.

Current (refresh only the current window)

Parent (refresh only the parent window)

All (refresh all windows).

Launch new window - If checked, the action associated with the menu entry launches a new window (for example a Content Editor is opened in a separate window instead of the Eclipse editor pane).

Target - A name for internally referencing the new window.

Style - Javascript options for defining the new window. The user can enter the options manually or click [**...**] to set them in the *Window Style dialog* (on page 50).

Window Style Dialog

The Window Style dialog lets you create a style for the window launched when you choose a menu entry. The dialog is launched when you check **Launch new window** in the General tab of the Menu and Menu Entry editor and click [**...**] beside Style.
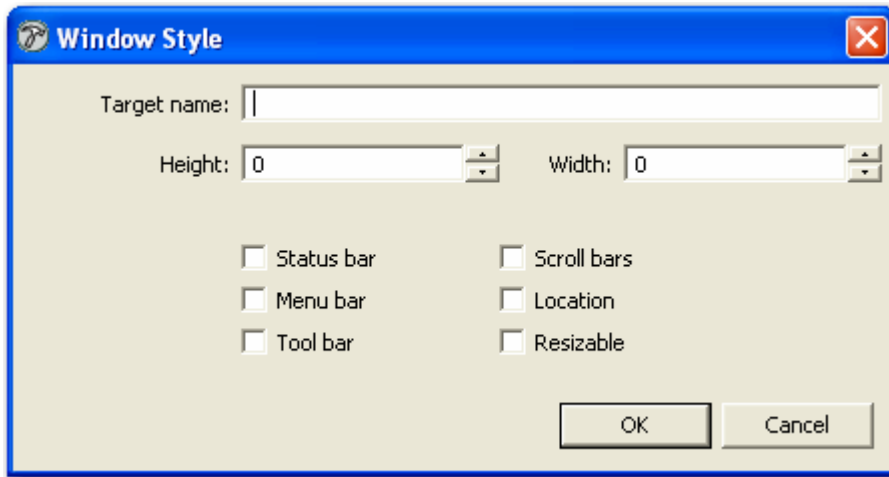
Figure 19: Window Style dialog

Field Definitions

Target name - Name for internally referencing the window.

Height - Height of the window.

Width - Width of the window.

Status bar - Whether or not a status bar (information bar at the bottom of the window) is included.

Menu bar - Whether or not a menu bar is included.

Tool bar - Whether or not a tool bar is included. Default is checked (yes).

Scroll bars - Whether or not scroll bars are included on the sides of the window.

Location - Whether or not a field for entering a URL is included.

Resizable - Whether or not users can resize the window.

Menu and Menu Entry Editor, Usage Tab

The Usage tab lets you specify which elements in windows accessible from Content Explorer display the currently edited menu or menu entry in their right-click or Menu bar menus.

Use this tab to:

- *Add areas where the Menu or Menu Entry appears in Content Explorer.* (see "Adding Properties to a Menu or Menu Entry" on page 63)

- *Edit areas where the Menu or Menu Entry appears in Content Explorer.* (see "Editing a Menu or Menu Entry" on page 65)
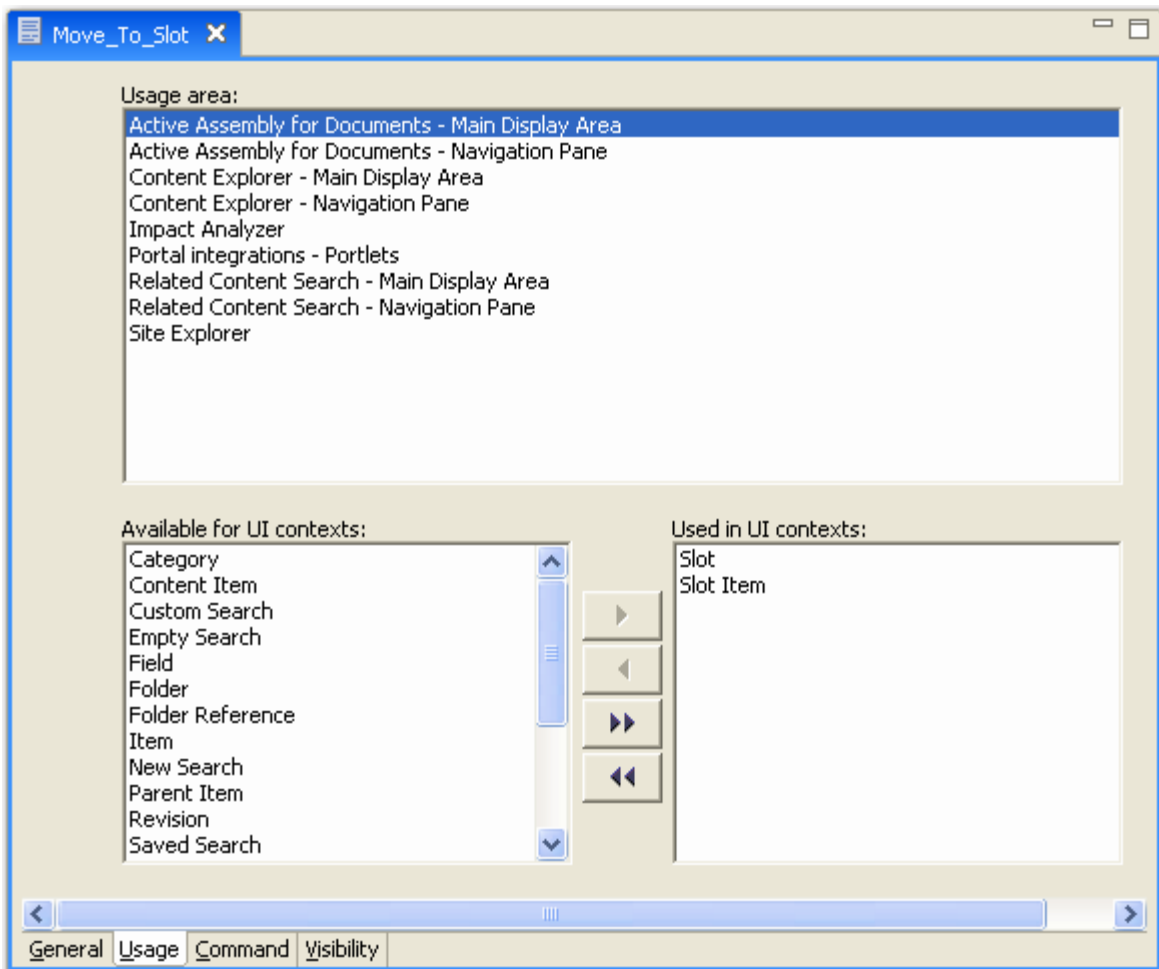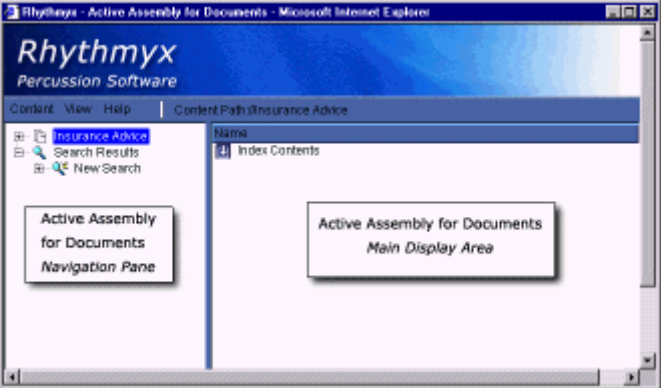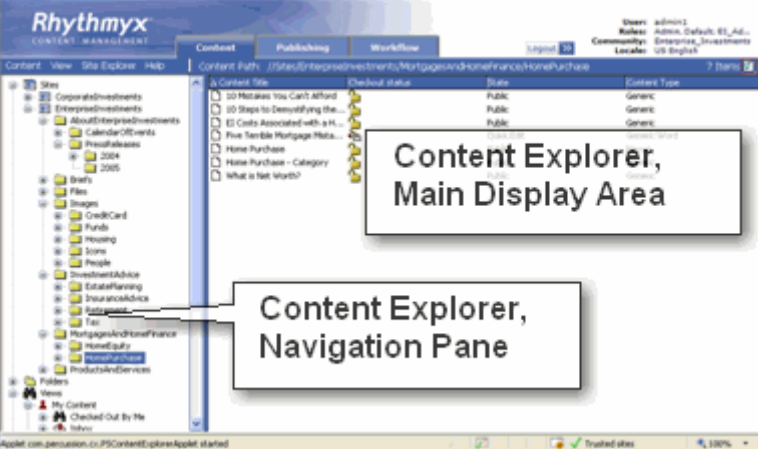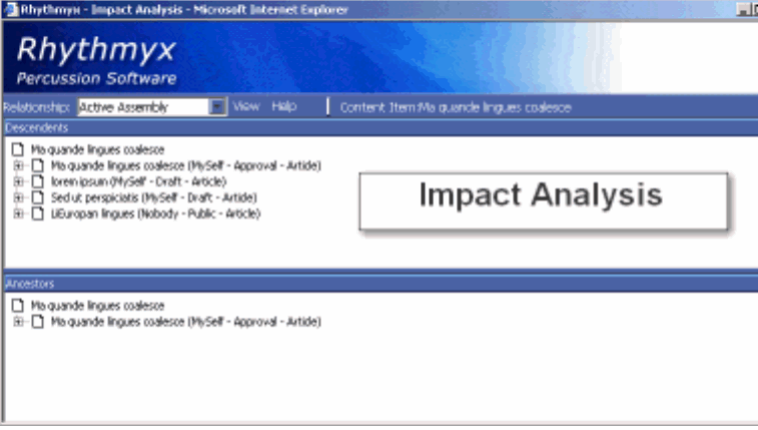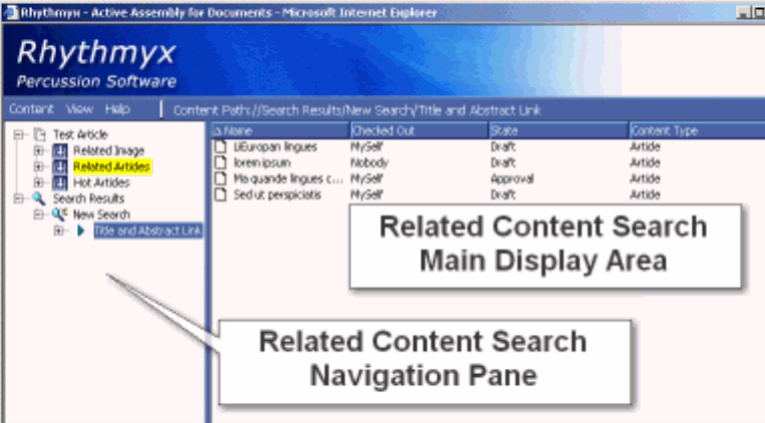
Figure 20: Menu and Menu Entry Editor, Usage tab

Field Definitions

Usage area - Lists windows accessible from Content Explorer that include elements that open right-click or Menu bar menus. The windows are listed in the following table. For additional information including how to access each of these windows, see the Content Explorer online help.

Content Explorer Area	Graphic
▪ Active Assembly for Documents - Main Display Area ▪ Active Assembly for Documents - Navigation Pane	
▪ Content Explorer - Main Display Area ▪ Content Explorer - Navigation Pane	
▪ Impact Analyzer	
▪ Portal integrations - Portlets	n/a

Content Explorer Area	Graphic
▪ Related Content Search - Main Display Area ▪ Related Content Search - Navigation Pane	
▪ Site Explorer	

Available for UI Contexts - When a window accessible from Content Explorer is selected under **Usage area**, the **Available from UI Contexts** box lists the elements on that window that can include the currently edited menu or menu entry in their right-click or Menu bar menus. A list of all possible elements follows. Each listing notes the windows from which the element is accessible.

Category: Available only in Content Explorer. The menu or menu entry is available if the user has a category selected in the Main Display Area.

Content Item Available in all modes. The menu or menu entry is available if the user has a Content Item selected.

Custom Search - The menu or menu entry is available if the user has a Custom Search selected.

Empty Search - The menu or menu entry is available if the user has a Search Results node selected.

Field - (not currently used)

Folder Available only in Content Explorer. The menu or menu entry is available if the user has a Folder selected.

Folder Reference Available only in Content Explorer. The menu or menu entry is available if the user has selected Folder in search results.

Item The menu or menu entry is available if the user has selected an item in the Impact Analyzer.

New Search Available in Content Explorer, Active Assembly for Documents, and Related Content Search. The menu or menu entry is available if the user has a Content Item selected in results of a newly-created search..

Parent Item Available in Active Assembly for Documents - Navigation Pane. The menu or menu entry is available if the user has the parent of the current item selected.

Revision Available in Content Explorer - Main Display Area. The menu or menu entry is available if the user has a Revision of a Content Item selected.

Saved Search Available in Content Explorer - Navigation Pane. The menu or menu entry is available if the user has a Saved Search selected.

Site The menu or menu entry is available if the user has a Site node selected.

Site Subfolder The menu or menu entry is available if the user has a Site subfolder node selected.

Slot Available in Active Assembly for Documents. The menu or menu entry is available if the user has a Slot selected.

Slot Item Available in Active Assembly for Documents. The menu or menu entry is available if the user has a Content Item in a Slot selected.

Standard Search - The menu or menu entry is available if the user has a Standard Search selected.

System Category Available in Content Explorer - Main Display Area. The menu or menu entry is available if the user has selected a category in a Display Format shipped with CM System.

System Folder Available in Content Explorer - Navigation Pane. The menu or menu entry is available if the user has selected a Folder that shipped with CM System.

System Site Available in Content Explorer - Navigation Pane. The menu or menu entry is available if the user has selected the default Site that ships with CM System.

System View Available in Content Explorer - Navigation Pane. The menu or menu entry is available if the user has selected one of the default Views that ship with CM System. These Views include My Content: Checked Out by Me, My Content: Inbox, My Content: Outbox, My Content: Recent, My Content: Session, Community Content: All, Other Content: All, and Other Content.

View Available in Content Explorer - Navigation Pane. The menu or menu entry is available if the user has selected a View.

Show - Lists elements chosen from the **Available for UI Contexts** box to display the menu or menu entry in their right-click or Menu bar menus (for the window selected in **Usage area**).

Menu and Menu Entry Editor, Command Tab

The Command tab specifies the command that a Menu or Menu Entry executes.

This tab is only available for Menu Entries, which execute commands, and dynamic Menus, which CM System generates by running commands. The tab is not available for cascading Menus, which consist of Menu Entries that are manually added.

Use this tab to:

- *Add the command associated with a Menu Entry or dynamic Menu* (see "Adding Properties to a Menu or Menu Entry" on page 63).
- *Edit the command associated with a Menu Entry or dynamic Menu* (see "Editing a Menu or Menu Entry" on page 65).
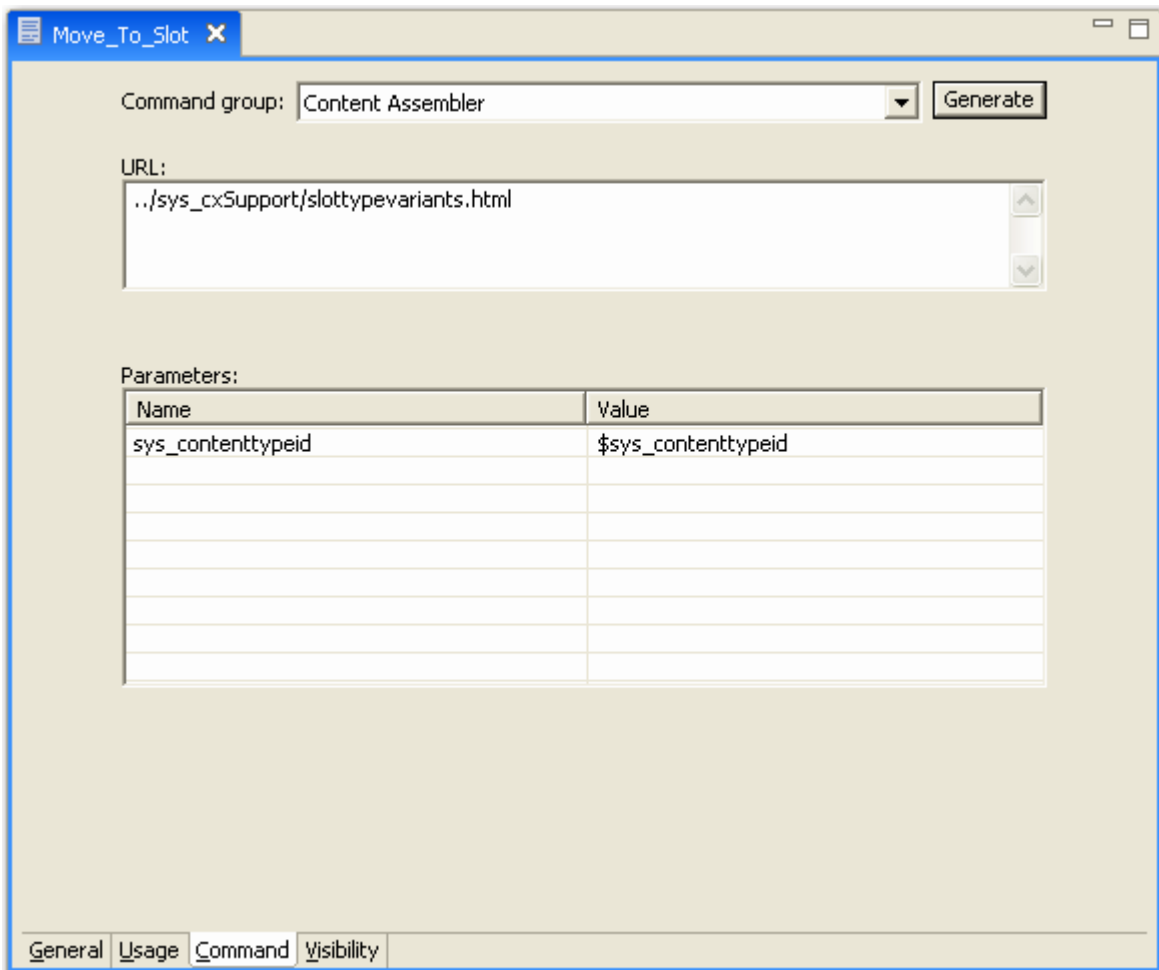
Figure 21: Menu and Menu Entry Editor, Command Tab

Field Definitions

Command Group A category for generating a dummy value for an application that can execute certain commands. For more information about the following categories of applications and the commands they can execute, see the section *CM System HTTP Interface* in the *Technical Reference Guide*.

- ▪ *Content Assembler* - Supplies a dummy Content Assembler URL and parameters.
- ▪ *Content Editor* - Supplies a dummy Content Editor URL and parameters.
- ▪ *Relationship Handler* - Supplies a dummy relationship URL and parameters.

When you reopen the Menu or Menu Entry, the **Command Group** always appears as *Content Assembler*, even if this does not reflect the choice you used to create your URL.

[**Generate**] Click this button to generate a sample URL for the type selected in the **Command Group** field. You can modify this value if necessary. If you have already specified a value in the URL field, the new value overwrites the existing value. (The system displays a confirmation message before overwriting the existing value.)

URL The URL of the command activated by this Menu or Menu Entry. You can specify any valid URL in this field. The parameter tables display any associated HTML parameters.

Parameters Parameters for the command specified in **URL**.

Name The name of the parameter.

Value The value of the parameter. The Value can be a text string that you enter or one of the following system parameters available in the drop lists:

Variable	Usage Area (and elements) where available
$sys_contentid	Content Explorer
	Active Assembly for Documents (Slot on Content Item)
	Active Assembly for Documents (Item in Slot)
	Site Explorer
$sys_revision	Content Explorer
	Active Assembly for Documents (Slot on Content Item)
	Active Assembly for Documents (Item in Slot)
	Site Explorer
$sys_contenttypeid	Content Explorer
	Active Assembly for Documents (Slot on Content Item)
	Active Assembly for Documents (Item in Slot)
$sys_tiprevision	Content Explorer
$sys_checkoutstatus	Content Explorer
	Active Assembly for Documents (Item in Slot)
$sys_contentcheckoutusername	Content Explorer
	Active Assembly for Documents (Item in Slot)

Variable	Usage Area (and elements) where available
$sys_workflowid	Content Explorer
$sys_slotid	Active Assembly for Documents (Slot on Content Item)
	Active Assembly for Documents (Item in Slot)
$sys_slotname	Active Assembly for Documents (Slot on Content Item)
$sys_variantid	Active Assembly for Documents (Item in Slot)
	Site Explorer
$sys_siteid	Content Explorer
	Active Assembly for Documents (Slot on Content Item)
	Active Assembly for Documents (Item in Slot)
	Site Explorer
$sys_assignmenttypeid	Content Explorer
	Active Assembly for Documents (Slot on Content Item)
	Active Assembly for Documents (Item in Slot)
	Site Explorer
$sys_relationshipid	Active Assembly for Documents (Item in Slot)

Special variables derived from the user session (Indicated by $$):

- sys_community
- sys_lang
- sys_username
- sys_mode

The special variable $sys_folderid is also available. It retrieves the contentid of the parent Folder of the selected Content Item or Folder.

Menu and Menu Entry Editor, Visibility Tab

In some cases, you may use the value of a property of a Content Item or Folder to determine whether or not to display a Menu or Menu Entry for that Content Item or Folder. The Visibility tab lets you specify these cases.

