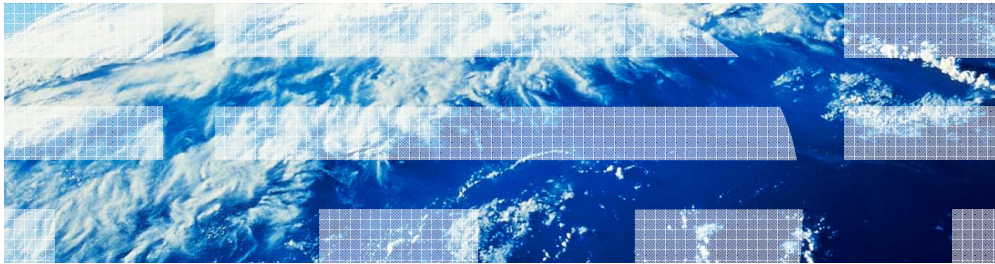




Business Process Management IBM Business Process Manager V8.0

Enterprise Content Management integration -
Document List and Document Viewer Controls



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This presentation provides an introduction to the Enterprise Content Management Document List and Document Viewer user interface controls that work with coaches in BPM version 8.0.

Agenda

- Introduction to user interface controls
- Configuration of the Document List control
- Configuration and behavior of the Document Viewer control
- Some usage considerations

The presentation starts out by providing an introduction to user interface controls. Then providing details on how to configure the document list control and document viewer control. With all these new features, some usage considerations and recommendations are also mentioned.

Introduction to user interface controls

This section introduces the new user interface controls in details.

Introduction to the ECM user interface controls

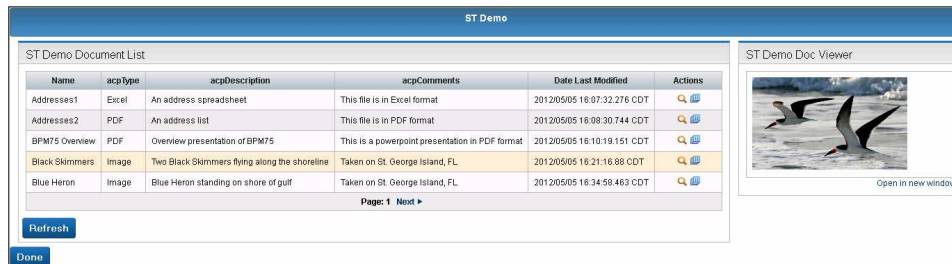
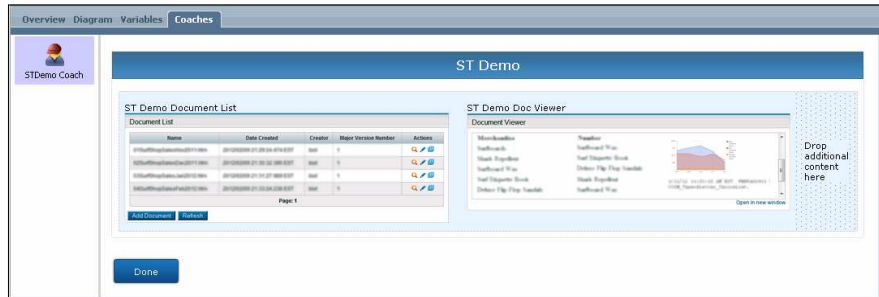
- ECM user interface controls
 - Coach Views designed to integrate with ECM repositories
 - Implemented using ECM operations and ECM business objects
- Document List
 - Displays the results of an ECM search operation as a table
 - A row represent one document from the repository that matches the selection criteria
 - The columns display property values associated with the document
- Document Viewer
 - Displays a document selected from a Document List
 - Browser must be able to display documents of that type

You can store and view documents on an ECM server by configuring a Document List view and, optionally, a Document Viewer view. These coach views are designed to integrate with ECM repositories and are implemented using ECM operations and ECM business objects.

The document list view control displays the result of document properties as a table using ECM search operation. In that table, the row represents one document from the repository that matches the selection criteria, and the columns display property values associated with the document.

You can also configure the Document Viewer coach control to display a single document or one of several documents that process participants choose from a Document List. With Document Viewer view, the browser must be able to display documents of that type.

Document List and Document Viewer



Here is a screen capture of Document List and Document Viewer. The top captures the coach control at design time. The coach uses the horizontal section with document list on the left and document viewer on the right. The bottom shows what the coach is rendering when it actually runs at runtime.