The Visibility tab lists categories of properties for Content Items and Folders and the possible values of each property. For each value of a property, the Visibility tab specifies "Show" or "Hide". If a user accesses a Content Item or Folder that has any "Hide" properties, the menu or menu item does not display for the Content Item or Folder.

Use this tab to:

- *Add instructions for showing and hiding Menus and Menu Entries* (see "Adding Properties to a Menu or Menu Entry" on page 63).
- *Edit instructions for showing and hiding Menus and Menu Entries* (see "Editing a Menu or Menu Entry" on page 65).
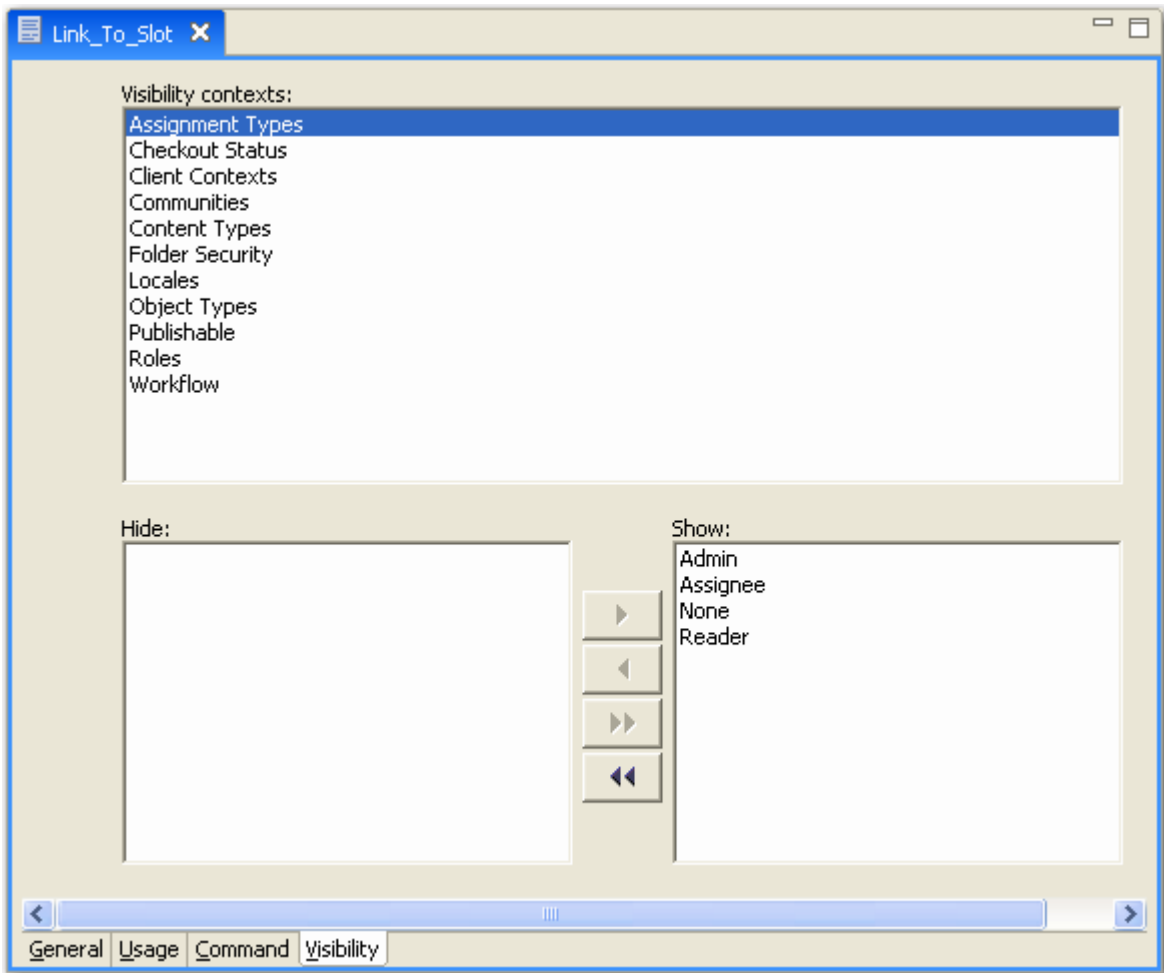
Figure 22: Menu and Menu Entry Editor, Visibility tab

Field Definitions

Visibility Contexts - Categories of Content Item and Folder properties. The categories are listed in the following table:

Context	Definition	Values
Assignment Types	The Assignment Type of the user's Workflow Role for the current Workflow State of the Content Item.	- Admin - Assignee - None - Reader
Checkout Status	The user who has the Content Item checked out	- Checked In (no user has the Content Item checked out) - Checked Out (a different user has the Content Item checked out) - Checked Out by Me (the user logged in to the system)
Client Contexts	The current condition of the Content Explorer	- Drag and Drop (defines the visibility of the menu or menu entry in popup menus when a user drags a Content Item and drops it in a folder or Slot) - Multiple Selection (defines the visibility of the menu or menu entry if the user has multiple Content Items selected) - Popup Menus (defines the visibility of the menu or menu entry in popup menus displayed when the user right-clicks in the Content Explorer) - Single Selection (defines the visibility of the menu or menu entry if the user has only one Content Item selected)
Communities	The Community of the user	all Communities in the system
Content Types	The Content Type of the Content Item selected	all Content Types defined in the system
Folder Security	The Folder Security of the user	- Read - Write If you move the Read entry to Hide, users with Read access to a folder do not see menus and menu entries for that folder. If you move the Write entry to Hide, users with Read or Write access to a folder do not see menus and menu entries for that folder. NOTE: Users with Admin access to a folder can always see the menus and menu entries for the folder.
Locales	The Locale of the user	all Locales in the system

Context	Definition	Values
Object Types	The type of Content Explorer object selected	▪ Folder ▪ Item
Publishable	The value of the Publishable field of the current State of the Content Item	▪ Archive (value in the Publishable field of the State is u) ▪ Ignore (value in the Publishable field of the State is i) ▪ Publish (value in the Publishable field of the State is y) ▪ Unpublish (value in the Publishable field of the State is n)
Roles	The Role of the user	all Roles defined in the system.
Workflow	The Workflow of the Content Item	all Workflows defined in the system

Hide - "Hide" values in the selected Visibility Context. If a Content Item or Folder has any of these values, the menu or menu entry does not display for the Content Item.

Show - "Show" values in the selected Visibility Context. If a Content Item or Folder has any of these values, the menu or menu entry displays for the Content Item unless any other Visibility Context values associated with the Content Item are in a Hide list. For example, for a menu entry, if a Content Item's Content Type is in the Show list but its Workflow is in the Hide list, the Content Item's menus do not display the menu entry. By default, all Visibility Context options appear in the **Show** list.

Creating a Menu

To create a Menu that appears in UI Elements Design View, complete the New Menu wizard.

For a graphic of the wizard and definitions of the fields discussed below, see *New Menu Wizard* (see page 41).

To create a Menu:

1   In UI Elements Design view, in the Menu bar, choose *File > New > Other*. In the Select a Wizard dialog, choose *Menu*.

The New Menu wizard opens.

2   In **Menu name**, enter an internal name for the menu.

The **Menu name** is automatically entered in **Label**.

3   Optionally, change the **Label**.

4   Optionally, in **Description**, enter a description of the menu.

5   In **Menu Type**, choose the way the menu options are chosen:

- Choose **Cascading menu** if you will manually select Menu Entries.

- Choose **Dynamic menu** if an application will select Menu Entries when the Menu is accessed.

6   Click [**Finish**].

The Menu is created and appears in UI Elements Design view, but most of its properties are not configured, and the menu is not usable. The New Menu wizard closes and the *Menu and Menu Entries editor* (see page 45) opens.

Now you can:

- *Configure the properties* (see "Adding Properties to a Menu or Menu Entry" on page 63) of the Menu in the Menu and Menu Entries editor.

- Save and close the Menu and Menu Entries editor and continue configuring the Menu at a later time.

Creating a Menu Entry

To enter the minimum amount of information to create a menu entry that appears in UI Elements View, complete the New Menu Entry wizard.

For a graphic of the wizard and definitions of the fields discussed below, see *New Menu Entry Wizard* (on page 43).

To create a Menu Entry:

1 In UI Elements view, in the Menu bar, choose *File > New > Other*. In the Select a Wizard dialog, choose *Menu Entry*.

   The New Menu Entry wizard opens.

2 In **Menu entry name**, enter an internal name for the menu entry.

   The **Menu entry name** is automatically entered in **Label**.

3 Optionally, change the **Label**.

4 Optionally, in **Description**, enter a description of the menu entry.

5 Click [**Finish**].

   The menu entry is created and appears under the User subfolder of the Menu Entries folder in UI Elements Design view, but most of its properties are not configured and it is not functional. The New Menu Entry wizard closes and the *Menu and Menu Entries editor* (see page 45) opens.

Now you can:

- *configure the properties* (see "Adding Properties to a Menu or Menu Entry" on page 63) of the Menu Entry in the Menu and Menu Entries editor.

- close the Menu and Menu Entries editor and continue configuring the menu entry at a later time.

- drag and drop (or copy and paste) the Menu Entry onto a Menu.

Adding Properties to a Menu or Menu Entry

For a graphic of the Menu and Menu Entry editor and definitions of the fields discussed below, see the *Menu and Menu Entry Editor* (see page 45) section.

To add properties to a Menu or Menu Entry:

1   In the Menu and Menu Entry editor, click the *General tab* (see "Menu and Menu Entry Editor, General Tab for Menus" on page 46).

2   Optionally, change the default **Sort rank**.

3   Optionally, in **Mnemonic** add a letter or character for selecting this menu or menu entry when it is visible in another menu.

4   Optionally, in **Accelerator**, add a sequence of keys to serve as a shortcut for opening the menu or performing the function associated with the menu entry.
   a.   Keyboard shortcut for opening this menu after choosing it. The keys control, shift,ctrl,meta,alt and altGraph are supported and can be combined with a character. The keys DELETE and INSERT are supported as well. Examples are: "INSERT", "control DELETE", and "alt shift X". Case is sensitive the modifiers are all lower case and the key value s in Caps.

5   Optionally, in **Tooltip**, add a definition that will appear when the user hovers the cursor over the menu label or menu entry label.

6   If you want to display an icon beside the menu or menu entry label when it is listed in a menu, in **Icon path**, enter the path in the CM System root of the icon graphic file.

7   *If you are entering a menu entry* (see "Menu and Menu Entry Editor, General Tab for Menu Entries" on page 48):

   a)   Check **Support multi-select** if you want users to be able to perform the menu entry's function on a group of selected Content Items.

   b)   If you want to refresh screens after CM System performs the menu entry's function, change the Refresh hint from the default value of *None*.

   c)   If you want CM System to launch a new window when performing the menu entry's function, check **Launch new window**. In **Target**, enter a name for the window. In **Style**, enter javascript options for defining the window or click [**...**] to choose options in the *Window Style dialog* (on page 50).

8   Click the *Usage tab* (see "Menu and Menu Entry Editor, Usage Tab" on page 51). For each **Usage Area** (Content Explorer window type) in which you want to display the currently edited menu or menu entry:

   ▪   In the **Usage area** box, click the usage area.

   ▪   For each element in the **Available for UI contexts** box: if you want to display the currently edited menu or menu entry in the element's right-click menu, move the element to the **Show** box.

9   Click the Command tab if it is visible. Either:

   ▪   Manually enter the URL of the command application that you want to execute for the menu entry or dynamic menu. Enter the names and values of any parameters associated with the application.

   OR

- Choose an application option in **Command Group** that is similar to the type of application that you want to use. See Menu and Menu Entry Editor, Command tab, for a description of the available options. Click generate to fill in **URL** and **Parameters** with model entries. Modify the model entries to specify the exact name and values of the application and parameters that you want to use. For more information about the supplied options and the commands they can execute, see the section *CM System HTTP*

    Interface in the *Technical Reference Guide*.

10 Click the *Visibility tab* (see "Menu and Menu Entry Editor, Visibility Tab" on page 58). By default, for a new Menu or Menu Entry, all values of all visibility contexts (Content Item properties, such as *State*) are in the **Show** list. If you do not want Content Items or Folders with a certain property value (such as *Archived*) to display the Menu or Menu Entry, click the **Visibility context** for the property, and move the value from the **Show** list to the **Hide** list. Repeat this procedure for all property values that should cause the Menu or Menu Entry to be hidden.

11 Save and close the Menu and Menu Entry editor.

Editing a Menu or Menu Entry

When you edit a Menu or Menu Entry, you can modify any of the information accessible from the Menu or Menu Entry editor.

You can edit Menu and Menu Entries under the System subfolder as well as those under the User subfolder.

To edit a Menu or Menu Entry:

1 In UI Elements Design view, right-click on the Menu or Menu Entry and choose *Open*

OR

Double-click the Menu or Menu Entry.

The *Menu and Menu Entry editor* (see page 45) opens with data filled in for the Menu or Menu Entry.

2 In the *Menu and Menu Entry editor* (see page 45), on the *General tab* (see "Menu and Menu Entry Editor, General Tab for Menus" on page 46) change:

- **Menu label or Menu entry label**
- **Description**
- **Accelerator**
- **Mnemonic**
- **Tooltip**
- **Sort rank**
- **Icon path**

If you are editing a menu entry, you can also change:

- the option to **Support multi-select**
- the value for **Refresh hint**
- the **Launch new window** option. If **Launch new window** was not previously checked, you must enter values for **Target** and **Style**. See *Adding Properties to a Menu or Menu Entry* (on page 63) for information about the values to enter in these fields.

3 In the *Usage tab* (see "Menu and Menu Entry Editor, Usage Tab" on page 51), change the Menu or Menu Entry's availability for any usage area elements by selecting the usage area and moving the element(s) from **Available for UI contexts** to **Show** or from **Show** to **Available for UI contexts**.

4 Click the Command tab if it is visible. Change the **URL** by either:

- Manually entering a new URL of a command application, and then entering the names and values of any parameters associated with the application

OR

■ Choosing an application option in **Command group** that is similar to the type of application that you want to use. See Menu and Menu Entry Editor, Command tab, for a description of the available options. Click generate to fill in **URL** and **Parameters** with model entries. Modify the model entries to specify the exact name and values of the application and parameters that you want to use. For more information about the supplied options and the commands they can execute, see the section *CM System HTTP*
Interface in the *Technical Reference Guide*.

If you want to leave the existing URL, but change the parameters, modify the **Names** and **Values** in the **Parameters** table.

5 Click the *Visibility tab* (see "Menu and Menu Entry Editor, Visibility Tab" on page 58). If you to change which property values of Content Items or Folders cause the Menu or Menu Entry to be shown or hidden, click the **Visibility context** for each property, and move the value from the **Show** list to the **Hide** list or from the **Hide** list to the **Show** list. Repeat this procedure for all property values whose effect on the Menu or Menu Entry's visibility you want to change.

Dragging and Dropping Menu Entries to Menus

To move menu entries into a menu:

1 Drag and drop (or copy and paste) a Menu Entry from the Menu Entries folder to a Menu in the Menus folder. You can drag and drop (or copy and paste) from either System or User folders.

A reference to the Menu Entry appears under the Menu.

Deleting a Menu

You cannot delete System Menus.

To delete a user Menu:

1 In UI Elements view, right-click on the menu and choose *Delete*.

The menu is deleted.

Deleting a Menu Entry

To delete a menu entry:

1   In UI Elements view, right-click on the menu entry and choose *Delete*.

The menu entry is deleted. References to the menu entry no longer appear under menus, and the menus no longer display the menu entries in Content Explorer.

C H A P T E R   6

Maintaining Searches

Searches are queries for locating certain Content Items in **Content Explorer** (on page 171), **Active Assembly** (on page 170), and **Active Assembly for Documents** (on page 173).You can predefine any number of searches for end users to use. For example, you could create a search that queries on creation date and another search that queries on Content Type.

You can specify that a search is user-customizable, or allows a user to change the query options.

You also must specify a default Search that opens when a user chooses *New Search* in Content Explorer, and a default Search that opens when a user chooses *Search* during Active Assembly or Active Assembly for Documents.

By default, CM System shows you the editor for the full-text search. However, if the full-text search is disabled in your system, CM System shows you the editor for the database search. For help disabling the full-text search, see the topic "Disabling Full-text Search" in the *Server Administrator online help*.

For more information about the way end users search, see the *Content Explorer Online Help*.

You create and edit searches in the Rhythmyx Workbench:

- Use the **New Search wizard** (on page 72) to create a new search.
- Use the **Search editor to maintain standard searches** (see "Search Editor, Standard Search" on page 74).
- Use the **Search editor to maintain custom searches** (see "Search Editor, Custom Search" on page 81).
- Use the **Configure New Searches for Communities** (see "Configuring Community Searches" on page 84)screen to specify the default searches that open in Content Explorer and Active Assembly.

You can:

- **Create a simple search** (see "Creating a Search" on page 85)
- **Customize a standard search** (on page 86)
- **Customize a custom search** (see "Configure a Custom Search" on page 87)
- **Modify a standard search** (on page 90)
- **Modify a custom search** (on page 91)
- **Specify the default searches that open in Content Explorer and during Active Assembly** (see "Setting New Searches for Communities" on page 92)
- **Delete searches** (see "Deleting a Search" on page 93)

New Search Wizard

The New Search wizard allows you to create new searches that appear in UI Elements Design view under the Searches folder.

To access the New Search wizard:

- From the Menu bar choose *File > New > Other*. In the Select a wizard dialog, choose *Search*.
- In UI Elements view, right-click on the Search folder or one of the Search subfolders and choose *New > Search*.

Figure 23: New Search wizard

Field Definitions

Search name - Required. System name for search query.

Label - Required. Name displayed to users for search query.

Description - Description of search.

Type - *Standard* or *Custom*. A standard search query is created using the fields provided in the interface; a custom search query uses a separate application.

Available Communities - Communities that may have access to the search.

Visible to these Communities - Communities that do have access to the search.

Filter - Pattern for choosing Communities to display in **Available Communities**

Search Editor, Standard Search

The Search Editor for standard searches lets you customize a standard search.

To access the Search Editor for standard searches:

- After completing the *New Search wizard* (on page 72) (and selecting the **Type** *Standard*), click [**Finish**].
- Right-click on the standard search object in any view that displays it and select *Open*.
- Double-click the standard search object in any view that displays it.

Using the Search Editor for standard searches you can:

- *Customize a standard search* (on page 86)
- *Modify a standard search* (on page 90)

Depending on the search engine that your system uses, you will either see:

- *the Standard Database Search Editor* (see "Standard Database Search Editor" on page 75) or;
- *the Standard Full Text Search Editor* (see "Standard Full Text Search Editor" on page 79)

Standard Database Search Editor

The standard search editor for systems that use the database engine appears as follows:
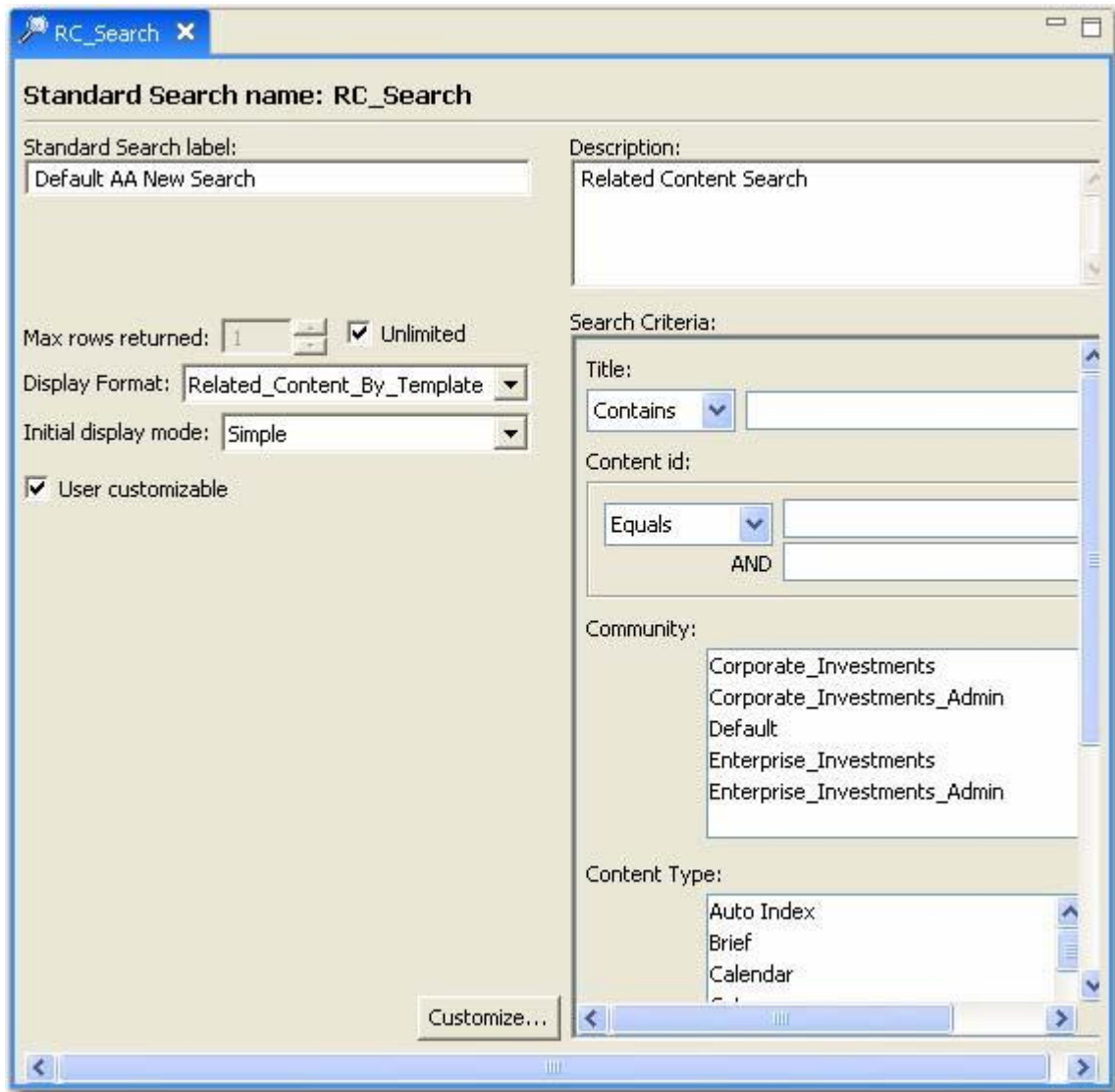
Figure 24: Standard Search dialog

Field Definitions

Standard Search Name - Read only. System name for search query.

Standard Search Label - Required. Name displayed to users for search query.

Description - Description of search.

Maximum rows returned   Specifies the maximum number of results to return for the query. Default is *-1*.

Unlimited Check this box to return all results of the query. If this value is checked, CM System ignores the value in the **Maximum Results** field.

Display Format Specifies the *display format* (see "Maintaining Display Formats" on page 111) used for the View. Options are all display formats currently available in the system. The default is the first display format in alphabetical order.

Initial display mode - *Simple* or *Advanced*.

- In Simple display mode, the following fields are included on the search dialog by default:

    o   Title

    o   Content ID

    o   Community

    o   Content Type

    o   Created By

The dialog also includes the **Display Format** and **Max rows returned** fields. An [**Advanced**] button is also available for moving to Advanced mode.
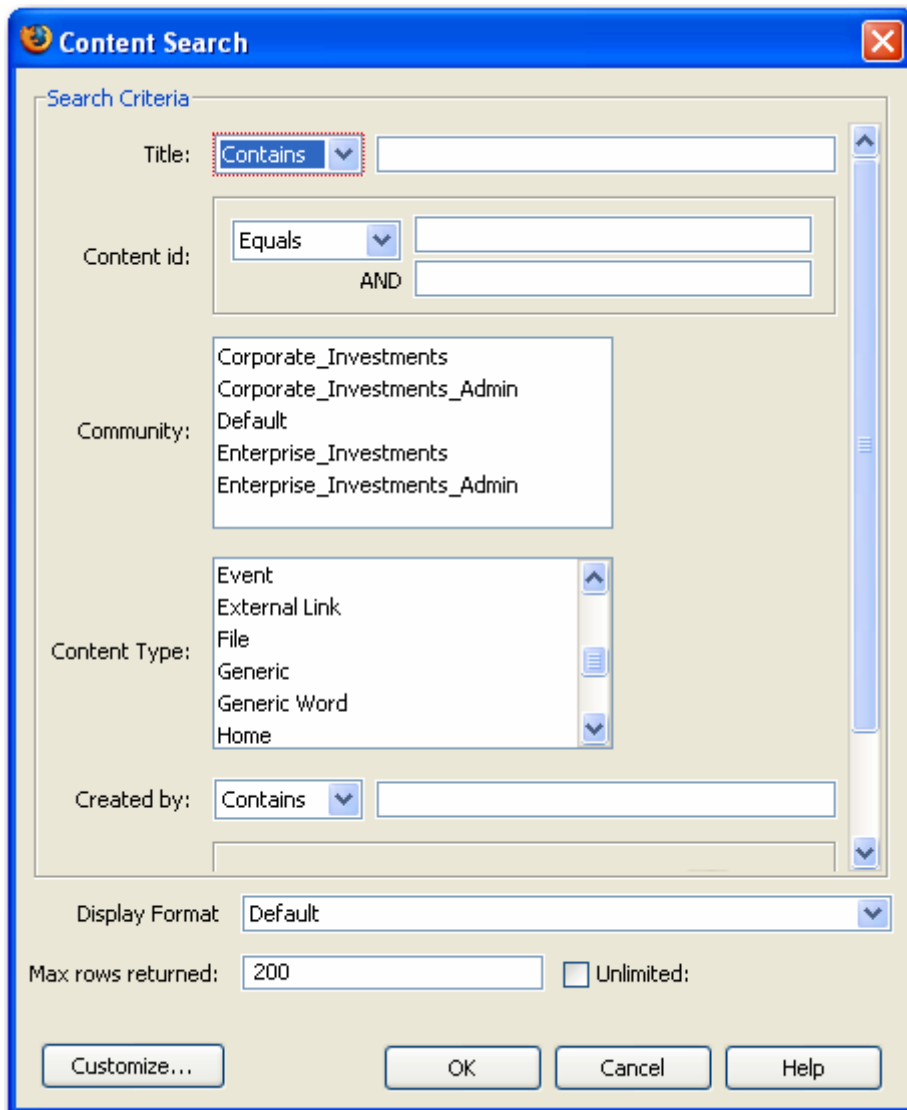

Figure 25: Database Search Engine dialog

■   Advanced display mode displays the same fields as those displayed in the Search editor graphic, above (other than **Description**, **Initial display mode**, and **User customizable**). A [**Simple**] button is available for moving to Simple mode.

User customizable - When checked, the search dialog displays a [**Customize**] button that users can click to open the *Field Selection editor* (on page 161), which enables them to add or remove fields to the search query.

Search Criteria - The contents of this box vary, depending on the fields you specify for the View. Use the [**Customize**] button to maintain the fields included in the search. The control for the field varies depending on the data type of the field.

Title - A drop list of options and a text box for filling in the Title or a portion of the Title to search for. The options in the drop list are *Starts with*, *Contains*, *Ends with*, *Exact*.

- *Starts with* - The title must start with the value entered in the text box.
- *Contains* - The title must contain the value entered in the text box.
- *Ends with* - The title must end with the value entered in the text box.
- *Exact* - The title must match the value entered in the text box.

Title is the default Search Criteria field. As the definition for Search Criteria Explains, you can add other search criteria fields.

[**Customize**] - Opens the *Field Selection editor* (on page 161), which enables users to add or remove fields to the search query.

Standard Full Text Search Editor

The standard search editor for systems that use the Full Text Search engine appears as follows:

Figure 26: Standard Search Editor

Field Definitions

Standard Search name - Read only. System name for search query.

Standard Search label - Required. Name displayed to users for search query.

Search for - Word or words or word fragment you want to search for. There is a limit of 100 characters in this field.

Expand Query with Synonyms - When checked, the search engine searches on words with similar meanings to the words entered as well as matching the characters entered.

Max rows returned - Maximum number of results to return.

Unlimited - Return all results. If checked, any value in **Max rows returned** is ignored.

Display Format - The *Display Format* (see "Maintaining Display Formats" on page 111) you want to use to display the results of the search.

Initial display mode - *Simple* or *Advanced*.

   ▪ In Simple display mode, only the **Search for**, **Display Format**, and **Max rows returned** fields are visible in the dialog. An [**Advanced**] button is also available for moving to Advanced mode.
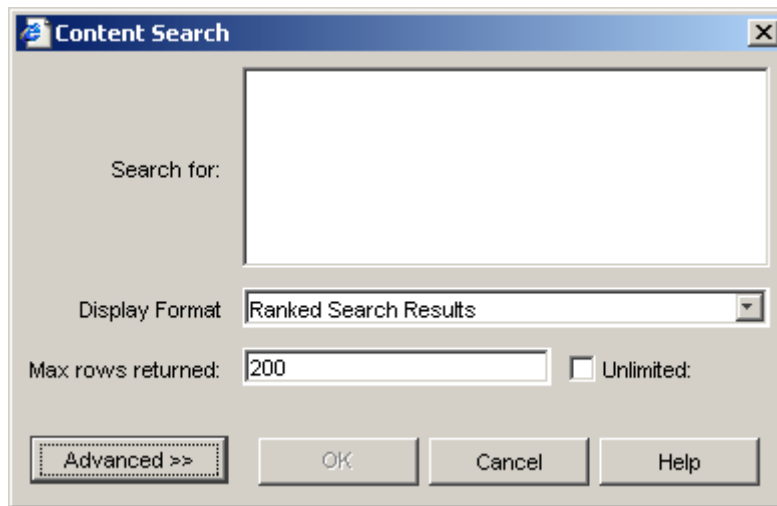
Figure 27: Full Text Search Engine dialog

   ▪ Advanced display mode displays the same fields as those displayed in the Search editor graphic, above (other than **Description**, **Initial display mode**, and **User customizable**). A [**Simple**] button is available for moving to Simple mode.

User customizable - When checked, the search dialog displays a [**Customize**] button that users can click to open the *Field Selection editor* (on page 161), which enables them to add or remove fields to the search query.

[**Customize**] - Opens the *Field Selection editor* (on page 161), which enables the implementer currently configuring the search to add or remove fields to the search query.

Description - Description of search.

Search Criteria - The contents of this box vary, depending on the fields you specify. Use the [**Customize**] button to maintain these fields, which only appear when you click the [**Advanced**] button in the Content Search dialog. The control for each field varies depending on the datatype of the field. By default, when you create a new search, Title is the only field that appears under **Search Criteria**.

   ▪ **Title** - A text box for filling in the **Title** or a portion of the **Title** to search for.

Search Editor, Custom Search

The Search Editor for custom searches lets you complete or edit a custom search.

To access the Search Editor for custom searches:

- After completing the *New Search wizard* (on page 72) (and selecting the **Type** *Custom*), click [**Finish**].
- Right-click on the custom search object in any view that displays it and select *Open*.
- Double-click the custom search object in any view that displays it.

Using the Search Editor for custom searches you can:

- *Complete a custom search* (see "Configure a Custom Search" on page 87)
- *Modify a custom search* (on page 91)

Figure 28: Search Editor, custom searches

Field Definitions

Custom Search Name - Read-only. System name for search query.

Custom Search Label - Required. Name displayed to users for search query.

Description - Description of search.

Custom Search URL - URL of application that includes the custom search query.

Max rows returned - Maximum number of results to return.

Unlimited - Return all results. If checked, any value in **Max rows returned** is ignored.

Display Format - The *Display Format* (see "Maintaining Display Formats" on page 111) you want to use to display the results of the search.

Search Criteria - The contents of this box vary, depending on whether or not you specify fields for this view, and which fields you specify. Use the [**Customize**] button to include Content Type fields in the search. The control for the field varies depending on the data type of the field.

drop list - options describing how the entry in **Title** must match the Content Item title. Options are *Starts With*, *Contains*, *Ends With*, *Exact*.

> *Starts With* - The Content Item title must start with the value.
>
> *Contains* - The Content Item title must start with the value.
>
> *Ends With* - The Content Item title must end with the value.
>
> *Exact* - The Title of the Content Item must match the entered string exactly.

Title - exact title or part of title to search for.

[**Customize**] - Opens the *Field Selection editor* (on page 161) for further customizing the search.

Configuring Community Searches

You can configure the pre-defined search each Community uses both for new searches in general and for Active Assembly. Use the Configure New Searches for Communities dialog to configure the searches for Communities. To access the Configure New Searches for Communities dialog, on the Content View and Search Editor, click the [**Community New Searches**] button.

Figure 29: Configure New Searches for Communities dialog

Field Descriptions

New CX Search Drop list. Specifies the pre-defined search used by default Content Explorer when a user initiates a new search. Options include all pre-defined searches in the system. CM System provides you with the basic, user-customizable *Default CX New Search*.

New AA Search Drop list. Specifies the pre-defined search used by default when a user searches for related content for Active Assembly. Options include all pre-defined searches in the system. CM System provides you with the basic, user-customizable *Default AA New Search*.

Community Specific Searches Table. For each Community in the system, you can specify a New Content Explorer Search and a new Active Assembly search. The cells for New CX Search and New AA Search are drop lists with all pre-defined searches in the system as options.   To specify a search for a community, select it from the drop list.

Creating a Search

To create a simple search that appears in UI Elements Design View, complete the New Search wizard.

For a graphic of the wizard and definitions of the fields discussed below, see ***New Search Wizard*** (on page 72).

To create a new Search:

1   In the Menu bar, choose *File > New > Other*. In the Select a Wizard dialog, choose *Search*.

   The New Search wizard opens.

2   In **Search name** enter an internal name for the search.

   The **Search name** is automatically entered in **Label**.

3   Optionally, change the value in **Label**.

4   Optionally, in **Description**, enter a description of the search.

5   In **Type**, enter *Standard* if you want to use the Search editor to create a search query. Enter *Custom* if you want to point to an application that performs the search query.

6   Move any Communities that you do not want to be able to view the search from **Visible to these Communities** to **Available to the Communities**.

7   To reduce the number of Communities displayed in **Available Communities**, enter a matching term in **Filter**.

8   Click [**Finish**].

   The Search is created and appears in UI Elements Design view under the Standard or Custom Search folder depending on the **Type** of search you have specified. The New Search wizard closes. If you have specified that the search **Type** is *Standard*, the ***Search Editor for standard searches*** (see "Search Editor, Standard Search" on page 74) opens. If you have specified that the search **Type** is *Custom*, the ***Search Editor for custom searches*** (see "Search Editor, Custom Search" on page 81) opens.

Now you can:

▪   ***customize the standard search*** (see "Customize a Standard Search" on page 86) or ***configure the custom search*** (see "Configure a Custom Search" on page 87)

▪   Drag and drop (or copy and paste) searches under Communities in the ***Community Visibility view*** (see "Community Visibility" on page 30)

Customize a Standard Search

For graphics of the editors and definitions of the fields discussed below, see *Standard Database Search Editor* (on page 75) and *Standard Full Text Search Editor* (on page 79).

To customize a standard search:

1 Either check **Unlimited** or enter a maximum number of search results to return in **Max rows returned**.

2 In **Display Format**, choose the Display Format for displaying the search results.

3 In **Initial display mode**, choose *Simple* or *Advanced*.

4 Check **User customizable** if you want users to be able to customize the fields that appear for use in the search query.

5 In the **Search Criteria** fields, optionally enter matching values.

6 To make additional fields available to the search query, click [**Customize**] and *customize the fields available for the search query* (see "Selecting Fields used in Display Formats, Views, and Searches" on page 164).

If your system uses the Full Text Search engine, you can also customize the following fields:

1 In **Search for**, enter a word or word fragment or group of words to search for.

2 By default, **Expand Query with Synonyms** is not checked. If you want to search for synonyms of the term entered in **Search for**, check **Expand Query with Synonyms**.

3 Save and close the editor.

Now you can:

▪ *Drag and drop (or copy and paste)* (see "Dragging and Dropping Menu Entries to Menus" on page 67) the search under Communities in the *Community Visibility view* (see "Community Visibility" on page 30).

▪ *Designate the search as one of the system's default searches* (see "Setting New Searches for Communities" on page 92).

Configure a Custom Search

For a graphic of the Search editor for custom searches and definitions of the fields discussed below, see *Search Editor, Custom Search* (on page 81).

To configure a custom search:

1 In **Custom Search URL**, enter the address of the application that contains the search query.

2 Either check **Unlimited** or enter a maximum number of search results to return in **Max rows returned**.

3 In **Display Format**, choose the Display Format for displaying the search results.

4 In the **Search Criteria** *Title* drop list, choose the matching criteria for *Title*.

5 Optionally, enter a string in *Title* to search on.

6 To make additional fields available to the search query, click [**Customize**] and *customize the fields available for the search query* (see "Selecting Fields used in Display Formats, Views, and Searches" on page 164).

7 Save and close the editor.

Now you can:

- *Drag and drop (or copy and paste)* (see "Dragging and Dropping Menu Entries to Menus" on page 67) the search under Communities in the *Community Visibility view* (see "Community Visibility" on page 30).

- *Set the search as one of the system's default searches* (see "Setting New Searches for Communities" on page 92).

Building a Custom Search Application

Custom Search applications are based on the Results.dtd. The incoming request requires pre-processing.

Content Explorer converts the data from the user requests into HTML parameters. It collects these parameters into an XML document, based on the following DTD:

```
<!ELEMENT HtmlParams ANY>
```

The root element of this document contains one of more child elements as name-value pairs. The name of each element is the name of the parameter and the value of the element is the value of the parameter. The document can contain multiple elements with the same name to support parameter with multiple values.

When a user enters a value in a search field, the name of the field is used as the name of the HTML parameter. For example: `<sys_title>xyz</sys_title>`.

The name of the HTML parameter that stores the operator is `<fieldname>_parameter`. The value of the operator depends on the data type of the field and an operator specified by the end user. Content Explorer may submit the following operator values:

Data Type of Field	Operator Selected by User	Submitted value	Additional processing of the value parameter
Keyword	Any	in	
Text	Starts with	like	"%" appended to end of the value parameter
	Contains	like	"%" appended to both beginning and end of the value parameter
	Ends with	like	"%" appended to the beginning of the value parameter
	Exact	equal	
Numeric	Equals	equal	
	Greater Than	greaterThan	
	Less than	lessThan	
	Between	between	Value parameter sent as a list of two values.
Date	On	equal	
	Before	lessThan	
	After	greaterThan	
	Between	between	Value parameter sent as a list of two values.

The incoming XML document will include a parameter for each field defined on the Search Query tab of the Search Editor, and an associated operator parameter. The document must be parsed into your resource query. A utility pre-exit, sys_ExtractHtmlParamsFromInputDoc, is included with CM System that should suit your purposes; if you need more complicated processing, you may need to write your own exit.

The SQL required by your database may require a different syntax than the operator value submitted by Content Explorer. If this is the case, you will need to develop another pre-exit that converts the operator values submitted by Content Explorer into the SQL syntax required by your RDBMS. The exact nature of these exits depends on the nature of the search queries you expect from your users and the requirements of your RDBMS. The sys_ConvertCustomSearchOperator exit included with CM System should be suitable for most queries and supports all of the data types listed in the table above.

When creating the custom search application, follow the procedure described for developing a custom View application. In addition, add the sys_ExtractHtmlParamsFromInputDoc pre-exit, the sys_ConvertCusomtSearchOperator pre-exit, or any other custom pre-exits you define the parse the incoming search query XML document.

Modify a Standard Search

You can modify any of the information for a standard search accessible through the Search Editor for standard searches.

For graphics of the editors and definitions of the fields discussed below, see *Standard Database Search Editor* (on page 75) and *Standard Full Text Search Editor* (on page 79).

To modify a standard search:

1   Change any of the following:

Standard Search label

Description

Display Format

Initial display mode

User customizable

Add, remove, or change the values entered in the **Search Criteria** fields, optionally enter matching values, or click [**Customize**] to *add or remove custom fields* (see "Field Selection Editor" on page 161) that you have included under **Search criteria**.

2   If your system uses the Full Text Search engine, you can also change the values of the following fields:

Search for

Expand Query with Synonyms

Check or uncheck **Unlimited** or change the maximum results returned in **Max rows returned**.

3   Save and close the editor.

You may have to refresh your browser in Content Explorer to view the changed search query.

Modify a Custom Search

You can modify any of the information for a standard search accessible through the Search Editor for standard searches.

For a graphic of the editor and definitions of the fields discussed below, see *Search Editor, Custom Search* (on page 81).

To modify a custom search, change any of the following:

1   **Custom Search label**

   Description

   Display Format

   Check or uncheck **Unlimited** or change the maximum results returned in **Max rows returned**.

   Click [**Customize**] to *add or remove custom fields* (see "Field Selection Editor" on page 161) that you have included under **Search criteria**.

2   If you have changed the location of the URL of the application that performs the query, or you want to use a different query, change the value in **Custom search URL**.

3   Save and close the editor.

Setting New Searches for Communities

For graphics of the editors and definitions of the fields discussed below, see the ***Configure New Searches for Communities Dialog*** (see "Configuring Community Searches" on page 84).

To set default new searches in general and for Communities:

1   In UI Elements Design view, right-click the Searches folder and choose *Assign New Searches by Community*.

2   In **New CX Search** choose a search in the drop list. This search will open when users double-click the New Search node in the navigation pane of Content Explorer.

3   In **New AA Search** choose a search in the drop list. This search will open when users choose to search for a related content item during Active Assembly or Active Assembly for documents.

4   If you want to use different default searches for any of the Communities in your system, in the **Community Specific Searches** table, in the row for the Community choose a different **New CX Search** or **New AA Search**.

5   Save and close the editor.

Deleting a Search

To delete a Search:

1   In UI Elements Design view, right-click on the search and choose *Delete*.

The search is deleted, and it is no longer available in Content Explorer.