Document List configuration

This sections provides details on how to configure the Document List control

Introduction to Document List configuration

- Document List configuration options include:
 - Number of visible rows
 - If pagination is enabled
 - Are documents read only or can they be updated
 - Can new documents be added
 - Are selected documents displayed in a browser window or Document Viewer
 - Specification of the ECM search operation to use
- The ECM search operation specifies:
 - Criteria for selection of documents from repository
 - The sort order of the documents
 - Which document properties appear as columns
 - The order of the columns
- The search operation's SQL query can be:
 - Built using the Content Filters graphical interface
 - Passed as a string

The Document List configuration includes many options. You can configure the number of visible rows, enable pagination, select whether the documents are read only or they can be updated, and check options to allow adding new documents or not. You can also select documents to be displayed in a browser window or Document viewer. Last but not least, you can build a query using ECM search operation.

When building the query for Document List, you can specify criteria for selection of documents from ECM repository, determine which document properties can appear as columns, and sort the order of documents and columns. You can either build the SQL query using the Content Filters graphical interface or passed as a string. The next few slides explain in detail about these configuration options.

Document List configuration

General

Configuration

HTML Attributes

- Allow create:
- Allow update:
- Parent folder path:
- Open in new window:
- Number of results to show:
- Show all content:
- Query:
- Search (user implementation required): STDemo Search Service Select... New ... Reset
- Get all document versions: ECM Get All Document Versions Content Management Select... New ... Reset
- Get document: ECM Get Document Service Content Management Select... New ... Reset
- Get type definition: ECM Get Type Definition Service Content Management Select... New ... Reset
- Get type descendants: ECM Get Type Descendants Service Content Management Select... New ... Reset

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As mentioned in the previous slide, this is the configurations panels for Document List view. You can specify whether you allow creation of new document from the document list. By selecting this option, you get the 'Add Document' button to open a new dialog to allow creating a new document. You can also specify whether you allow the document in document list to be updated. This enables the update feature in the Action area for each document of document list. In addition, there is option to view document and all existing versions for a particular document.

The parent folder field is the path to the folder where any documents are created. The next option is to allow document to be open in a new browser window. It is required to view document if no Document Viewer view is available. The number of results to show and show all content options determine how you want to display the document list table.

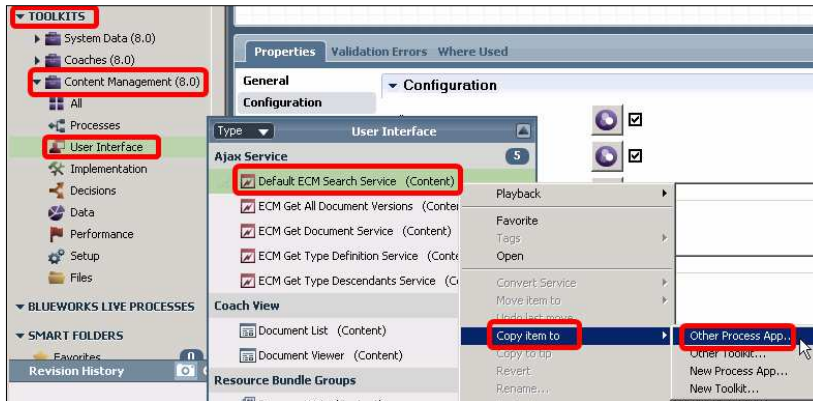
You can build up a query within search service for a document list. However, you can also pass query dynamically by specifying variables in which you intend to pass here. The last five configuration option is Ajax services that are used in the background by Document List view in order to interact with ECM repository. The bottom four are default implementations which are part of Content Management toolkit. No additional implementation is required. For the search Ajax service, you may need to create implementation specifically to how you want your document list to operate.

Search step configured with Document List (1 of 5)

- Initially Document List configured with the Default ECM Search Service
 - Default service is not implemented
 - It does define the appropriate input/output parameters needed by Document List



- Copy the Default ECM Search Service to your Process App
 - Ensures you have the right input/output parameters for the service



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ECM Document List and Document Viewer Controls

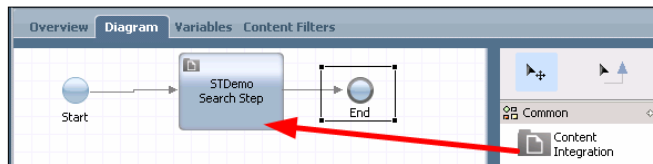
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The next five slides describe how you can configure Document List by going through a series of steps. As mentioned previously, the first screen capture shows the default Search service which requires implementation manually.

The best approach to implement it is to copy the default ECM Search Ajax service from Content Management toolkit to your Process App.

Search step configured with Document List (2 of 5)

- Rename Default ECM Search Service to something appropriate (for example: MySearch)
- Add a Content Integration step



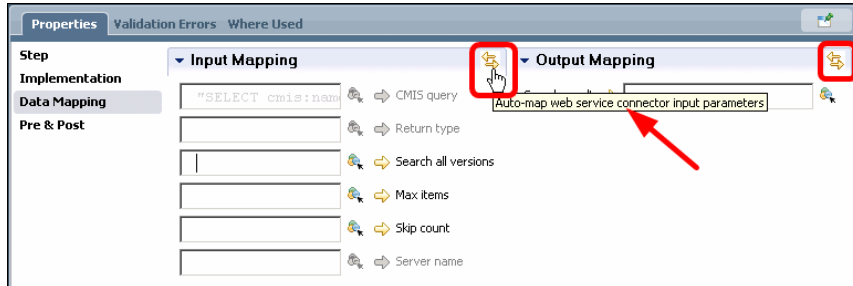
- Configure the ECM server to use and specify this is a search operation

The screenshot shows the Properties panel for the search step. The 'Enterprise Content Management Server' dropdown is set to 'aimcp040Filenet' and the 'Content Operation' dropdown is set to 'Search'. Both dropdowns are highlighted with red boxes.

The next step is to rename the copied default ECM search service to meaningful name such as MySearch. Within this service, you can drag and drop a Content Integration step and configure this step by identifying the server definition to access the ECM repository. And then identifying the content operation which is search operation.

Search step configured with Document List (3 of 5)

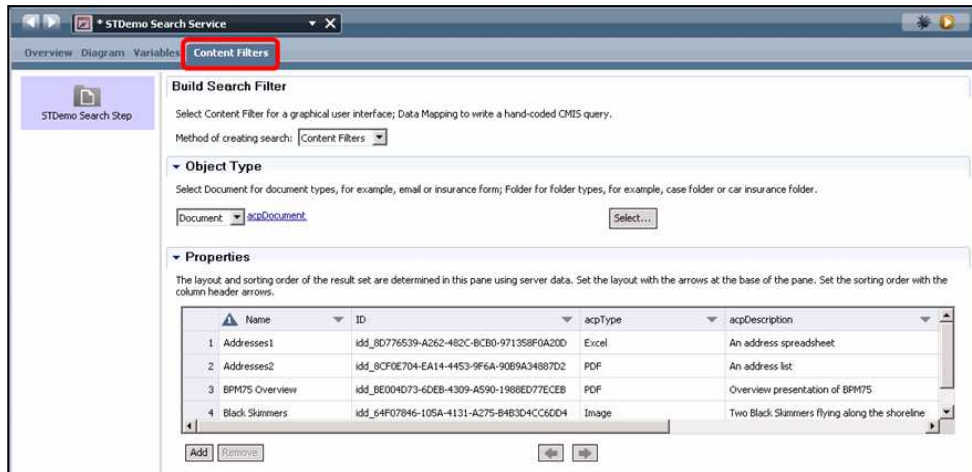
- Define the data mappings
 - Use Auto-map to generate the defaults for both input and output mappings



Continue from previous step, you can now define the data mappings. Within the data mapping panel of properties, you can use auto map feature to generate appropriate mappings for both input and output mappings.

Search step configured with Document List (4 of 5)

- Use Content Filters panel to define the search and resulting list
 - Object Type → select the ECM document class from the dropdown
 - Select properties to be the columns in your list (use Add button)
 - Arrange columns (use arrows)
 - Specify columns to sort (use drop down on column heading)



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ECM Document List and Document Viewer Controls

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This step is to configure the search itself in terms of what properties you want to get from resulting list. You can select the ECM document class from the dropdown of Object Type. The result list is shown under Properties for all possible documents under that object type. You can use the 'Add' button to select which properties to display as the column in your list and arrange them as necessary. You can also prioritize columns ascending or descending by using the drop down on each column heading.