C H A P T E R   7

Adding Custom Icons for Content Types

CM System displays an icon beside content items in the following interfaces:

- *Content Explorer* (on page 171)
- *Content Browser* (on page 174)
- *Active Assembly for Documents* (on page 173)
- *Impact Analysis* (on page 175)

For example, the following graphic shows the Impact Analysis window. Notice the icon that precedes each content item listing. In this case, the Generic, Image, and Navon content items have different icons.
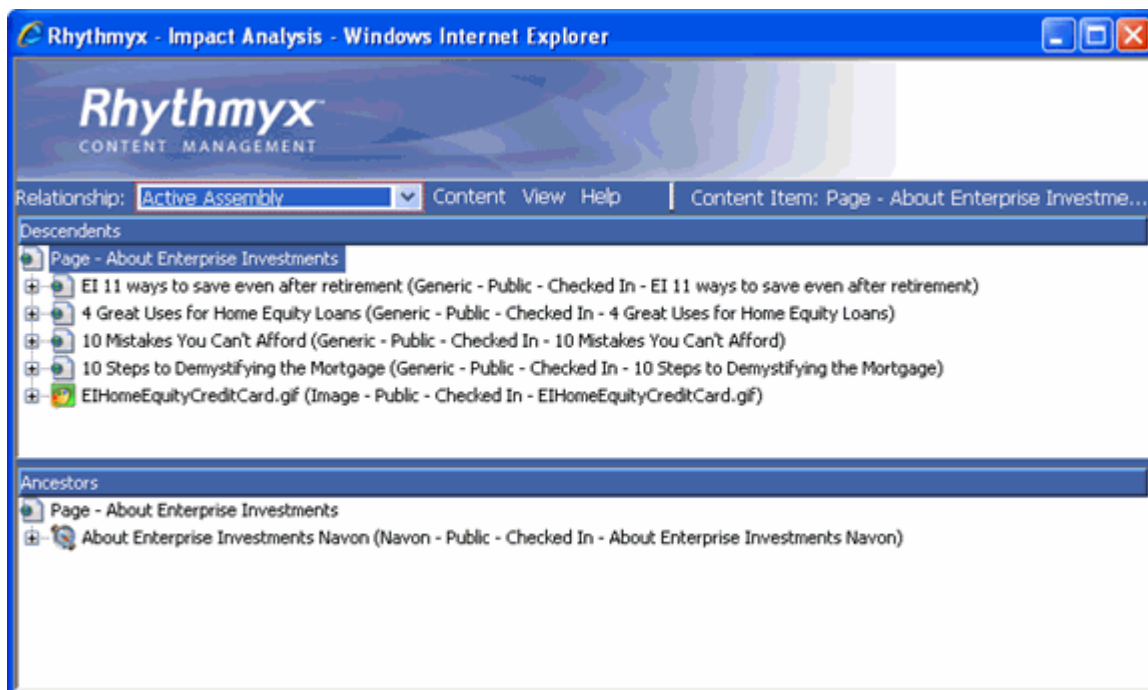

Figure 30: Impact Analysis

You assign an icon to a Content Type when you configure the Content Type in the CM System Workbench's Content Type editor. The icon appears in all of the interfaces listed above.

The following graphic shows the location in the Workbench's Content Type Editor where you configure the Content Type icon. On the Properties tab of the Content Type editor a **Content Type Icon** field enables you to configure the icon. The field is a drop list with three options:
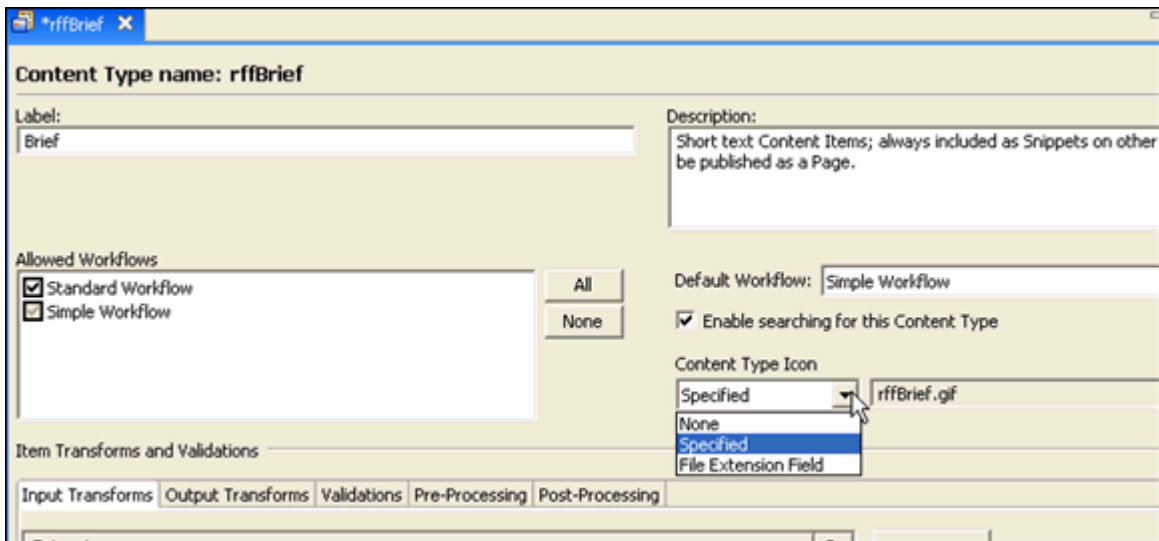
Figure 31: Content Type Icon field in the Workbench

The three options for assigning an icon in the Workbench are as follows:

- *None* - Choose this option if you want the standard ⬜ icon to represent the Content Type.

- *Specified* - Choose this option to specify a file storing the icon that you want to represent the Content Type. When you choose *Specified*, another field appears and a search dialog opens so you can select the path and file that store the icon you want to use. See ***Implementing an Icon to Represent a Content Type*** (on page 98) for more information about this option.

- *File Extension Field* - Use this option for file and image Content Types only. When you choose *File Extension Field*, a drop list appears that holds all of the text fields in the Content Type. Choose the field in the list that will hold the name of the file extension. The file extension determines the icon used to represent the Content Type. See ***Implementing an Icon to Represent a File Extension*** (on page 100) for more information about this option.

When you create your own icons, use the following specifications:

Dimensions	16 pixels X 16 pixels maximum; larger sizes will be accepted but will appear distorted.
File Types	gif, jpeg, jpg, and png. All other file types are ignored, and the ⬜ icon is used.

FastForward Icons

By default, in the Workbench, CM System uses *Specified* for the non-binary FastForward Content Types and stores the icon files for these Content Types in <Rhythmyx root>\rx_resources\images\ContentTypeIcons. For the File and Image FastForward Content Types, CM System uses *File Extension Field* and specifies a field that holds an extension that can be mapped to an icon file. The default FastForward Content Type icons are the following:

Icon	Content Type	Notes
	Auto Index	
	Brief	
	Calendar	
	Contacts	
	Event	
	External Link	
	File (PDF)	For File Content Types, the icon differs depending on the type of file (file extension). This row shows a few common icons.
	File (.doc)	
	Generic	
	Generic Word	
	Home	
	Image (.jpg)	For Image Content Types, the icon differs depending on the type of file (file extension). This row shows the icon for .jpg.
	Nav Image	
	Navon	
	Nav Tree	
	Press Release	

You can reuse any of the FastForward icons or the extension icons for your own custom Content Types. You can also create your own icon graphics to use.

Implementing a Custom Content Type Icon

The procedure for implementing a custom Content Type icon differs depending on whether you are:

Implementing a custom icon that represents a Content Type. (see "Implementing an Icon to Represent a Content Type" on page 98)

or

Implementing a custom icon that represents the extension of the file stored by a content item. (see "Implementing an Icon to Represent a File Extension" on page 100)

Implementing an Icon to Represent a Content Type

To assign an icon to a specific Content Type:

1   Choose the icon that you want to use. You can either:

 ▪ Find an icon that you want to use in the CM System root. The FastForward icons are located in:
   <Rhythmyx root>\rx_resources\images\ContentTypeIcons

 ▪ Create an icon. It must have the file extension .gif, .jpeg, .jpg, or .png, and it will appear most clearly if it is 16 pixels by 16 pixels.

2   Store the icon anywhere in the CM System root. Once you select it as the icon for the Content Type, CM System stores it in <Rhythmyx root>\rx_resources\images\ContentTypeIcons.

3   In the Rhythmyx Workbench create or open the Content Type and click the Properties tab. In this example, the implementer is creating a Music Content Type.

4   In the **Content Type Icon** drop list, choose *Specified*.

The Properties tab displays a new blank field next to the **Content Type Icon** field and opens a file search dialog.
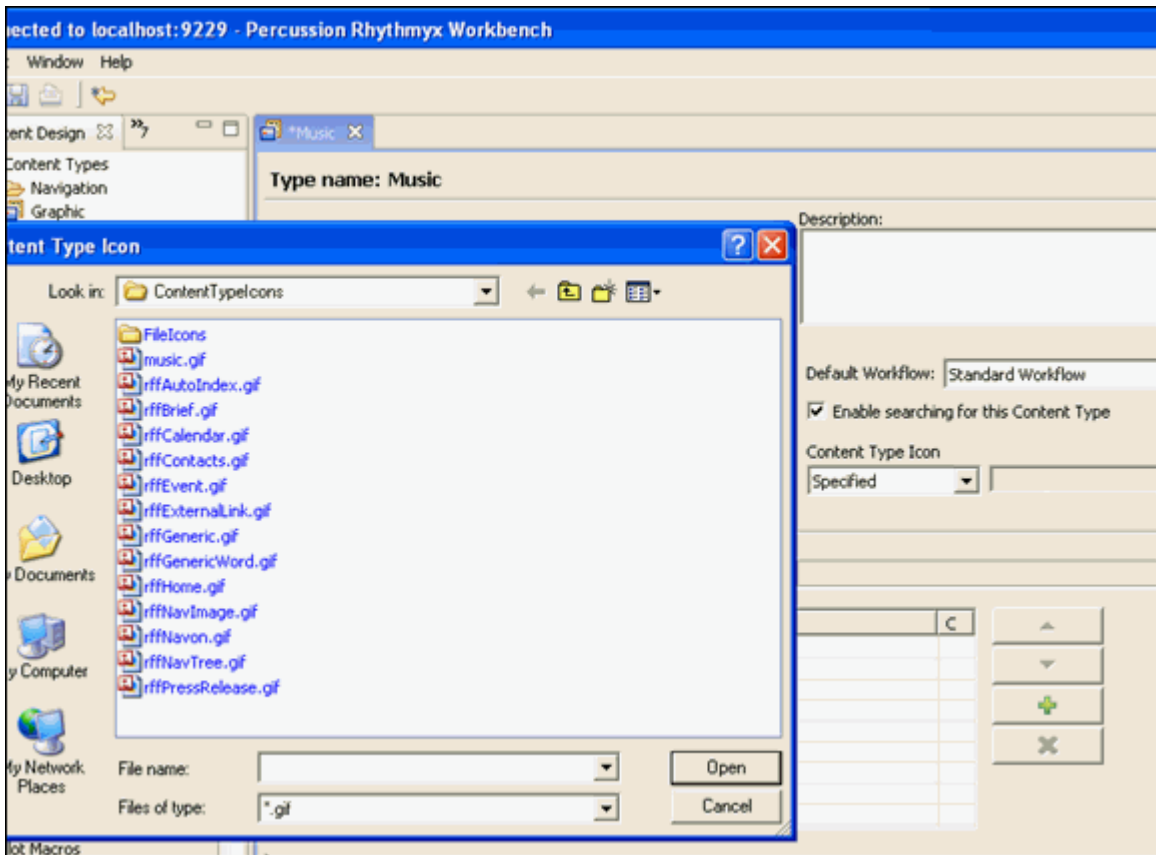
Figure 32: Choosing an icon

5   Choose the icon you want to use for the Content Type. In the graphic above, the implementer has added the music.gif icon file that appears at the beginning of the file list and chooses it. The music icon appears as ♪.

6   The path and name of the icon now appear in the additional Content Type Icon field. If it is not already stored in the path <Rhythmyx root>\rx_resources\images\ContentTypeIcons, Rhythmyx stores it there.
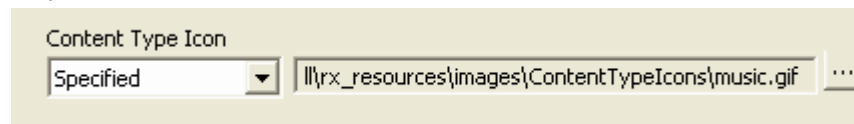
Figure 33: Specified icon for Content Type

7   Save the changes to the Content Type.

Now, when Music content items are listed in interfaces that display icons, the music icon appears beside them.

△ Content Title	Checkout status	State	Content Type
Blue Shadows		Draft	Music
EI 12 Easy Steps to preparing your estate plan		Quick Edit	Generic
EI CEO Contact Information		Public	Contacts
EI Sample PDF.pdf		Public	File
EI Sample Word Document.doc		Public	File

Figure 34: Icon selected for Music Content Type appears beside item

Implementing an Icon to Represent a File Extension

When you choose the option *File Extension Field* in the **Content Type Icon** drop list, you must configure certain files in your CM System root so that the system finds and renders the correct icon.

Out of the box, CM System provides you with two FileIcons.properties files that store mappings for the Content Types that use the *File Extension Field* option for icons. When you choose the option *File Extension Field* in the **Content Type Icon** drop list, make sure that the extension types stored in the Content Type are mapped to an icon in one of these properties files:

- <Rhythmyx root>\sys_resources\Images\ContentTypeIcons\FileIcons\FileIcons.properties (this file includes Rhythmyx-provided icon/extension mappings)

- <Rhythmyx root>\rx_resources\Images\ContentTypeIcons\FileIcons\FileIcons.properties (this file includes default icon mappings for the FastForward File and Image Content Types. Content Type/icon mappings are used when a content item stores a file with an extension that does not have a mapping.) Add custom or override icon/extension mappings and icon/Content Type mappings to this file.

Make sure your icon files are present in the same directory as the properties file in which they are mapped or the system will not be able to find them.

For example, a portion of the
<Rhythmyx root>\sys_resources\Images\ContentTypeIcons\FileIcons\FileIcons.properties file appears as:


```
wav=audio.gif
wma=audio.gif
xhtml=html.gif
xls=excel.gif
xlsx=excel.gif
xml=xml.gif
```

Figure 35: FileIcons.Properties in sys_resources

The following graphic shows the default
<Rhythmyx root>\sys_resources\Images\ContentTypeIcons\FileIcons directory. The icon files listed in the section of the FileIcons.properties file shown above (audio.gif, html.gif, excel.gif) are stored in the same FileIcons directory as the FileIcons.properties file in which they are mapped.

Figure 36: Contents of FileIcons folder

To assign an icon to represent the file type that a content item stores:

1 Choose the icon that you want to use. You can either:

- Find an icon that you want to use in:
   <Rhythmyx root>\sys_resources\images\ContentTypeIcons\FileIcons.

- Find an icon elsewhere or create one. It must have the file extension .gif, .jpeg, .jpg, or .png, and it will appear most clearly if it is 16 pixels by 16 pixels.

2 Place the icon file in
   <Rhythmyx root>\rx_resources\images\ContentTypeIcons\FileIcons.

3 In the file
   <Rhythmyx root>\rx_resources\images\ContentTypeIcons\FileIcons\FileIcons.properties, map the icon file to the extension that you want it to represent.

Here, the implementer has mapped the vsd extension to the icon file vsd.gif. The vsd icon is intended for the Graphic Content Type and appears as 📄.

```
 1   ########################################################################
 2   # Properties file to specify the extension name and name of the image fi
 3   # The image files of type gif, jpeg, jpg and png are allowed, other type
 4   # Icons for most commonly used file types are supplied by Rhythmyx and a
 5   # under sys_resources folder. Implementers can add icons for new file ty
 6   # system icons in this file.¶
 7   # Example usage¶
 8   # doc=word.gif¶
 9   # To set a default image for content type itself, add a property with it
10   # will be applied only when you set the contenttype icon to File Extensi
11   # Example usage¶
12   # rffFile=file.gif¶
13   ########################################################################
14   rffFile=file.gif¶
15   rffImage=image.gif¶
16   ¶
17   # The following maps a content item ¶
18   # storing a file of type .vsd to the vsd.gif icon.¶
19   vsd=vsd.gif¶
20   ¶
```

Figure 37: extension/icon mapping in FileIcons.properties file

4   If you want to provide a default icon for the Content Type in case the file it is storing has an extension that you have not mapped, you can also map the Content Type to an icon in the file <Rhythmyx root>\rx_resources\images\ContentTypeIcons\FileIcons\FileIcons.properties.

```
 1   ########################################################################
 2   # Properties file to specify the extension name and name of the image fi
 3   # The image files of type gif, jpeg, jpg and png are allowed, other type
 4   # Icons for most commonly used file types are supplied by Rhythmyx and a
 5   # under sys_resources folder. Implementers can add icons for new file ty
 6   # system icons in this file.¶
 7   # Example usage¶
 8   # doc=word.gif¶
 9   # To set a default image for content type itself, add a property with it
10   # will be applied only when you set the contenttype icon to File Extensi
11   # Example usage¶
12   # rffFile=file.gif¶
13   ########################################################################
14   rffFile=file.gif¶
15   rffImage=image.gif¶
16   ¶
17   # The following maps a content item ¶
18   # storing a file of type .vsd to the vsd.gif icon.¶
19   vsd=vsd.gif¶
20   ¶
21   # The following maps a Graphic content item that ¶
22   # stores a file with an unmapped extension to the image.gif icon.¶
23   Graphic=image.gif¶
24   ¤
```

Figure 38: Mappings in the FileIcons.properties file

Here, the implementer has also added a default mapping in case a Graphic content item is created that stores an image that does not have a .vsd extension or other mapped extension. This mapping maps the Graphic content item to the more generic image icon which appears as .

5   In the Rhythmyx Workbench create or open the Content Type and click the Properties tab.

6   In the **Content Type Icon** drop list, choose *File Extension Field*.

7   The Properties tab displays a new drop down field next to the **Content Type Icon** field.

The drop down field contains all text fields in the Content Type.

8   Choose the field that will store the uploaded file's extension.

Figure 39: File Extension Field selected

9   Save the changes to the Content Type.

In our example, when a Graphic content item is listed in interfaces that display icons, if the content item holds a vsd file, the vsd.gif icon is displayed.

Figure 40: Graphic content item storing .vsd file

However, if a Graphic content item is created that holds a different type of binary file, the image.gif icon is displayed:

Figure 41: Graphic content item that does not store a .vsd file

C H A P T E R 8

Customizing DocuComp Integration

CM System gives users the ability to compare text in Content Items in Active Assembly and Content Explorer. Configuration of the text comparison engine in CM System is controlled by the configuration file: (Rhythmyxroot)\rxconfig\Server\requestHandlers.compare.xml. To change the configuration, change the values of the configuration options in the file. The options available include:

Attribute	Available Values	Default Value	Remarks
dcGranularity	0-100	20	Specifies the minimum granularity of a match. The granularity defines the minimum number of characters to compare.
dcMoveSense	Any integer greater than zero.	100	Specifies the minimum number of characters to consider as being classified as a move. If a string of characters shorter than this value is moved, it will be treated as though it was deleted and pasted back. A string equal to greater than this value will be treated as though it was moved.
dcPunctuation	0 (false) 1 (true)	0	Specifies whether to consider punctuation (as defined by the punctuation character set) to be part of a word or as standalone text. 0: punctuation is not treated as part of the word. 1: punctuation is treated as part of the word.
dcOldPrgmList	0 (false) 1 (true)	0	Specifies whether to treat the old (original) stream as a line based listing. If set to true (1), the minimum sequence for comparison is a full line of text.
dcNewPrgmList	0 (false) 1 (true)	0	Specifies whether to treat the new (modified) stream as a line based listing. If set to true (1), the minimum sequence for comparison is a full line of text.
dcHTML	0 (false) 1 (true)	1	Specifies whether to run the comparison in HTML mode. If set to true, DocuComp does not evaluate HTML markup (data surrounded by the "<" and ">" characters)

Setting the Default Dialog for Inserting Inline Objects/Table Editor Snippets

In Active Assembly or Content Explorer, when a user is editing a field that uses a rich text editor, options to add inline links, inline images, and inline Templates as part of the rich text are available. By default, when the user chooses one of these options, the Content Browser opens to enable the user to find a content item to add to a link, or as an image or formatted Template.

Likewise, by default, when a user is using a table editor in Content Explorer to insert a Snippet into a Slot, the Content Browser opens to enable the user to find the content item to add as a Snippet.
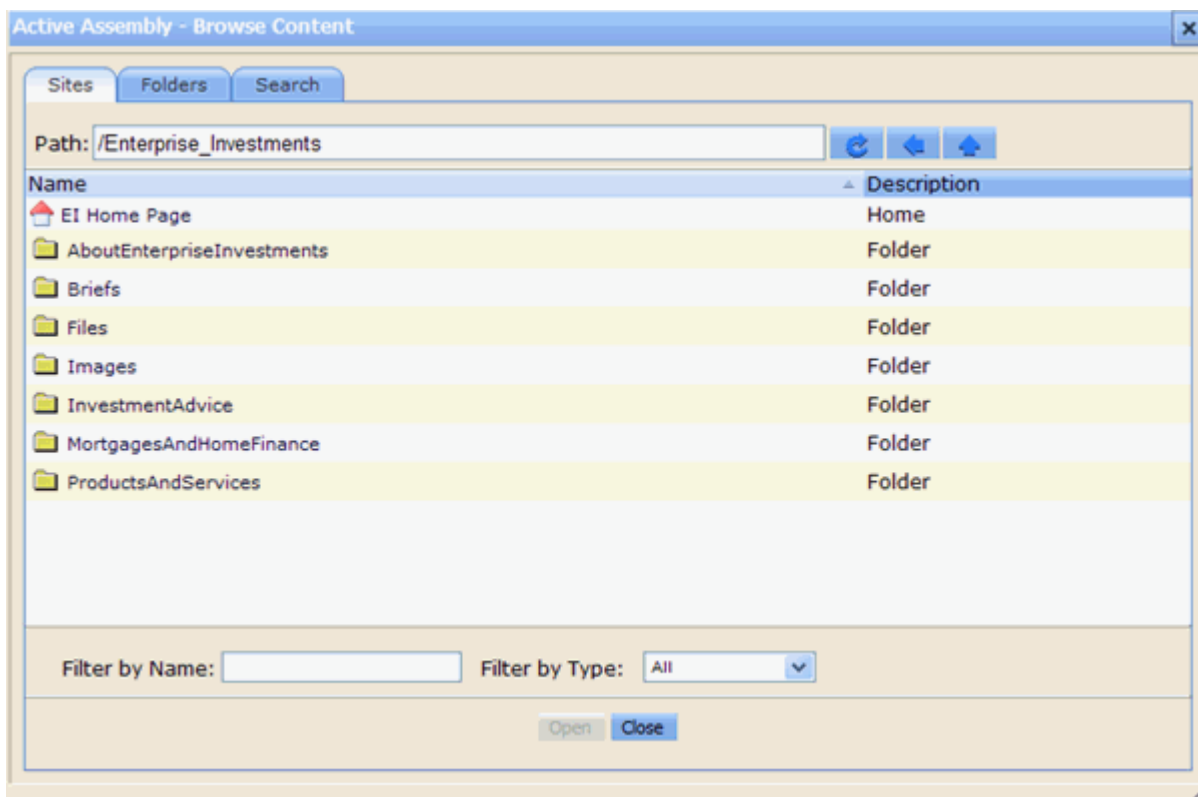
You can change the default so that instead of the Content Browser opening, the search dialog opens. Note that the default dialog must be the same for both the rich text editor and the table editor.

To change the default dialog for inserting inline objects and table editor Snippets:

    1   In <Rhythmyx root>\rxconfig\Server open the file server.properties.

2 By default the InlineSearchUsesContentBrowser variable is set to true, indicating that the Content Browser is the default dialog in both editors:

```
inlineSearchUsesContentBrowser=true
```

3 Manually change the value of the InlineSearchUsesContentBrowser variable to false, indicating that the search dialog is the default dialog in both editors:

```
inlineSearchUsesContentBrowser=false
```

NOTE: You can also change inlineSearchUsesContentBrowser to true if it has already been changed to false.

4 Restart the CM System server.

C H A P T E R 1 0

Configuring Workflow Notification and Copy URL Links

By default, when a user clicks a link to a content item in a Workflow Notification or a content item URL copied in Content Explorer, the link opens the item in Active Assembly. You can change the server configuration so that clicking on the link opens the *Action Panel* (on page 172) for the item.

To change the default URL target:

1 In <Rhythmyx root>\rxconfig\Server open the file server.properties.

2 By default the URL target is set to Active Assembly, indicating that a clicked URL link will open a content item in Active Assembly:
`notificationUrlTarget=activeAssembly`

3 Manually change the `notificationUrlTarget` value to `actionPanel`, indicating that a clicked URL will open a content item's action panel:

`notificationUrlTarget=actionPanel`

4 Restart the CM System

server. NOTES:

After you have changed the value notificationUrlTarget to actionPanel, you can change it back to activeAssembly.

When you are in the Active Assembly interface, if you copy a content item URL, the link that you paste always opens the item in Active Assembly. Changing the notificationUrlTarget value to actionPanel does not affect this URL.

For either server configuration, if the content item is in multiple Sites or multiple Folders, a screen prompts you to choose the Site, Folder, or the combination of Site and Folder.

To choose a Template for opening the item in Active Assembly, the server first filters all of the Templates associated with the content item and the Site. Then it chooses the first Template whose PublishWhen value is *Default.* For more information about *PublishWhen,* see the document *Building Packages for the Percussion CM System.* If no Template has a PublishWhen value of *Default*, the server uses the first Page Template alphabetically. If there are no Page Templates, the server uses the first Snippet Template alphabetically. If the server cannot find a Site or a Template, it opens the Action Panel when a user clicks the link, regardless of whether the link is configured to open the Action Panel or an Active Assembly Template.

C H A P T E R   1 1

Maintaining Display Formats

Display Formats specify two different things:

1 The columns to show in a *Content Explorer* (on page 171) or *Active Assembly for Documents* (on page 173) user interface. Users apply a display format to the contents of a folder or to the results of a View or search query to specify how they want to view the Content Items in the Content Explorer Display pane.

2 The categories that organize the items included in View or Search nodes in the Content Explorer Navigation pane.

For example, the following Display Format:
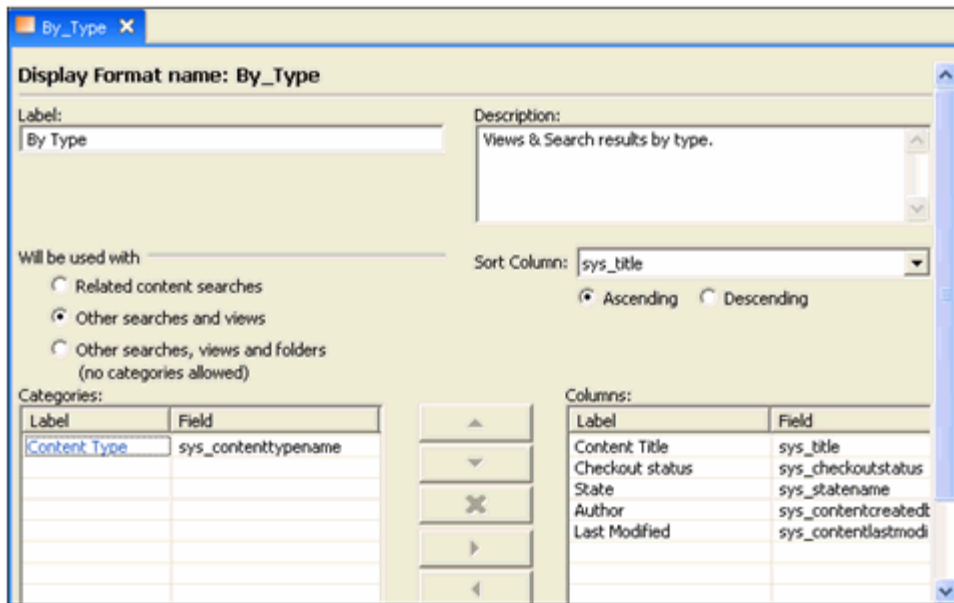
Figure 42: Display Format Editor

Shows View or Search categories in the Content Explorer Navigation pane by Content Type:
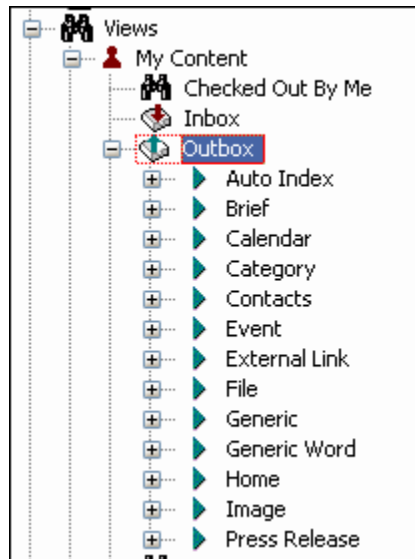
Figure 43: Content Type Display Format in Navigation Pane

And shows Columns for Content Title, Checkout Status, State, Author and Last Modified in the Display pane:
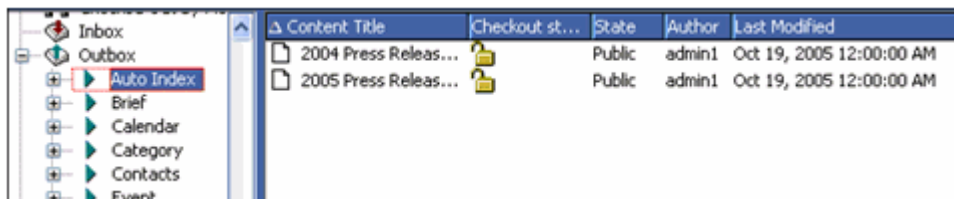
Figure 44: Display Format in Display Pane

Create and edit Display Formats in the Rhythmyx Workbench:

- Use the *New Display Format wizard* (on page 114) to create a new Display Format.
- Use the *Display Format editor* (see page 116) to complete and maintain Display Formats.

You can:

- *Create a Display Format.* (see "Creating a Display Format" on page 118)
- *Edit a Display Format.* (see "Modifying a Display Format" on page 120)
- *Delete a Display Format.* (see "Deleting a Display Format" on page 121)

New Display Format Wizard

The Rhythmyx Workbench's Display Format wizard is used to create new Display Formats in UI Elements Design view.

To access the New Display Format wizard:

- From the Menu bar choose *File > New > Other.* In the Select a Wizard dialog, choose *Display Formats.*
- In UI Elements Design view, right-click the Display Format folder and choose *New > Display Format.*

Figure 45: New Display Format Wizard

Field Descriptions

Display Format name   The name of the Display Format.

Label The label for the field displayed to the Business User, may be different from the Display Format Name.

Description A description of the Display Format.

Available to these communities The Communities that are available to be assigned to the Display Format.

Visible to these communities The communities that are able to view the Display Format.

Filter A term for filtering the list of Available Communities.

Display Format Editor

The Display Format editor is used to maintain Display Formats.

To access the Display Format editor:

- After completing the New Display Format wizard, click [**Finish**].
- Right-click on the Display Format object in any view that displays it and select *Open*.
- Double-click on the Display Format object in any view that displays it.

Figure 46: Display Format Editor

Field Definitions

Display Format name - Read only. Internal name of the Display Format.

Label - Name of Display Format shown to users.

Description - Description of Display Format.

Will be used with - What areas of Content Explorer interface will use Display Format.

- *Related content searches* - The Display Format can be applied to folders in related content searches. The Display Format can include either categories shown in the navigation pane or columns shown in the display pane. The sys_title (System Title) column is included by default and required as a column. You can move any other fields added to the Columns table to the Categories table. The sys_variantid and sys_contenttypeid fields are required in the Columns or Categories table.

- *Other searches and views* - The Display Format can be applied to searches and views, but not folders. The Display Format can include either categories shown in the navigation pane or columns shown in the display pane. When a search or view is expanded in the Navigation pane, the categories are displayed under it. When a category is selected, its Content Items are displayed in the Display Pane using the columns specified. The sys_title (System Title) column is included by default and required as a column. You can move other fields added to the Columns table to the Categories table.

- *Other searches, views, and folders (no categories allowed)* - The Display Format can be applied to the contents of searches, views and folders when they are displayed in the Content Explorer display pane. The Categories table is disabled. The sys_title (System Title) column is included by default and required.

Sort column - Column in Columns table for sorting Content Items in display pane.

- *Ascending* - Sort on Sort column in ascending order.
- *Descending* - Sort on Sort column in descending order.

Categories table - Categories to display under a search or view node in the navigation pane.

Categories Label - Name that will appear under search or view node.

Categories Field - Field displayed under Label.

Columns table - Columns to list when display Content Items in the display pane. The sys_title (System Title) column is always included by default and required in the **Columns** table. The sys_title field cannot be moved to the **Categories** table.

Columns Label - Name that will appear in column of display pane.

Columns Field - Field displayed under column.

Columns Width - Width of column.

[**Add Columns**] - Button that opens the *Field Selection editor* (on page 161) for adding columns.

Creating a Display Format

Use the New Display Format wizard to create a new Display Format.

For a graphic of the wizard and definitions of the fields discussed below, see *New Display Format Wizard* (on page 114).

To create a new Display Format:

1 In the Menu bar, choose *File > New > Other*. In the Select a Wizard dialog, choose *Display Format*.

  The New Display Format wizard opens.

2 Enter a name for the Display Format in the **Display Format Name** field.
The Display Format Name is automatically entered in the **Label** field.

3 Optionally, change the value in the **Label** field.

4 Enter a description for the display format in the Description field. You may want to indicate when and why the user should apply the display format.

5 To specify the Communities that the new Display Format will be visible to:

  a) Select any Communities in the **Visible to these communities table** that you don't want to be able to see the Display format and click ◄ to move them to the **Available communities table**.

  b) You can move multiple Communities by using CTRL - click and ◄ .

  c) You can move all Communities using ◄◄ .

6 Click the [**Finish**] button.
The New Display Format wizard closes and the Display Format editor opens. The Display Format appears under the Display Format folder in UI Elements Design view.

Now you can:

- Save and Close the Display Format editor and customize the Display Format later. You can use the Display Format in its default state but it will only displays the sys_title field for Content Items listed in the Content Explorer display pane.

- *Customize the Display Format* (see "Customizing a Display Format" on page 119) in the Display Format editor.

Customizing a Display Format

For graphics of the editor and definitions of the fields discussed below, see *Display Format Editor* (see page 116).

To customize a Display Format:

1   Select the appropriate radio button in the **Will be used with** section.
When the *Other searches, views, and folders radio button* is selected, the **Categories** table is disabled.

Some fields are included by default or required:

- The sys_title field is always included by default and required in the **Columns** table. The sys_title field cannot be moved to the **Categories** table.

- If you choose *Related Content search* in **Will be used with**, the sys_variantid and sys_contenttypeid fields are automatically added and required because a Related Content search required these fields to determine what content can be inserted in a Slot. They can be moved to the Categories table.

- Fields can be included in the **Columns** table or the **Categories** table, but not both.

- to create links from Content Items under one Site node in Content Explorer to Content Items under another Site node, you must include the sys_siteid and sys_folderid fields in the Display Format.

2   To specify the fields used in the Display Format:

a)   Click the [**Add Column(s)**] button.

The *Field Selection editor* (on page 161) opens. Use the Field Selection editor to choose fields for the Display Format. They appear in the **Columns** table.

b)   If *Related Content Searches* or *Other searches and views* is chosen under **Will be used with**, you can move fields to the **Categories** table. To move a field from the **Columns** table to the **Categories** table, select the field you want to move and click [<].

All of the fields that you include in the **Columns** table appear in the drop list for **Sort Column**.

3   Choose a field in **Sort Column** for sorting Content Items that appear in the display pane of Content Explorer.

4   To sort the Content Items in the display pane by the **Sort Column** field in ascending order, choose **Ascending**; to sort them by descending order, choose **Descending**.

5   Save and close the Display Format editor.

Now you can:

- Assign the Display Format to a Folder, Search or View in Content Explorer. You may have to refresh Content Explorer or flush the Server cache first.

Modifying a Display Format

You can modify Display Format information that is accessible through the editor.

For a graphic of the editor and definitions of the fields discussed below, see *Display Format Editor* (see page 116).

To modify a Display Format:

1   Change the **Label** or **Description**.

2   You can change the **Will be used with** choice, but the following additional changes occur:

- If you change from *Related Content searches*, a dialog warns you that it is removing the sys_variantid field, and gives you the option of removing the sys_contenttypeid column. Click [**Yes**] or [**No**] to remove the sys_contenttypeid column also.

- If you change to *Related Content searches*, the sys_variantid and sys_contenttypeid fields are automatically added to the **Columns** table.

- If you change to *Other searches, views, and folders (no categories allowed)* if you have any fields in the **Categories** table, a dialog will warn you that it must move the fields in the **Categories** table to the **Columns** table and will give you the option to continue. Click [**Yes**] or [**No**] to continue with the change.

3   Click the [**Add Columns**] button to access the *Field Selection editor* (on page 161) and add any columns to the **Columns** table.

4   Select any fields in the **Columns** table or **Categories** table and use [▼] and [▲] to change their order among the other fields.

5   Select any fields in the **Columns** table or **Categories** table and use [◄] and [►] to move them from one table to the other. If the move operation is not allowed, the arrow is disabled. You can also use [►►] to move all fields from the **Categories** table to the **Columns** table.

6   Select a field and click [✖] to remove it. If the operation is not allowed, the button is disabled.

7   Change the field in the **Sort column** and the option of *Ascending* or *Descending* for the sort.

8   Save and close the editor.

Deleting a Display Format

To delete a Display Format:

1 In UI Elements Design view, right-click on the Display Format and choose *Delete*.

The Display Format is deleted, and it is no longer available in Content Explorer.

Adding Graphics to Display Formats

The default Display Formats provided by Percussion Software, Inc., do not include graphics, but you can add graphics to your custom Display Formats.

- For details about adding static graphics (graphics not managed by CM System) to Display Formats, see the topic "*Using Images in Display Formats* (see "Using Images in Display Format Columns" on page 122)".

- For details about adding thumbnail previews of CM System-managed Image Content Items, see the topics "*Adding Thumbnail Previews to Display Formats*".

Using Images in Display Format Columns

In some cases, you may prefer to use images rather than text in certain columns of your Display Format. For example, if your Display Format includes Locale, you might want to use images of flags to indicate the Locales in the Display Format rather than using text.

You can use either .gif or .jpg files to provide these images. You cannot use bitmaps (.bmp) as your image files because Java does not render bitmaps.

If you choose to store your graphic files in your CM System installation directory, do not store them in a directory with "sys_" prefix. Directories with this prefix are overwritten on upgrade, and your graphics will be lost. A good option is to store your graphic files in the rx_resources\images directory. Since this directory has an "rx_" prefix, it will not be overwritten on upgrade and you will not lose your graphics.

To render a Display Format column as an image:

1 If the field does not already exist, add it to a Content Editor Definition.

Often when you want to use an image, you need to use a computed field rather than a field bound to a backend database column. A computed field uses a UDF (specified in the PSXExtensionCall node) to generate the value of the column. The computed value might be a single word or it might be the URL of the location of the graphic file. If you define a computed field, be sure you specify Image as the <DataType> of the field.

2 Add an XSLT template to the file
`<rxroot>\rx_config\rx_DisplayFieldTemplates.xsl` to override or modify the value of the field computed by the Content Editor. For details, see the comments in the file `rx_DisplayFieldTemplates.xsl`.

For example, the following template substitutes images for the text of Checkout Status:

```
<xsl:template match="ResultField[@name='sys_locale']"
mode="rc_res_displayfield">
        <xsl:param name=  "sys_contentid"/>
        <xsl:param name=  "sys_revision"/>
        <xsl:param name=  "sys_contenttypeid"/>
        <xsl:param name=  "sys_variantid"/>
        <ResultField name=  "{@name}">
```

```
            <xsl:choose>
             <xsl:when          test="(.=      'en-
    us')">../rx_resources/images/usflag.gif</xsl:when>
              <xsl:when          test="(.=      'en-uk')">../
    rx_resources/images/ukflag.gif </xsl:when>
              <xsl:when          test="(.=      'fr-
    fr')">../sys_resources/images/frtricolor.gif</xsl:when>
              <xsl:when          test="(.=      'fr-
    ca')">../sys_resources/images/quebec.gif</xsl:when>
            </xsl:choose>
          </ResultField>
      </xsl:template>
```

Modify the field if the Content Editor itself does not include enough to compute the field. For example, suppose you want to render a thumbnail in a Display Format for Related Content Search results. To render the correct image, you would need the Variant ID that assembles the thumbnail image. You would first use a UDF to compute the value of the field, then modify it in the XSLT template to retrieve the correct image. If you do not override the template, CM System will display the value computed by the UDF rather than the thumbnail image.

3   Add the field to the Display Format, or create a Display Format that includes it.

Adding Thumbnail Previews to Display Formats

To add a thumbnail preview of an Image Content Item to a Display Format:

1   Add a new entry to the file <Rhythmyxroot>/rxconfig/server/addThumbnailURL.properties for each image Content Type, mapping the Content Type ID to the ID of the thumbnail Template you want to use to preview the Content Type in the Display Format. For example, if you had a Content Type with an ID of 350, and you wanted to use a Template with an ID of 324 to preview it in Display Formats, you would add the following entry to the addThumbnailURL.properties file:

```
    350=324
```

Note that only one mapping per Content Type is supported. If the file contains more than one entry for a Content Type ID, only the last entry will be used.

2   Add the column sys_thumbnail to the Display Format.

C H A P T E R   1 2

Maintaining Content Explorer Views

A View is a pre-defined query that helps arrange content in Content Explorer. Business Users can define their own searches, but Views are predefined for them.

CM System provides a set of default Views:
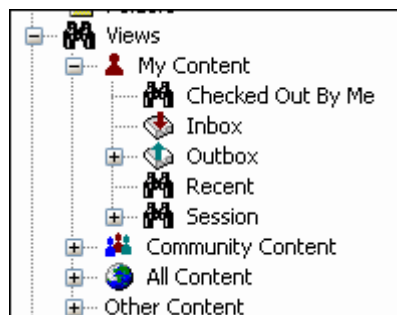
Figure 47: The Default CM System Views

Implementers can also define Views. Views provide implementers with the ability to apply more complex queries than those available using a simple search mechanism. The Inbox View that is included with CM System by default is an example of this type of View, which displays content that is assigned to a user's Role. It requires a query of content in States associated with the user's Role, which is beyond the capability of a search query.

Create and edit Views in the Rhythmyx Workbench:

- Use the *New View wizard* (on page 126) to create a new View.
- Use the *View editor* (on page 128) to complete and maintain Views.