Search step configured with Document List (5 of 5)

- Add Search Criteria
 - Properties from the selected ECM document class are selectable
 - Property type, availability of a choice list are known to editor

- Rather than use the Content Filters to build the search and resulting table, a variable containing a `cmisQuery` can be passed
 - `cmisQuery` is a simplified SQL statement defined by the CMIS 1.0 OASIS Standard

```
SELECT selectClause FROM fromClause [WHERE whereClause] [ORDER BY orderByClause]
```

- Example

```
"SELECT cmis:name, cmis:objectId, acpType, acpDescription, acpComments
FROM acpDocument WHERE ( acpType = 'Text')
ORDER BY cmis:name ASC"
```

The last step is to specify search criteria for All or Any. You can add the search criteria by listing properties associated with a particular document class and a set of condition. The value of property depends on the type of the property.

The information you have seen in the last two slides is used to build the SQL statement defined by the CMIS 1.0 OASIS Standard. It provides Select, From, Where, and Order By clauses as in the example in this slide.

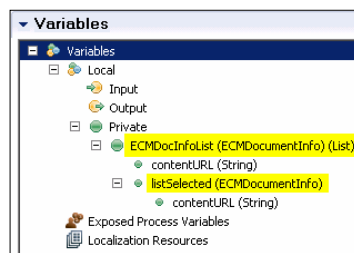
Section

Document Viewer configuration and behavior

This section provides details on Document Viewer configuration and behavior.

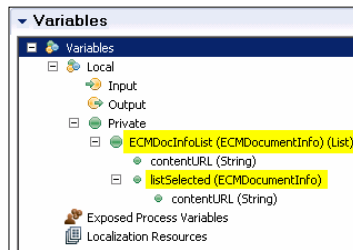
Document Viewer configuration

- Document List and Document Viewer are associated through a binding
 - A Document List only requires a binding when there is an associated Document Viewer
 - The Document Viewer must always be bound with a Document List
- Document List is bound to a list of ECMDocumentInfo objects
 - Each ECMDocumentInfo is a simple string containing a URL
 - The URL is used internally to identify the document
- Document Viewer is bound to an ECMDocumentInfo object that is the selected object from the Document List

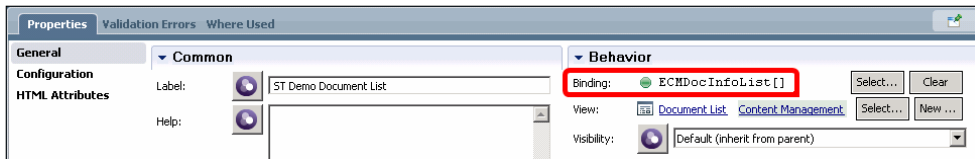


In order for Document List and Document Viewer to work together, they must have a shared binding. The Document List is bound to one of the object which is ECMDocumentInfo containing a simple string of contentURL. This content URL is used internally to identify the document. As for Document Viewer, it is bound to an ECMDocumentInfo object that is the selected object from the Document List.

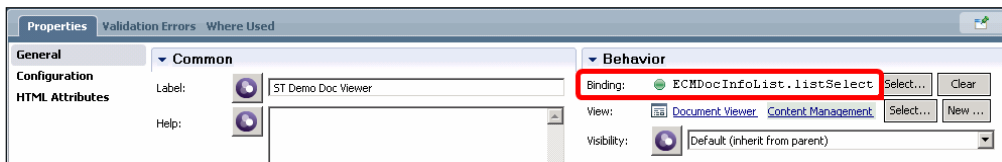
Document List and Document Viewer bindings



Document List



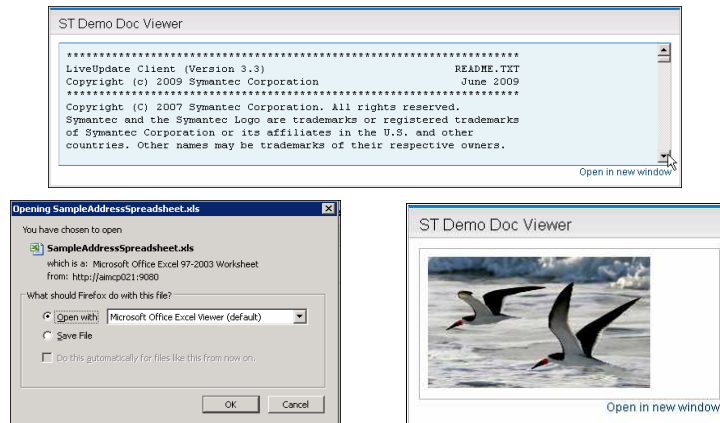
Document Viewer



As described in the previous slide, these are screen captures of Document List and Document Viewer properties. The Document List is binding to ECMDocumentInfo list and then the Document Viewer is binding to ECMDocumentInfo listSelected variable.