You can:

- *Create a View* (see "Creating a New Content Explorer View" on page 135)
- *Customize a standard View* (see "Configuring a Standard Content Explorer View" on page 137)
- *Customize a custom View* (see "Configuring a Custom Content Explorer View" on page 138)
- *Edit a View* (see "Modifying a Standard View" on page 142)
- *Delete a View* (see "Deleting a Content Explorer View" on page 144)

New View Wizard

The New View wizard is used to create Content Explorer Views that appear in UI Elements Design view under the Views folder.

To access the New View wizard;

- From the Menu bar choose *File > New > Other*. In the Select a Wizard dialog, choose *View*.
- In UI Elements Design view, right-click the Views folder or one of its subfolders and choose *New > View*.

Figure 48: New View Wizard

Field Definitions

View Name - Required. System name for the view.

Label - Required. View name displayed to end users.

Description - Description of the view.

Type - Specifies the type of view. There are two choices available in the drop down menu, *Standard* (manually entered query) or *Url* (address of application that generates the View).

Parent Category - Specifies the parent category in which the View or search is listed. The drop list contains the following CM System-supplied options: *All Content*, *Community Content*, *My Content*, and *Other Content*.

Available Communities - Communities that are available to be assigned to the View.

Visible to these communities - Communities that are able to see the View.

Filter - Filters the list of Available Communities.

View Editor

The View Editor lets you complete or edit a View.

To access the View Editor:

- After completing the *New View wizard* (on page 126) click [**Finish**].
- Right-click on the View object in any view that displays it and select *Open*.
- Double-click the View object in any view that displays it.

Depending on the **Type** of View you have chosen in the New View wizard, you will either see:

- *The Standard View editor* (see "Standard View Editor" on page 128)
- *The Custom View editor* (see "Custom View Editor" on page 133)

Standard View Editor

The View editor for standard Views lets you customize a standard View.

To access the standard View editor:

- When completing the *New View Wizard* (on page 126), choose Standard as the value for the Type drop list, complete the rest of the wizard, then click the Finish button.
- Right-click on the standard View object in any view that displays it and select *Open*.
- Double-click the standard View object in any view that displays it.

Using the View editor for standard Views, you can:

- *Configure and customize a standard View* (see "Configuring a Standard Content Explorer View" on page 137)
- *Modify a standard View* (see "Modifying a Standard View" on page 142)

Depending on the search engine that your system uses, you will either see

- *the Standard Database View Editor* (see "Standard Database View Editor" on page 129); or
- *the Standard Full-text View Editor* (see "Standard Full-text Search View Editor" on page 131)

Standard Database View Editor

The standard View editor for systems that use the database search engine appears as follows:

Figure 49: Standard view

Field Definitions

Standard View name - Read only. The name used for the View in the CM System server.

Standard View label - This field is required. The label displayed in the user interface for the View. It must be unique among all defined Views. This value is available for translation in globalized environments.

Description - This field is optional. Free form description of the View.

Display Format - Specifies the display format to be used for the View. It lists all display formats currently available in the system in alphabetical order. The default selection is the first display format in the list.

Parent Category - Specifies the parent category in which the View or search is listed. The drop list contains the following CM System-supplied options: *All Content*, *Community Content*, *My Content*, and *Other Content*.

Max rows returned - Specifies the maximum number of rows to return for the query. Checking the Unlimited box will return all results. Results are always filtered by Content Explorer as well.

Search criteria - The contents of this box vary, depending on the fields you specify for the View when you click [**Customize**].

[**Customize**] - Opens the *Field Selection editor* (on page 161) which enables users to add or remove fields to the search query.

Standard Full-text Search View Editor

The standard View editor for systems that use the Full-text search engine appears as follows:

Figure 50: Standard View Editor with Full-text Search engine installed

Field Definitions

Standard View Name - Read only. System name for View.

Standard View Label - Required. Name displayed to users for View.

Description - Description of the View.

Search for - Word or words or word fragment used to select Content Items for the View. This field has a limit of 100 characters.

Mode - How the search engine conducts the search.

- **Concept** - A Concept search finds words that have meanings related to the term you enter. For example, if you entered the word "cat", a Concept search may also return Content Items that include the words "lion" and "tiger" as well.
- **Pattern** - A Pattern search finds Content Items that includes words that match the word you entered closely, but not exactly. For example, if you entered the word "cat", a Pattern search would also return Content Items that include the words "catalog" and "catamaran" as well.
- **Boolean** - A Boolean search is a search that finds an exact match for your query using Boolean operators.

Filter with - Specific word or words that the items found must include.

Expansion - If you are using *Concept Mode*, specify the **Expansion**, which determines how closely or distantly related a word must be to the word you entered. CM System allows the following levels of Expansion (examples assume that you entered the word "catch" in the **Search for** field):

- *exact matches* (returns only Content Items that include the word "catch" or nearly identical variants, such as "catches");
- *simple variations* (In addition to the previous option, also returns Content Items that include the word "caught");
- *most strongly related concepts* (default option; in addition to the previous option, also returns Content Items that include the word "catchable" and "catching");
- *strongly related concepts* (In addition to the previous option, also returns Content Items that include words such as "bag" or "arrest");
- *weakly related concepts* (In addition to the previous option, also returns Content Items that include words such as "capture", "secure", "seize", or "nail".

Max rows returned - Maximum number of results to return.

Unlimited - Return all results. If checked, any value in **Max rows returned** is ignored.

Display Format - The *Display Format* (see "Maintaining Display Formats" on page 111) you want to use to display the results of the search.

Parent Category - Specifies the parent category in which the View or search is listed. The drop list contains the following CM System-supplied options: *All Content*, *Community Content*, *My Content*, and *Other Content*.

Search Criteria - The contents of this box vary, depending on the fields you specify for the View. Use the [**Customize**] button to maintain the fields included in the search. The control for the field varies depending on the datatype of the field.

Title - A text box for filling in the Title or a portion of the Title to search for. This field cannot be removed from the View editor, but you do not have to specify a value for it.

[**Customize**] - Opens the *Field Selection editor* (on page 161), which enables you to add or remove fields to the search query.

Custom View Editor

The Custom View Editor will open if the View was defined as *Url* in the New View Wizard.

Figure 51: Custom View Editor

Field Definitions

Custom View name - Read only. The name used for the View in the CM System server.

Custom View label - This field is required. The label displayed in the user interface for the View. It must be unique among all defined Views. This value is available for translation in globalized environments.

Description - This field is optional. Free form description of the View.

Display Format - Specifies the display format to be used for the View. It lists all display formats currently available in the system in alphabetical order. The default selection is the first display format in the list.

Parent Category - Specifies the parent category in which the View or search is listed. The drop list contains the following CM System-supplied options: *All Content*, *Community Content*, *My Content*, and *Other Content*.

Custom View URL - This field is required. Specifies the path, relative to the CM System root, to the CM System application and resource that retrieves content for the View.

Parameters - Specifies custom properties for the application and resource that create the View.

Name column - Property names.

Value column - Property values.

Creating a New Content Explorer View

To create a new Content Explorer View that appears in UI Elements Design view, complete the information in the New View Wizard.

For a graphic of the Wizard and definitions of the fields discussed below, see *New View Wizard* (on page 126).

To create a Content Explorer View:

1   In the Menu bar, choose *File > New > Other*. In the Select a Wizard dialog, choose *View*.

  The New View Wizard opens.

2   In the **View name** field, enter an internal name for the view.

  The **View name** is automatically entered in **Label**.

3   Optionally, change the value in **Label**.

4   Optionally, in the **Description** field, enter a description of the view.

5   In the **Type** drop down list, select the view type:

  ▪   Select **Standard** to create a query view using the View Editor.

  ▪   Select **Url** to specify a path, relative to the CM System root, to the CM System application and resource that generates the view.

6   In **Parent Category**, choose a CM System view parent category. Choices are *My Content*, *Community Content*, *All Content*, and *Other Content*. The new view will appear in Content Explorer under the Parent view that you choose.

7   Move any Communities that you do not want to be able to see the view from **Visible to these Communities** to **Available to the Communities**.

8   To reduce the number of Communities displayed in **Available Communities**, enter a matching term in **Filter**.

9   Click [**Finish**].

  The View is created and appears in UI Elements Design view under the Standard or Custom Search folder depending on the **Type** of search you have specified. The New Search wizard closes. If you have specified that the search **Type** is *Standard*, the *Search Editor for standard searches* (see "Search Editor, Standard Search" on page 74) opens. If you have specified that the search **Type** is *Custom*, the *Search Editor for custom searches* (see "Search Editor, Custom Search" on page 81) opens.

10   Click [**Finish**].

  The View is created and can be found on the UI Elements Design view under the Standard or Custom sub-folder of the Views folder. Most of the Views properties are not configured and it is not functional. The New View wizard closes and the either the *Standard View Editor* (see "Configuring a Standard Content Explorer View" on page 137) or the *Custom View Editor* (see "Configuring a Custom Content Explorer View" on page 138) opens, depending on the **Type** selection you made in the within the New View wizard.

Now you can:

- Configure the properties of the view in the *View Editor* (on page 128).
- Save and close the View Editor and continue configuring the view at a later time.

Configuring a Standard Content Explorer View

For instructions on how to access the Standard View Editor, a graphic and definitions of the fields discussed below, see *Standard View Editor* (on page 128).

To configure a standard view:

1   Open the view you wish to customize.

2   In **Display Format**, select the Display Format to be used for displaying the search results.

3   In the **Max rows returned** field, enter a number of items to display or to display all results, check the **Unlimited** box.

4   In the **Search Criteria** section, click [**Customize**] to open the *Field Selection editor* (on page 161) to choose fields for creating a view query.

5   Enter values for the fields entered in **Search Criteria** to create the query for selecting Content Items.

6   Save and close the Standard View editor.

Now you can:

▪   Use the View in Content Explorer. You may have to refresh Content Explorer or flush the Server cache before it appears.

Configuring a Custom Content Explorer View

For instructions on how to access the Custom View Editor, a graphic and definitions of the fields discussed below, see *Custom View Editor* (on page 133).

To customize a custom view:

1   Open the view you wish to customize.

2   In **Display Format**, select the Display Format to be used for displaying the search results.

3   In the **Custom View URL** field specify the path to the CM System application and resource that retrieves content for the view.

4   In the **Parameters** section specify parameters for the application and resource. Enter the name of the parameter in the **Name** column and the value of the parameter in the **Value** column.

5   Save and close the Standard View editor.

Now you can:

▪   Use the View in Content Explorer. You may have to refresh Content Explorer or flush the Server cache before it appears.

▪   Click [**Finish**] to save the view.

Building a Custom View Application

Custom View application resources are based on the Result.dtd. To build a custom View application:

1   In the Rhythmyx Workbench, start a new application (in the Menu bar, choose *Application > New*).

2   On the Files tab of the Rhythmyx Workbench, browse to the sys_cxViews application folder, and drag and drop the Results.dtd into you application. Choose *Query* from the pop-up menu.

3   CM System creates a resource with the name *Result*, linked to the Default XSL stylesheet.

4   Double-click on the Result resource to open the Mapper.

5   Choose the data tab for the database where your tables are stored, and open the database where your content tables are stored. Drag and drop the tables needed for your query to the datatank end of the datapipe.

6   Map the database tables to the query. The following graphic shows the mapping of the Inbox view resource in the sys_cxView application (see this application in the Rhythmyx Workbench for the parameters and other details of the UDFs):

Back-end	XML	C
ROLES.ROLENAME	PSXXmlField/SearchResponse/Result/sys_assignee	C
sys_FormatDateToUserLocale(CONTENTSTATUS.CONTE...	PSXXmlField/SearchResponse/Result/sys_contentlastmo...	C
CONTENTSTATUS.CONTENTCREATEDBY	PSXXmlField/SearchResponse/Result/sys_contentcreatedby	C
sys_LocalizedTextLookupUser(psx.workflow.state, STATES...	PSXXmlField/SearchResponse/Result/sys_contentstateid	C
CONTENTSTATUS.TITLE	PSXXmlField/SearchResponse/Result/sys_title	C
CONTENTSTATUS.CONTENTID	PSXXmlField/SearchResponse/Result/sys_contentid	C
sys_LocalizedTextLookupUser(psx.contenttype, CONTENT...	PSXXmlField/SearchResponse/Result/sys_contenttypeid	C
STATES.STATEID	PSXXmlField/SearchResponse/Result/sys_stateid	C
STATES.WORKFLOWAPPID	PSXXmlField/SearchResponse/Result/sys_workflowid	C
sys_Trim(CONTENTSTATUS.CONTENTCHECKOUTUSER...	PSXXmlField/SearchResponse/Result/sys_contentchecko...	C
CONTENTSTATUS.CURRENTREVISION	PSXXmlField/SearchResponse/Result/sys_currentrevision	C
CONTENTSTATUS.TIPREVISION	PSXXmlField/SearchResponse/Result/sys_tiprevision	C
CONTENTSTATUS.EDITREVISION	PSXXmlField/SearchResponse/Result/sys_editrevision	C
PSXUserContext/User/SessionObject/sys_lang	PSXXmlField/SearchResponse/@xml:lang	C
sys_ComputeAssignees(CONTENTSTATUS.CONTENTID)	PSXXmlField/SearchResponse/Result/sys_assignees	C
sys_ComputeAssignmenType(CONTENTSTATUS.CONTE...	PSXXmlField/SearchResponse/Result/sys_assignmenttype	C
sys_ComputeCheckoutStatus(CONTENTSTATUS.CONTE...	PSXXmlField/SearchResponse/Result/sys_checkoutstatus	C
sys_MakeIntLink(./sys_DisplayFormats/getDisplayFormat...	PSXXmlField/SearchResponse/@displayformaturl	C
PSXUserContext/User/Name	PSXXmlField/SearchResponse/@username	C
		C

Figure 52: Mappings of the Inbox View resource

7   Double-click on the Selector to open it. In the Selector, click the **Manually enter SQL** radio button and enter your SQL query in the **SELECT statement** field.

8   Optionally, add a Pager.

a)   On the Workbench Menu bar, choose *Insert > Result Pager*.

b) CM System displays the Result Pager dialog.
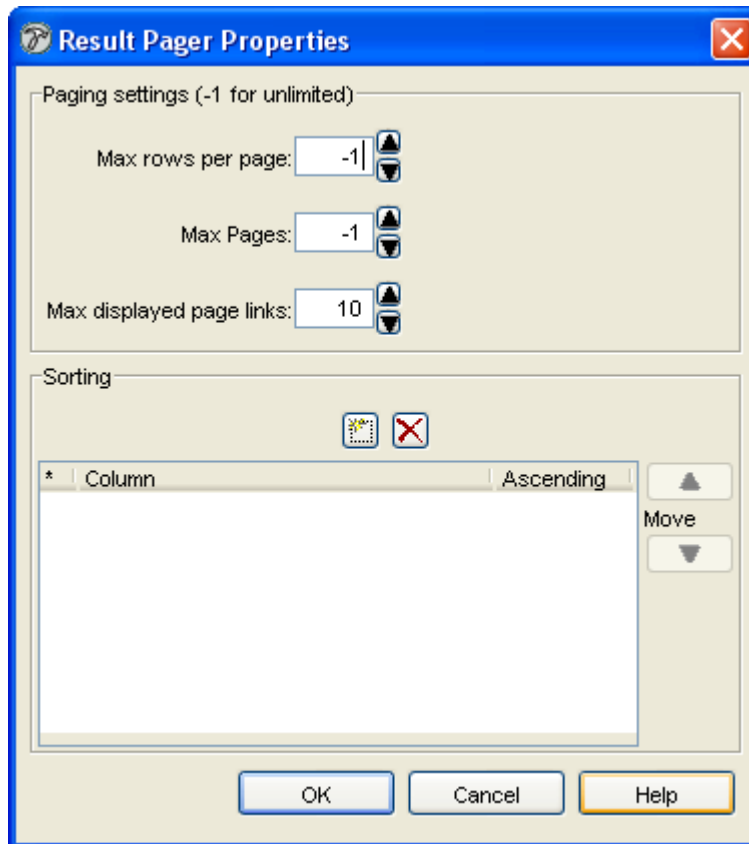
c) Specify the **Max rows per page**, **Max pages**, and **Max displayed links per page**.

d) To specify Sorting criteria, click the New button [icon] on the Results Pager dialog, and choose the column you want to use when sorting results. By default, all columns are sorted in ascending order. If you want to sort in descending order, uncheck the **Ascending** checkbox in the row you want to sort in descending order. You can specify multiple sort criteria. CM System sorts results based on the order of the sort criteria (in other words, all results are sorted based on the first column specified, then the results within that order are sorted based on the second column specified, and so on). To modify the order of the sort criteria, select a row you want to move and click the up or down arrows to change its position.

e) Click [**OK**] to close the Result Pager.

9 Close the Mapper.

10 Right-click on the request icon and choose Request Properties. In the **Request Name** field of the Request Properties dialog, specify a new name for the query resource.

11 Click the [**Copy to Clipboard**] button, then click [**OK**] to close the Request Properties dialog.

12 Save and start the application.

13 Assign the new application to a View or search:

a) In the Workbench, choose the Server Objects tab.

b) Start the Content View Editor.

    c) Open the Content View for which you created the application.

    d) If you have not already created a View, create it now using the procedure in "Creating a View". Add the new View to the Custom node.

    e) On the URL tab of the View, specify the name of the CM System application you created.

14 On the URL tab of the Content View Editor, click in the URL field and paste the URL you copied to the clipboard from the Request Properties dialog for the View query.

15 Save the View.

Start Content Explorer (or refresh it if you have already started it), and test the new View.

Modifying a Standard View

You can modify any of the information for a standard view accessible through the Standard View editor.

For a graphic of the View Editor, instructions on opening it, and definitions of the fields discussed below, see the *Standard View Editor* (on page 128).

To edit a standard view:

1   In the *Standard View Editor* (on page 128), you may modify:

- **Standard View label**
- **Display Format**
- **Description**
- **Search Criteria Fields** and their values
- **Max Rows Returned/Unlimited**

2   Save and close the editor.

Now you can:

- In the *Community Visibility view* (see "Community Visibility" on page 30), change the Communities that use the View.

Modifying a Custom View

You can modify any of the information for a custom view accessible through the Custom View editor.

For a graphic of the View Editor, instructions on opening it, and definitions of the fields discussed below, see *Custom View Editor* (on page 133).

To edit a custom view:

1   In the *Custom View Editor* (on page 133), you may modify:

- **Custom View label**

- **Display Format**

- **Description**

- **Custom View URL.** If you change the URL to point to another application and resource, you may have to change the **Names** and **Values** of **Parameters** for the new application.

- If you do not change the **Custom View URL**, you can change the **Names** and **Values** of the **Parameters** associated with it.

2   Save and close the editor.

Now you can:

- In the *Community Visibility view* (see "Community Visibility" on page 30), change the Communities that use the View.

Deleting a Content Explorer View

To delete a View:

      1   In UI Elements Design view, right-click on the View and choose *Delete*.

The View is deleted, and it is no longer available in Content Explorer.

C H A P T E R   1 3

Extending Lifecycle Analysis Reporting

CM System provides Content Administrators with the ability to retrieve content metadata from the Repository for the creation of Lifecycle Analysis reports. The Lifecycle Analysis report option is available in content item action menus in Content Explorer. Report data is provided by CM System resources in one of two applications:

- sys_reports

  The default data processing application for Lifecycle Analysis. All Lifecycle Analysis resources provided by Percussion Software are stored in this application, and the default Excel file, LifecycleAnalysis.xls, is stored in this application directory. When your system is upgraded, all files in this directory, including all application files, are overwritten with updated files. Therefore, you should not modify any of these files.

- rx_reports

  This application is provided for you to enhance and customize Lifecycle Analysis. It is not overwritten during upgrades. Any resources that you modify should be copied to this application before modification, and any new resources you develop should be added to this application. If you modify the default Excel file (including to update the CM System properties), you should move it to this application directory before making any changes. Any enhancements Percussion Software makes to the default Excel file during upgrade should be migrated to the copy of the file in this directory.

The following options are available to enhance CM System Lifecycle Analysis:

- Update default Lifecycle Analysis resources provided by Percussion Software

  You can enhance the reporting resources provided by Percussion Software to retrieve additional reporting data; for example, you might want to enhance the Content by Workflow Reporting by adding the currently assigned Roles. Note that any time you enhance a default resource, you should first copy it from the sys_reports application to the rx_reports application. If you do not copy the resource to rx_reports before modifying it, your changes will be overwritten when your system is upgraded. For details, see *Modifying the Fields in Standard Lifecycle Analysis Reports* (on page 150).

- Add new Lifecycle Analysis query resources

  You can add additional resources that retrieve data about your content. For example, you might want to add a query for Content Items that are in Pending or Quick Edit States (in other words, content that is ready to go Public, but is not currently Public). Any new resources that you develop should be added to the rx_reports application. Resources added to the sys_reports application will be deleted when this application is overwritten during upgrades. For details see *Adding Custom Lifecycle Analysis Report Resources* (on page 153).

When adding a CM System field that stores numeric data (such as a ID) to a resource, add the attribute "type" to the node, with a value of ""Number" (@type='Number'). This attribute ensures that Excel processes the output data for the field correctly. If you do not include this attribute for a node, Excel will return a warning that the contents of the cell have been formatted as a number.

- Add new reporting clients

  You can output CM System reporting data to other reporting clients, such as Crystal Reports. For details, see ***Implementing Lifecycle Analysis in Additional Clients*** (on page 157).

NOTE: Excel has a limit of 65,000 rows in any one spreadsheet. Certain tables, such as the CONTENTSTATUS table, can easily exceed this limit. When a table exceeds this limit, CM System returns an error message when attempting to open the LifecycleAnalysis.xls workbook. To alleviate this problem, you may want to create duplicate resources that select smaller data sets.

For a detailed discussion about using Microsoft Excel as a reporting tool, see *Excel Advanced Report Development* by Timothy Zambia (Wiley Publishing, 2005, ISBN 0?7645-8811-7).

Updating the CM System Lifecycle Analysis Workbook

The following custom properties have been added to the CM System reporting Excel file. You should update the values of these properties with the correct local values in the copy of the file in `<Rhythmyxroot>/rx_reports`. (`<Rhythmyxroot>/rx_reports/LifecycleAnalysis.xls`). If you do not update the values in this file, users will not be able to retrieve data from the CM System server when they attempt to use Lifecycle Analysis.

Property Name	Description	Default Value	Update
rx_server	Name or IP address of the CM System server (which is recommended?)	127.0.0.1	Change the name or IP address to match that of your CM System
rx_port	Port on which the CM System server listens	9992	Change the value to the port assigned to your CM System server.
rx_protocol	Protocol used to communicate with the CM System server	http	Should not be modified.
rx_root	CM System application root	Rhythmyx	Should not be modified.
rx_resources	Comma-separated list of resources in the rx_reports application.	None	Add the names of any resources you copy from the sys_reports application to the rx_reports application and of any new resources you develop and add to the rx_resources application.
sys_resources	Comma-separated list of resources in the sys_reports application	ContentState, CommunityContent, StaleContent, PubStatus, ContentStatus	If any new resources are added by Percussion Software, you should add them to your copy of LifecycleAnalysis.xls. Otherwise, you should not modify this property.

To update the properties:

1 Right-click on `<Rhythmyxroot>/rx_reports/LifecycleAnalysis.xls` and from the popup menu, choose *Properties*.

   Windows displays the Properties dialog.

2 Click the Custom tab.

3 Select the property whose value you want to modify.

4   Enter the new value in the **Value** field.

5   Click the [**Modify**] button.

6   When you have finished modifying the values, click the [**OK**] button.

Access Control for Lifecycle Analysis Reports

By default, only members of the Report Admin Role have access to Lifecycle Analysis resources, and thus can retrieve Lifecycle Analysis data. You can grant users access to the Lifecycle Analysis reports by adding them to this Role. For details about adding users to a Role, see the topic "Adding Users to a Role" in the Rhythmyx Server Administrator Help.

Another option for granting access to Lifecycle Analysis data is to add more Roles to the rx_reports application ACL. Add the Role to the ACL, and grant it Query access to the application. For details about modifying the application ACL, see "Editing an Application ACL" in the Rhythmyx Workbench Help. If you add the Role to the ACL, you will also need to modify the Visibility of the Lifecycle Analysis Action Menu item. You must move each Role you added to the rx_reports ACL to the **Show** field of the Visibility tab for the Lifecycle Analysis Action Menu item.

The Lifecycle Analysis reports retrieve all eligible data for the report, regardless of Community. Thus, while a user may see a Content Item listed in a report, they may not be able to access the Content Item if it is in a Community other than the currently logged Community of the user or if none of the user's Roles are assigned to the current Workflow State of the Content Item.

Modifying the Fields in Standard Lifecycle Analysis Reports

You can modify the fields included in a Lifecycle Analysis report by modifying the CM System resource used to generate the data for the report. To modify a Lifecycle Analysis report:

1 Open the Rhythmyx Workbench.

2 Open the sys_reports application.

3 Select the resource that generates the report you want to modify and click the copy button.

4 Open the rx_reports application.

5 Click the paste button to paste the report resource to the rx_reports application. Remember to add a Default XSL stylesheet to the resource.

6 Open the resource.

7 Open the mapper.

8 Add the backend table column whose data you want to include in the report to the **Backend** column of the mapper.

When adding a CM System field that stores numeric data (such as an ID) to a resource, add the attribute "type" to the node, with a value of ""Number" (`@type='Number'`). This attribute ensures that Excel processes the output data for the field correctly. If you do not include this attribute for a node, Excel will return a warning that the contents of the cell have been formatted as a number.

9 In the XML column of the same row, add a new XML node for the output data.

10 Close the mapper.

11 Save the application.

12 At this point, you can check that the resource returns the desired data by querying the resource directly. Start a browser and enter the path to the resource in the address field. The browser will return the results as a XML document. Confirm that the new report field is included in the document and that it contains the data you expect.

13 You must add the new resource to the rx_resources custom property of the Excel workbook. You may also want to remove the name of the resource from the sys_resources custom property. (Each resource listed in these two properties creates a spreadsheet tab in the workbook. If you do not remove the name of the resource from the sys_resources property, you will have two tabs with the same name, although the data will differ slightly.)

14 Refresh the data in your workbook to confirm that you are retrieving the data you expect to see.

Example Modification of a Lifecycle Analysis Report Resource

In this exercise, we will modify the Content By Community report, adding the column "Checked Out To" to list the user the currently has the Content Item checked out. This data is stored in the CONTENTSTATUS.CHECKEDOUTUSERNAME column in the Repository database.

To modify the Content By Community report:

1 Copy the CommunityContent resource from the sys_reports application to the rx_reports application.

    a) In the Rhythmyx Workbench, open the sys_reports application.

    b) Select the CommunityContent resource.

    c) Click the copy button.

    d) Open the rx_reports application.

    e) Click the paste button.

       CM System adds the CommunityContent resource to the sys_reports application.

2 Map the CONTENTSTATUS.CHECKEDOUTUSERNAME column to a new node in the DTD, named Checked_Out_To:

    a) Double-click on the CommunityContent resource.

       CM System opens the Mapper for the resource.

    b) Find the CONTENTSTATUS.CHECKEDOUTUSERNAME column and drag it to the first empty row in Back-end column of the Mapper.

    c) Double-click in the XML column of the Mapper and add the new DTD element. This element must be a child of the Content element, so enter the new element as follows:

```
Content_By_Community/Content/Checked_Out_To
```

       Remember to add the underscores. The macros in the LifecycleAnalysis.xls workbook will replace them with spaces, but the underscores are required in CM System.

Back-end	XML	C
CONTENTSTATUS.CONTENTID	PSXXmlField/Content_By_Community/Content/Content_Id	C
Number	PSXXmlField/Content_By_Community/Content/Content_Id/@type	C
CONTENTSTATUS.TITLE	PSXXmlField/Content_By_Community/Content/Title	C
RXCOMMUNITY.NAME	PSXXmlField/Content_By_Community/Content/Community	C
CONTENTTYPES.CONTENTTYPENAME	PSXXmlField/Content_By_Community/Content/Content_Type	C
WORKFLOWAPPS.WORKFLOWAPPNAME	PSXXmlField/Content_By_Community/Content/Workflow	C
STATES.STATENAME	PSXXmlField/Content_By_Community/Content/State	C
CONTENTSTATUS.STATEENTEREDDATE	PSXXmlField/Content_By_Community/Content/State_Entered_D...	C
CONTENTSTATUS.CONTENTCHECKOUTUSERNAME	PSXXmlField/Content_By_Community/Content/Checked_Out_To	C

    d) To test your modification, start a browser session and query the resource. Enter the following value in the Address field:

```
http://localhost:9992/Rhythmyx/rx_reports/ContentCommunity.xml
```

       Your browser should display a result similar to the following:

```
 - <Content>
     <Content_Id type="Number">652</Content_Id>
     <Title>CI Open and Closed Mortgages</Title>
     <Community>Corporate Investments</Community>
     <Content_Type>Generic</Content_Type>
     <Workflow>Standard Workflow</Workflow>
     <State>Quick Edit</State>
     <State_Entered_Date>2005-09-26 10:21:51.127</State_Entered_Date>
     <Checked_Out_To>admin2</Checked_Out_To>
   </Content>
```

Note that the new column Checked_Out_To creates a new node. If the new node is not in the correct location, confirm that you added it as a child of the Content node.

3   Add the CommunityContent resource to the list of resources in the rx_reports custom property of the Excel workbook and remove it from the list of resources in sys_reports custom property.

4   Log in to Content Explorer, go to a Site Folder and retrieve the report. Note that the Checked Out To column has now been added to the report.

Figure 53: Updated Content by Community report in Microsoft Excel showing the new column

Adding Custom Lifecycle Analysis Report Resources

To add a custom Lifecycle Analysis report to your system, determine the backend columns you want to include in the report. Define a DTD that includes these rows. (NOTE: Each node in the DTD that is associated with a CM System field that stores numeric data [such as an ID] should include the attribute "type" with a value of "Number" [`@type='Number'`]. If you do not include this attribute with these fields, Excel will return a warning that the contents of the cell have been formatted as a number.) For details about the correct structure of this DTD, see ***Implementing Lifecycle Analysis in Additional Clients*** (on page 157).

Drop this DTD into the application rx_reports to create a new Query resource. Add the backend tables to the application Datatank, creating joins on Content ID and Revision ID. Map the data from these tables to your DTD. Save the resource and give it a name that identifies the data it produces. Query the resource directly and review the resulting XML document to confirm that the resource is producing the data you expect.

Now add the name of the resource to the rx_resources custom property of the Excel workbook. When you refresh the workbook, you will see a new spreadsheet tab with the name in the root element of your DTD, and a column for each of the backend table rows defined in the DTD and in the application.

Example Creation of a Custom Lifecycle Analysis Report Resource

In this example, we will create a report with a Pivot Table that shows the Content Items in Pending and Quick Edit States. This is content that is not currently Public, but is ready to be Public. We will call the report Pending Content. It will consist of the following columns:

- Content ID
- Current Workflow State
- Creator
- Last Modifier
- Date Entered the current State

To create the Pending Content Report:

1   Create a DTD for the report. The root element of the DTD will be called Pending_Content. This element must contain one child element to create the rows in the report. We will call this child element Content. The children of the Content element are the columns we want to add to the report. (Note that the Content_ID element includes the attribute "type" with a value of "Number" as should any node associated with a CM System field that stores numeric data.) The DTD for this report will be:

```
<?xml version="1.0" encoding="UTF-8"?>
<!ELEMENT Pending_Content (Content*)>
<!ELEMENT Content (Content_ID, Workflow_State, Creator,
Last_Modifier, Date_Entered_State)>
```

```
<!ELEMENT Content_ID (#PCDATA)>
<!ATTLIST Content_ID
 type CDATA #IMPLIED
>
<!ELEMENT Workflow_State (#PCDATA)>
<!ELEMENT Creator (#PCDATA)>
<!ELEMENT Last_Modifier (#PCDATA)>
<!ELEMENT Date_Entered_State (#PCDATA)>
```

Save the DTD as PendingContent.dtd.

2 In the Rhythmyx Workbench, open the rx_reports application, drop the PendingContent.dtd into it and from the popup menu, choose *Query*. CM System creates a new resource named PendingContent, attached to the Default stylesheet.

3 Add backend columns to the resource:

a) In the data tab for your Repository database, select the CONTENTSTATUS table, drag it into the mapper and attach it as the data tank for the resource.

b) Add the STATES table to the datatank.

Adding the STATES table should create a join between the two tables on the WORKFLOWAPPID column. If the join is not created, add it manually.

c) Map the query. The following graphic illustrates the desired mappings for this query:

Back-end	XML	...
CONTENTSTATUS.CONTENTID	PSXXmlField/Pending_Content/Content/Content_ID	
Number	PSXXmlField/Pending_Content/Content/Content_ID/@type	
CONTENTSTATUS.CONTENTCREATEDBY	PSXXmlField/Pending_Content/Content/Creator	
STATES.STATENAME	PSXXmlField/Pending_Content/Content/Workflow_State	
CONTENTSTATUS.CONTENTLASTMODIFIER	PSXXmlField/Pending_Content/Content/Last_Modifier	
CONTENTSTATUS.STATEENTEREDDATE	PSXXmlField/Pending_Content/Content/Date_Entered_State	

4 In the Selector, add a manual SQL statement to select Content Items in the Pending and Quick Edit Workflow States. (The WHERE table does not allow you to define the nesting or WHERE clauses required to retrieve the correct data.) In the FastForward implementation, the following SQL statement retrieves the desired data.

```
SELECT CONTENTSTATUS.CONTENTID, CONTENTSTATUS.CONTENTCREATEDBY,
CONTENTSTATUS.CONTENTLASTMODIFIER, STATES.STATENAME,
CONTENTSTATUS.STATEENTEREDDATE FROM rxmaster.dbo.STATES STATES,
rxmaster.dbo.CONTENTSTATUS CONTENTSTATUS  WHERE STATES.WORKFLOWAPPID
= CONTENTSTATUS.WORKFLOWAPPID AND
CONTENTSTATUS.CONTENTSTATEID=STATES.STATEID
AND(STATES.STATENAME='Pending' OR STATES.STATENAME='Quick Edit')
```

5 To test your modification, start a browser session and query the resource. Enter the following value in the Address field:

```
http://localhost:9992/Rhythmyx/rx_reports/PendingContent.xml
```

Your browser should display a result similar to the following:

```xml
<?xml version="1.0" encoding="utf-8" ?>
- <Pending_Content>
  - <Content>
      <Content_ID type="Number">337</Content_ID>
      <Workflow_State>Quick Edit</Workflow_State>
      <Creator>admin1</Creator>
      <Last_Modifier>admin1</Last_Modifier>
      <Date_Entered_State>2007-07-03
        09:20:16.56</Date_Entered_State>
    </Content>
  </Pending_Content>
```

6 Add the PendingContent resource to the list of resources in the rx_reports custom property of the Excel workbook and remove it from the list of resources in sys_reports custom property.

7 Log in to Content Explorer, go to a Site Folder and retrieve the report.

8 Use the Pivot Table and Pivot Chart Wizard to create the Pivot Table.

a) In the Excel Menu bar, choose *Data > Pivot Table and Pivot Chart Report…*.

b) Excel displays the first dialog of the Pivot Table and Pivot Chart wizard. In the Where is the data that you want to analyze list, select the **Microsoft Office Excel list or database** radio button. In the What kind of report do you want to create list, select the **Pivot Table** radio button. Click the [**Next**] button.

c) Excel displays the second dialog of the Pivot Table and Pivot Chart wizard.   Leave the default selection (all cells) in the Range field and click the [**Next**] button.

d) Excel displays the last dialog of the Pivot Table and Pivot Chart wizard. Select the **New worksheet** radio button and click the [**Finish**] button.

e) Excel displays a pivot table template and a list of fields to add to the table. Add the Last Modifier field to the Row section of the template, the Workflow State field to the Column section of the template, and the Content ID field to the Data section of the template. When you finish, the results should resemble the following screenshot:

Change the name of the new pivot table worksheet to "Pending Content by User". You may want to delete the original report worksheet before saving the workbook.

Implementing Lifecycle Analysis in Additional Clients

To implement Lifecycle Analysis in a different client, you will need to consume the Lifecycle Analysis XML data generated by CM System, and add a means for the client to retrieve and update the data.

The DTD for XML documents output by Lifecycle Analysis resources has a simple structure that parallels the structure of the <table>, <tr> and <td> tags in HTML:

- The root element of the DTD document is equivalent to the HTML <table> tag. It creates the root element of the output XML document. In Excel, the value of this element is used as the name of the spreadsheet tab containing the data.

- The root element must contain one child element, which is equivalent to the <tr> tag in HTML. This element creates the rows in the spreadsheet.

- The "row" element contains one child element for each row in the report. These elements are equivalent to the <td> elements in HTML. Each creates a cell in the spreadsheet.

The Lifecycle Analysis client must be able to parse XML that conforms to this pattern to generate a spreadsheet tab.

Passing HTML Parameters to a Lifecycle Analysis Resource

The macros attached to the LifecycleAnalysis.xls file allow you to pass HTML parameters to the resource. This feature allows you some flexibility in determining the output of the Lifecycle Analysis report.

Normally, when adding a Lifecycle Analysis resource to the rx_resource custom property you add only the name of the resource. If you want pass an HTML parameter to a resource, you must add the .xml extension to the name of the resource, and add the HTML parameter using standard HTML coding (`resourcename.xml?parametername=value`).

For example, the Publish Status Summary report returns data from the last three editions published by default. If you publish several times a day, such as hourly, the default configuration would not provide an accurate portrait of the content on your site. To ensure an accurate representation, you would want to retrieve data for the last twenty-four Editions published. To change this configuration, you will want to pass the parameter maxResults with a value of 24 to the PublishStatus report resource. In the rx_resource custom property, change

```
PubStatus
```

to

```
PubStatus.xml?maxResults=24
```

You can also change the configuration of any reports provided with CM System. The Stale Content report uses the HTML parameter daysuntouched to determine the minimum number of days a Content Item can go unmodified before being included in the report. The default value of this parameter is 7.

```
StaleContent.xml?daysuntouched=7
```

If you wanted to change the minimum number of days for a Content Item not to be modified before being included in this report, change the value of the daysuntouched parameter. For example, if you wanted to see only Content Items that have not been modified in a month rather than a week you might change the value of the parameter to 28:

```
StaleContent.xml?daysuntouched=28
```

Upgrading Lifecycle Analysis

To ensure that you do not lose modifications when you upgrade, CM System provides two reporting applications, as described in ***Extending Lifecycle Analysis Reporting*** (on page 145). After you upgrade, you will need to migrate any enhancements from the sys_reports application to the rx_reports application. Similarly, you will need to migrate enhancements to the LifecycleAnalysis.xls workbook file from the copy in sys_reports to the copy in rx_reports.

CHAPTER 14

Field Selection Editor

Use the Field Selection Editor to manage the fields included in display formats, standard Views, and standard and custom Searches.

To access the Field Selection Editor, in the *Display Format editor* (see page 116), *Standard View Editor* (on page 128), *Standard Search Editor* (see "Search Editor, Standard Search" on page 74), or *Custom Search Editor* (see "Search Editor, Custom Search" on page 81), click [**Add Columns**] or [**Customize**].
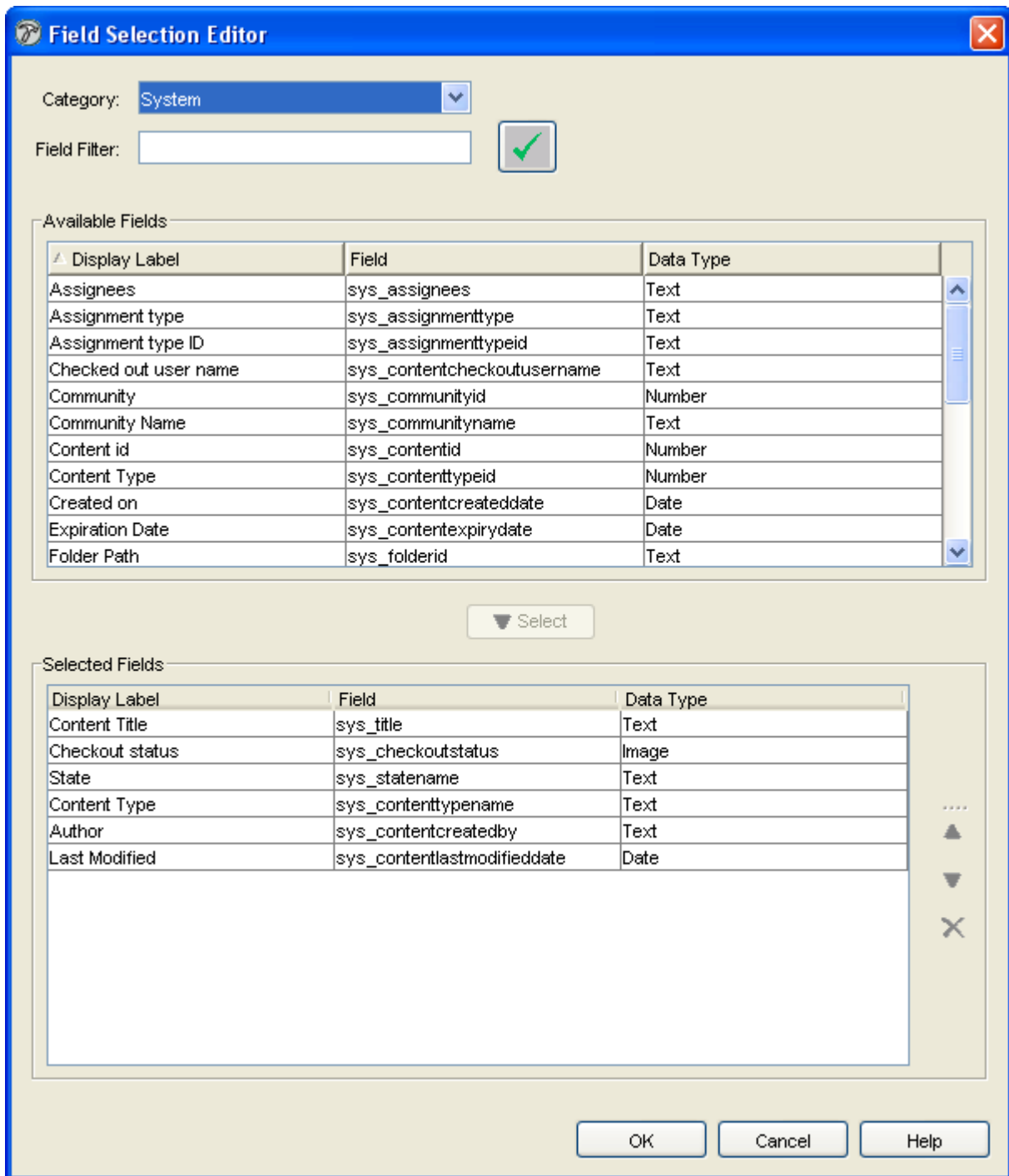
Figure 54: Field Selection Editor

Field Descriptions

Category   General field filter, based on the Content Editor fields. Options include *System* (Content Editor system fields) *Shared* (Content Editor shared fields), *Local* (Content Editor local fields), and *All* (all fields for Content Editors). Default is *System*.