Document Viewer behavior

- The Document Viewer
 - Can display any document type supported by the browser
 - Non-supported types exhibit the browser's normal behavior such as a Save File dialog
 - Viewer size is not configurable
 - Ca not specify during authoring, some resizing occurs based on browser
 - Provides a link to open content in a new browser window



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ECM Document List and Document Viewer Controls

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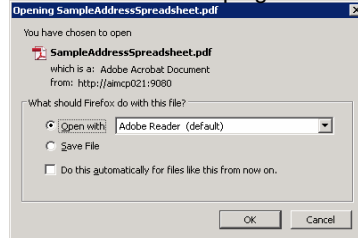
The Document Viewer can display any document type supported by the browser. For any non-supported types, you see 'Save File' dialog as expected by browser's behavior. In this example, the text file and jpeg file are expected to show in Document Viewer. However, with Excel document, you are given the opportunity to either save or open using the actual Microsoft Excel program, as it is not actually displayed in the browser.

The size of the Document Viewer is not configurable. It cannot be specified during authoring since some resizing occurs based on the browser. The next few slides provide more details on the Document Viewer control.

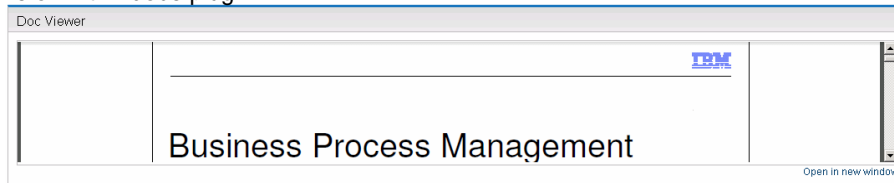
The Document Viewer also provides a link to open content in a new browser window.

Configuration of browser affects behavior

Firefox without Adobe plug-in



Firefox with Adobe plug-in



This is another example on configuration of Firefox browser which affects different behavior. If Firefox browser does not have Adobe plug-in, you are given an option to save it or open with actual PDF viewer program.

If Firefox browser has the proper Adobe plug-in, the pdf file is expected to show in the Document Viewer.

Different browsers behave differently

Firefox displays
image as a thumbnail



Internet Explorer displays
full size image with scrollbars



This slide shows different browsers behave differently on how image files are shown in Document Viewer. The Firefox displays images as a thumbnail, while the Internet Explorer displays full size image with scrollbars.

Document Viewer recommendation

- Document Viewer recommendation:
 - Due to varying behaviors and sizing limitations of the control
 - In many cases it is better to use “Open in new window” rather than a Document Viewer
 - Only use the Document Viewer if you know it behaves as required in your specific scenario

Due to varying behaviors and sizing limitations of the control, the general recommendation for the Document Viewer is to use the “Open in new window” rather than a Document Viewer. Only use the Document Viewer if you know it behaves as required in your specific scenario.

Usage considerations

This section provides information on usage considerations and recommendations.

“Show all content” configuration parameter confusing

- Without “Show all content”, you can see all content using pagination

Number of results to show:

Show all content:

Name	acpType	acpDescription	acpComments	Actions
Dragonfly Leaf	Image	Dragonfly on a leaf	Taken at Forest Glen Camp, Spring, TX	
Live Update	Text	README file for Symantec Live Update	This is a file in text format	
Pelican Marsh	Image	Pelican flying through a marsh	Taken in Apalachicola, FL	

◀ Back Page: 3 Next ▶

- With “Show all content” you can only see the first “n” rows, there is no pagination or scrollbar

Number of results to show:

Show all content:

Name	acpType	acpDescription	acpComments	Actions
Addresses1	Excel	An address spreadsheet	This file is in Excel format	
Addresses2	PDF	An address list	This file is in PDF format	
BPM75 Overview	PDF	Overview presentation of BPM75	This is a powerpoint presentation in PDF format	

In term of usage consideration, this slide shows how “Show all content” configuration parameter displays differently when you selected or deselect it. This option is part of Document List. This “Show all content” works in conjunction with “Number of results to show” parameter. In the first example, you see the “Number of results to show” is three and “Show all content” is not selected. This results in a Document List with three rows and a pagination control at the bottom of the list indicating which page is currently on. It also provides the back and next control buttons to move between pages of the Document List.