Field Filter Filter that further screens by only choosing those that match the characters entered in the text box. Can take any regular expression as a value.

Available Fields Displays selected fields.

Available Fields Display Label Read only. The name of the field displayed to Business Users.

Available Fields Field Read only. The name of the field used for processing in the CM System server. **Available Fields Data Type** Read only. The type of data stored in the field.

Selected Fields This table lists all fields selected to use in the Display Format, Search, or View.

Selected Fields Display Label Read only. The name of the field displayed to Business Users.

Selected Fields Field Read only. The name of the field used for processing in the CM System server. **Selected Fields Data Type** Read only. The type of data stored in the field.

Selecting Fields used in Display Formats, Views, and Searches

Select the fields that display in Display Formats, standard Views, or Searches with the *Field Selection editor* (on page 161).

For definitions of the fields discussed below, see *Field Selection editor* (on page 161).

To use the Field Selection Editor:

1   Press the [**Add Columns**] or [**Customize**] button in the Display Format, View, or Search editor.

The Field Selection editor opens in a separate window from the Rhythmyx Workbench.

2   In the **Category** drop list, choose the type of fields you want to use in the Display Format, Search, or View. Options include *System* (Content Editor system fields) *Shared* (Content Editor shared fields), *Local* (Content Editor local fields), and *All* (all Content Editor fields).

3   In the Field Filter field, enter a filter. This field accepts any regular expression.

4   Click the Apply button .

5   The Field Selection Editor displays the fields that meet the criteria you specified.

6   To display all available fields in the category again, delete the entry in the Field Filter field and click again.

7   To add a field to the Display Format, View, or Search select the field in the **Available Field** table and click .

The field moves to the **Selected Fields** table.

The values available in some fields depend on the value you specify in another field. If the second field is required by the first field, CM System includes it automatically. If the second field is optional, CM System displays a message notifying you about the dependency and offering to include the dependency.

For example, if Content Type had an optional dependency on Community and you added the field Content Type to the Selected Fields table, CM System would display the following message:

Figure 55: Optional Field Dependency dialog

When entering criteria for a Search or View, the values available in the Content Type field depend on the Community selected. If no Community is specified, all Content Types are available. However, if you specify a Community, only Content Types associated with that Community are available.

8   To remove a field from the Display Format or View, select the field you want to remove from the Selected Fields table and click the Delete button [×] .

9   The change the order of the fields in the Display Format or View, select a field in the Selected Field table and click the up [▲] and down [▼] arrows to move it to the correct position in the order.

10 Click [**OK**] to close the Field Selection editor and enter your **Selected Fields** in the Display Format, View, or Search editor.

C H A P T E R   1 5

Making CM System Accessible to Visually Impaired Users

CM System includes accessibility options that make Content Explorer and Content Editors more usable for visually impaired users and other users who use screen readers, special screen display options, and keystrokes for navigation.

The recommended operating system and browser to use with CM System's accessibility options are:

- Microsoft Windows XP Pro, XP Home, or Vista
- Internet Explorer 5.0 and above

The accessibility features in CM System for visually impaired users include:

- Compatibility with screen reader applications.
  Screen reader applications verbally describe user interfaces and screen contents. They also voice keystrokes for performing navigation and commands. See *Using Content Explorer with a Screen Reader* (on page 168) for more information.

- Keystrokes for navigating and using Content Editor controls.
  Implementers can specify keystrokes for Content Editor controls in a Content Editor field's Field Properties dialog. See "Implementing the "shared" Field Set" in the *CM System Implementation Guide*. CM System also includes a large number of keystrokes for navigation. See "Navigating with Keystrokes" in the Content Explorer Online Help.

- Ability to import the operating system's magnified font settings and high resolution color schemes.
  The fonts and color schemes configurable in Windows Screen Magnifier, which is accessible from the Windows Accessories screen, work well with Content Explorer. Users can save operating system settings in the Content Explorer Display Options dialog. See "Changing Content Explorer Options" in the Content Explorer Online Help for more information.

Some components of the Content Explorer interface do not support Accessibility features. Users cannot use screen reader applications with these components or apply system settings to them. The user interface components that do not support Accessibility are:

- The Comparison Page (accessed from the *View > Compare* option in the Action Menu)
- Preview Pages (accessed from the *Preview > [Template]* option in the Action Menu)
- Page Assembly Windows (accessed from the *Active Assembly > [Template]* option in the Action Menu, Content Editor links).

Using Content Explorer with a Screen Reader

Screen reader applications vocalize user interface tags and labels and keystroke combinations for executing commands. Content Explorer includes components with the necessary tags and labels as well as default and customizable keystrokes to enable screen reader applications to describe its appearance and functionality to users.

The recommended screen reader for use with CM System is:

- JAWS 5.0 Professional Windows XP Pro or Home

The CM System applet is a Java application; to enable JAWS to interact with CM System, you must also use:

- Sun Microsystem's Java Access Bridge

A P P E N D I X I

CM System Interfaces Referenced in this Document

This appendix is a brief reference to the CM System interfaces mentioned in this document.

Active Assembly

The Active Assembly interface provides a WYSIWYG browser UI that lets business users assemble content visually into Slots (as well as perform a range of other functions on them, including content item Workflow and creating new content items to add to Slots).

Figure 56: Active Assembly Interface

Content Explorer

Content Explorer includes a Navigation Tree with Folders, Views, and Searches that present Content Items by user-defined or system-defined categories. When users click on one of these nodes in the Navigation Tree, the Display pane to the right shows its contents.

Users can right-click on a Content Item to access an Action Menu of functions to perform on the Content Item, such as editing and performing Workflow transitions.
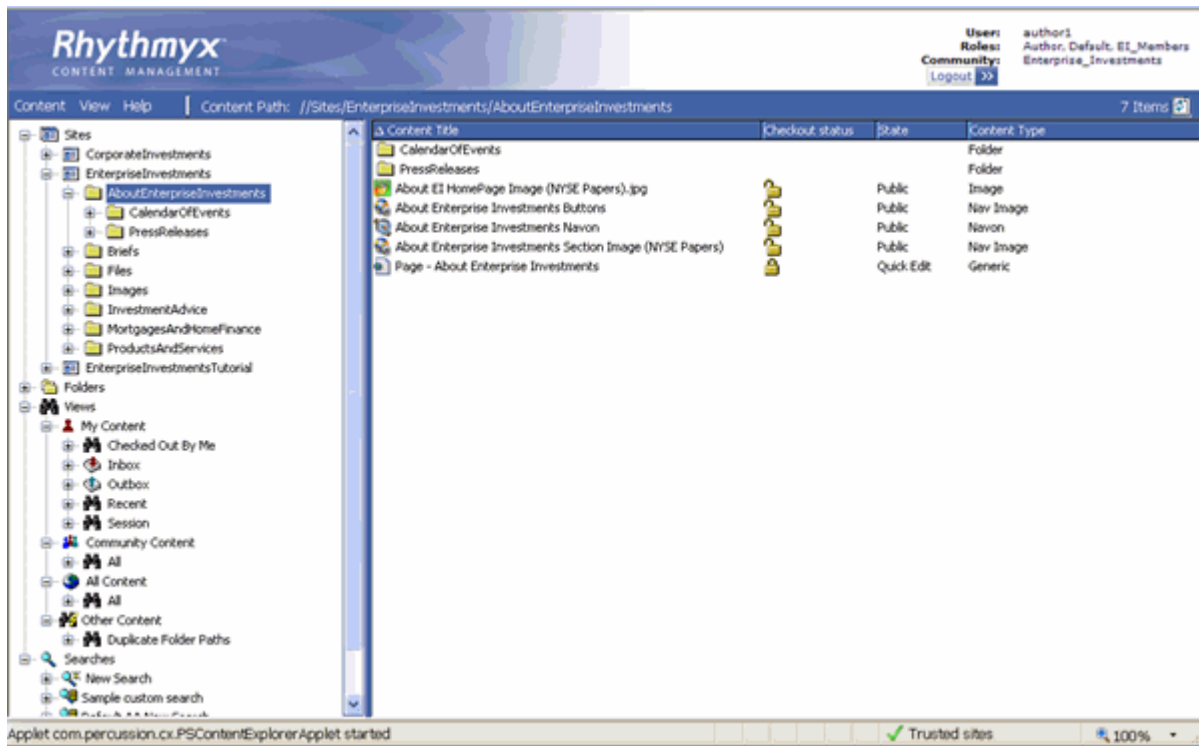

Figure 57: Content Explorer

Action Panel

An Action Panel is a page that contains the action menu options for a content item but is visible in another interface:
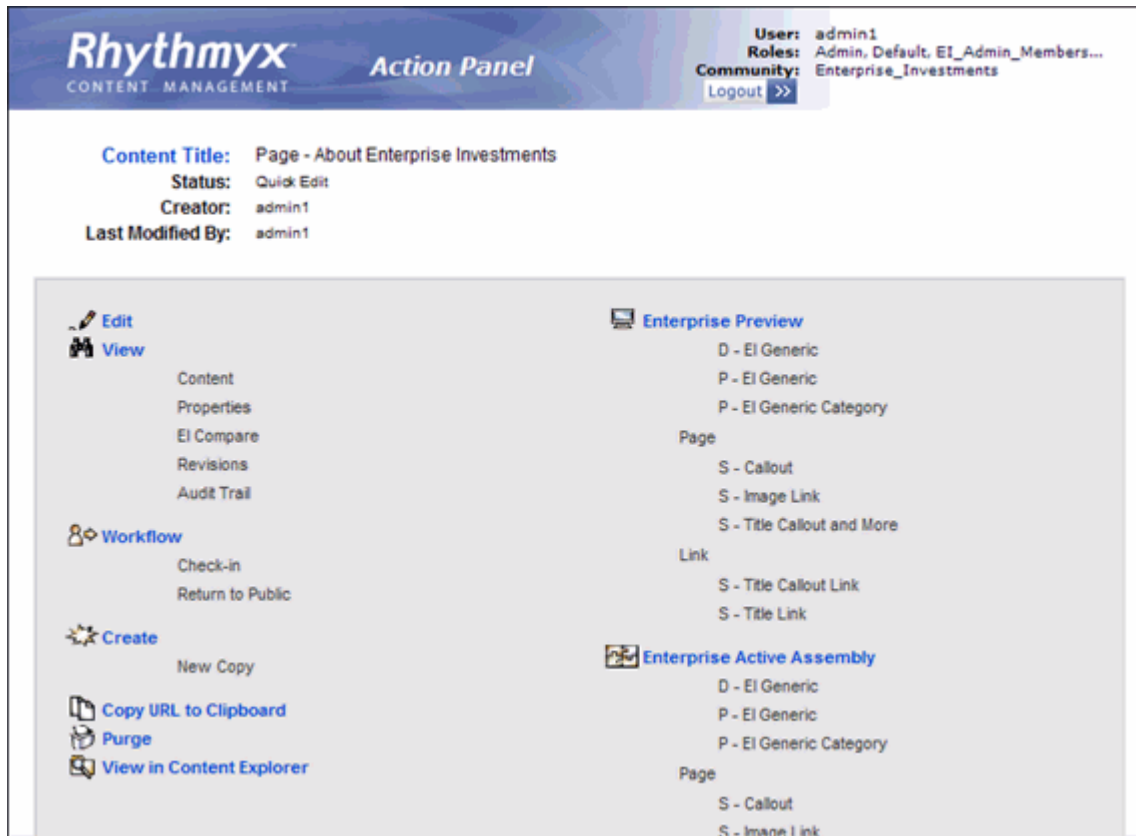

Figure 58: Action Panel

Active Assembly for Documents

To produce documents, you can use the Document Assembly window, which functions like the Content Explorer interface, but displays related content and Slots for a single Content Item. The Active Assembly for Documents option is accessible from a content item's action menu in Content Explorer.
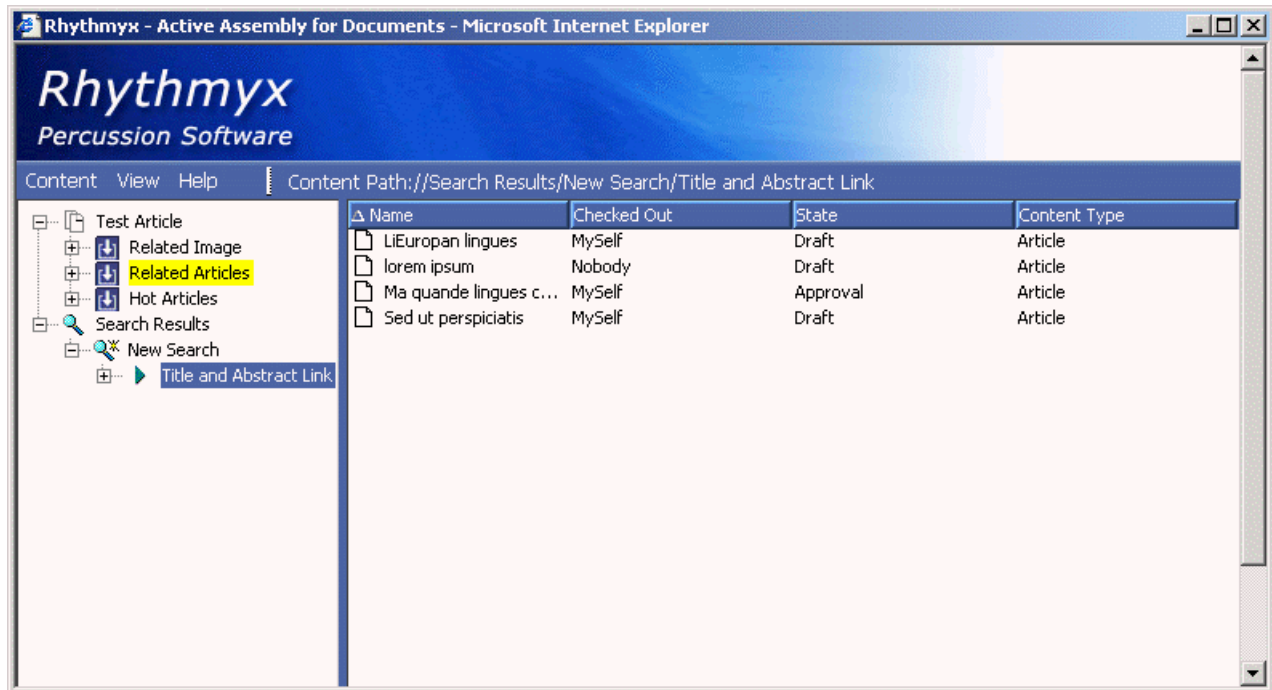

Figure 59: Document Assembly window

Content Browser

The Content Browser is a dialog with three tabs, Sites, Folder and Search. In the Sites and Folders tabs, you can browse to items located in your Content Explorer Sites or Folders. In the Search tab, you can perform a query style search to locate an item.

In Content Explorer, you use the Content Browser to insert inline objects into rich text fields and to add content to a content item in its active assembly table editor. In Active Assembly, you use the Content Browser to insert content into Slots and to insert inline objects into rich text fields.
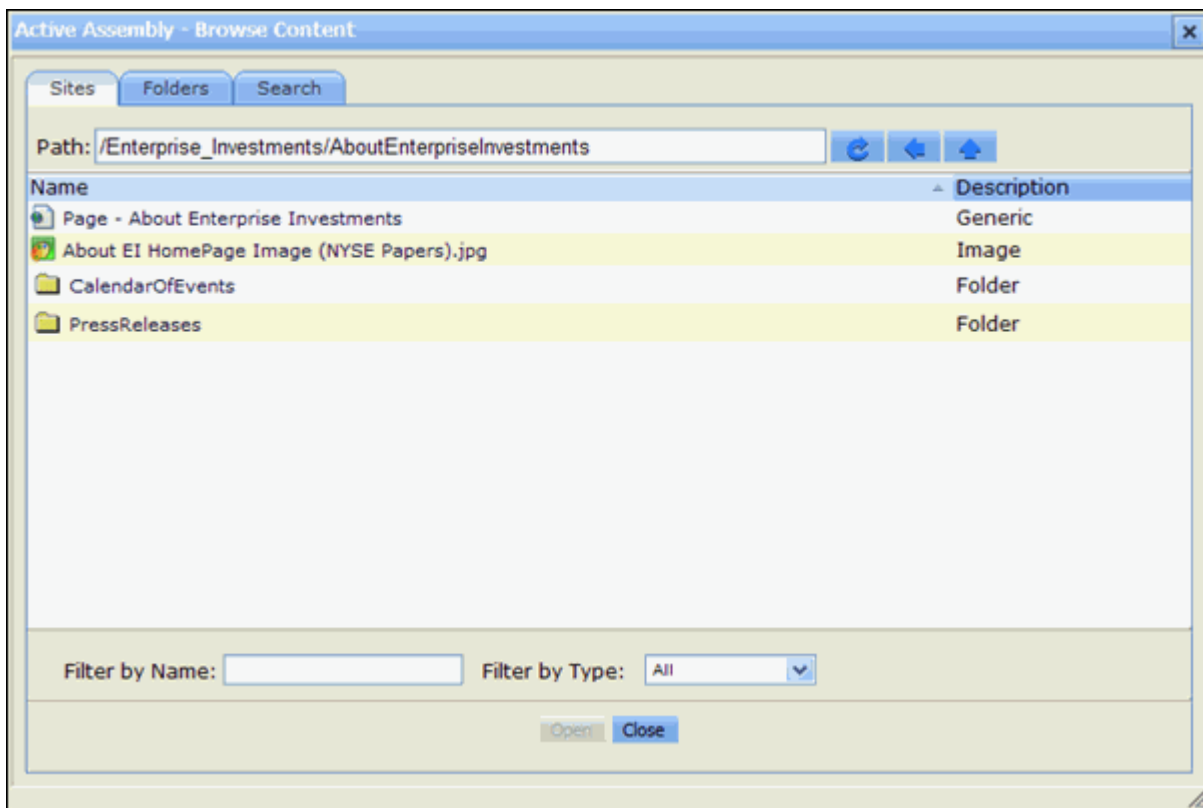

Figure 60: Content Browser

Impact Analysis

The Impact Analysis window shows descendant and ancestor trees for the owner content item for the relationship that you choose in the drop list at the top of the window. The listing includes the item's Content Type, State, check-in/out status, and system title.
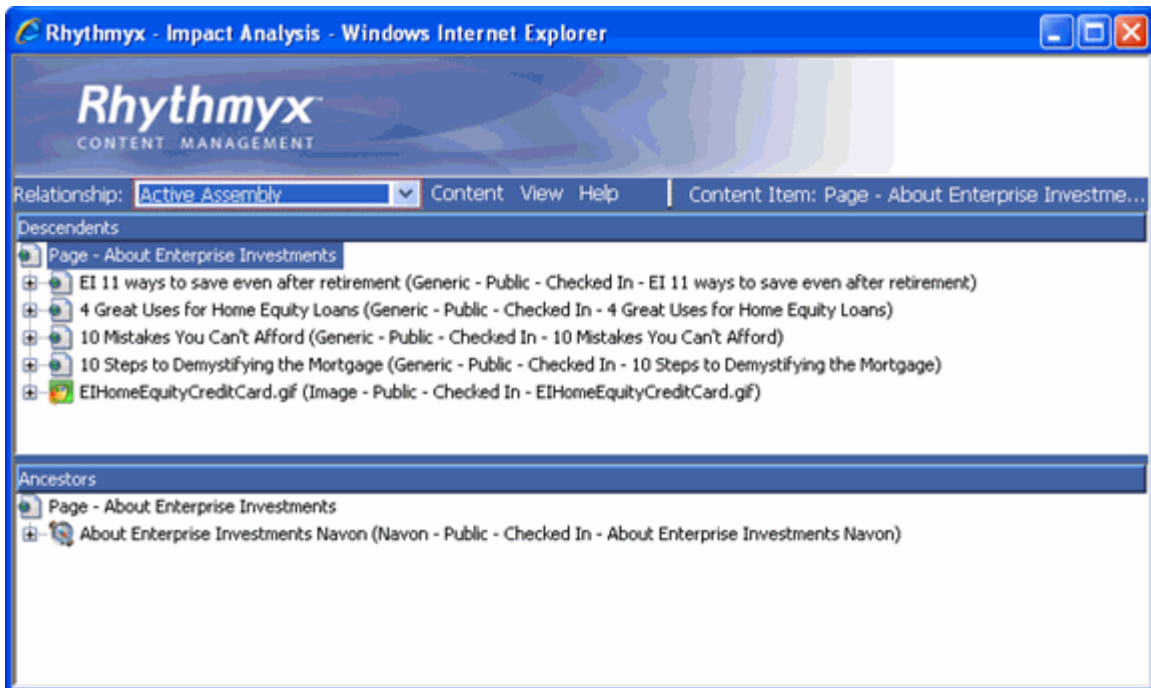

Figure 61: Impact Analysis