In the second example, the “Number of results to show” is still three but the “Show all content” is now selected. When it is selected, it removes the pagination and scrollbar on the right side. You only see the first three documents as stated in the “Number of results to show” parameter and not see any other documents when “Show all content” is selected.

In conclusion, this behavior of the “Show all content” control might raise some confusion to users so take this into consideration when you configure the Document List.

ID column not displayed by required

Properties

The layout and sorting order of the result set are determined in this pane using server data. Set the layout with the arrows at the base

	Name	Date Created	ID
1	Addresses1	Sat May 05 16:04:30 CDT 2012	idd_8D776539-A262-482C-8CB0-971358F0A20D
2	Addresses2	Sat May 05 16:08:30 CDT 2012	idd_8CF0E704-EA14-4453-9F6A-90B9A34887D2
3	BPM75 Overview	Sat May 05 16:10:19 CDT 2012	idd_BE004D73-6DEB-4309-A590-1988ED77ECEB
4	Black Skimmers	Sat May 05 16:21:16 CDT 2012	idd_64F07846-105A-4131-A275-8483D4CC6DD4

Add Remove

- Screen capture shows default columns from a new search
- Name and Date Created
 - Will be displayed in the list
 - Can be removed from the list
- ID
 - Will not be displayed in the list
 - Should not be removed from the list – prevents document list from functioning

Another usage consideration is, the ID column is not displayed as required when you define the search. When you initially define what properties are going to be displayed during search operation, you get three columns by default. They are Name, Date Created, and ID columns. At the runtime, you see the Name and Date Created columns but the ID column is hidden from the Document List. The Name and Date Created columns can be removed from the list if needed. However, the ID column which does not show during runtime should not be removed from the query. The IDs provide the links to the respective documents in the content repository. An ID is required to perform any actions on the document, including showing the document in a Document Viewer.

Therefore, it is important to not remove from the list at authoring time even though you do not want that ID column. This can avoid runtime failure as it is always required and is hidden at all time during runtime.

No access to document properties

- The selected document from a Document List can be:
 - Displayed in browser window or document viewer
 - Can be updated
- Other actions on the selected document cannot be performed
 - Requires access to document properties which are not accessible to your code
- Example scenario that will not work
 - Display a list of loan applications
 - Select a loan application and hit a button to get list of all documents associated with the application
- Document deletion cannot be done
 - No document list specific capability provided
 - Lack of access to document properties prevents coding a workaround

As mentioned in the previous slide about Document List and Document Viewer views, a selected document from a Document List can be displayed in a new browser window or in document viewer. You can create a new document or update existing documents. However, any other actions on the selected document cannot be performed exclusively by user interface (UI). You have to have access to document properties separately from the UI to do additional processing. These properties are not accessible to your code.

An example scenario which does not work is when you have a list of loan applications and you want to get a list of all associated documents associated with a particular application. The document deletion cannot be done because the UI control does not provide the capability to gain access to the document properties.

No variable substitution in query string

- Document List search query can be:
 - Defined completely at authoring time using Content Filter
 - Completely dynamic passed in a variable
- Realistic scenario
 - List of all documents associated with a particular insurance claim
 - Claim ID required in the query to filter on those documents
 - Best solution (not possible)
 - Query string defined at authoring time containing a substitution variable for the claim ID
 - V8 solution:
 - Build and pass the complete query string with SELECT, FROM, WHERE and ORDER BY clauses

In this last usage consideration, the Document List search query can be defined completely at authoring time using Content Filter or completely dynamic passed in a variable. In a realistic scenario, you might have a list of all documents associated with a particular insurance claim. The claim ID is a key ID required in the query to filter on those documents. The best solution for this scenario is to have query string defined at authoring time containing a substitution variable for the claim ID. However, this solution is not possible in this release because there is no variable substitution option. Instead, one of V8 solution is to build and pass the complete query string with SELECT, FROM, WHERE, and ORDER BY clauses when you want a particular value within the WHERE clause to be variable.

Summary

- Introduced user interface controls
- Described configuration of the Document List control
- Described configuration and behaviors of the Document Viewer control
- Discussed some usage considerations

In summary, you were introduced to the ECM user interface controls. You have learned about the Document List and Document Viewer controls and how to configure them during authoring time. The behaviors of the Document Viewer control were then described, along with some usage considerations and recommendations when configuring Document List and Document Viewer.



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