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Overview

This guide introduces and explains application plan methods and the Application Plan Designer. The following sections will guide you through the process of integrating your business application with ImageNow and creating an application plan, previously known as an applet.

- About the application plan types
- What is Application Plan Designer?
- Creating an application plan
- Testing an application plan

More specialized topics on working with application plans are available from Product Help in ImageNow Administrator and ImageNow Application Plan Designer.

About the application plan types

Choosing which application plan type will work best with your business application is the first and most important step when creating application plans. ImageNow currently uses four methods, Agent, Interact, LearnMode and Manual, to learn a business application and the one to use depends on several variables. There is no right or wrong method. Find the type that best fits the needs of your particular business application, its design, and the index values you need to capture to link your images into ImageNow. You need to understand how each method captures data from different types of applications. It is extremely helpful to understand certain features of your business application, such as the type of application and the interfaces it uses. Also, understand how your users access it.

The types of applications that ImageNow is able to learn include GUI-based, DOS-based, web-based, and terminal emulation applications. ImageNow can also learn applications that can communicate using OLE, DDE, and COM objects. ImageNow includes one type to manually link images into ImageNow if your business application is unavailable or when there is no business application.

Agent

Agent is a method used with ImageNow agents, both internal and external, that process jobs and provide messaging to the ImageNow clients.

Interact

Interact is a method used with the Interact line of products that integrate with ImageNow. These products consist primarily of software that works within a third party’s environment to expose ImageNow functionality.

LearnMode

LearnMode is a client-side, non-programmatic method of integrating your business application with ImageNow and learning screens or windows within that application. After a screen or window is learned, you can use ImageNow to scan images in and link them directly to records in your application. After, when you want to access an image that links to a particular record in your application, it is only one mouse click away.

LearnMode offers seven different methods to learn your business application, and the best method to use depends on the type of application you are using. For example, knowing whether your application is GUI-based, web-based, DOS-based, a terminal emulator, or other type of application will assist in determining the LearnMode type to use. Each application learned by ImageNow will be stored in a container called an application plan. Each application plan can be a different LearnMode type. An application plan is
comprised of screens. Typically, there is one screen for each screen or window in your business application.

When ImageNow learns a screen or window in your business application, it creates a screen in your application plan. Creating a screen involves capturing the data from your host screen so that you can create document keys to link the image to the record in your application. Once LearnMode creates and tests the screen, you can scan images into ImageNow and link them to a particular record in your business application from that screen. Thereafter, you can view these images from your application anytime by opening the record in your business application and clicking one button on the ImageNow Client control bar.

The first task in learning your business application is to determine which LearnMode type to try first. Sometimes, it will require trying more than one method to determine which LearnMode type works best for your particular application, especially in the case of GUI-based applications. Once you have determined the LearnMode type, you can create screens for each business application screen to which you need to link documents. Testing each screen is very essential in ensuring it works as desired. Once you have completed all the tasks in creating an application plan for your business application, scanning and viewing images in your business application will be seamless and automatic. The only time you would have to use modify your application plan again is if you make changes to your business application.

Window Walker

LearnMode uses this type with some GUI applications that conform to the Microsoft Windows interface design guidelines. Many applications in use today have a graphical user interface that operates entirely within a single window on the desktop. Examples of applications that run inside a single window are Microsoft Word and Microsoft Excel. Custom-built applications may also fall into this category.

These application windows are published to the operating system in such a way that LearnMode can easily communicate with them. Different information is contained within easily distinguishable controls, such as fields, images, and objects. LearnMode obtains data automatically and dynamically from the Windows application running on your desktop. When capturing data from your business application, LearnMode will deliver the unique control IDs to the application plan. LearnMode uses these control IDs in the captured window to define document keys and the screen label for the screen. Window Walker can learn some Java applets and applications that run in browsers.

ImageNow includes an enhancement to the Window Walker LearnMode to expand options for learning web-based applications built with tools such as Macromedia Flash. It also is a good option for Mozilla Firefox users.

HyperLearn

LearnMode uses this type for GUI applications that do not make themselves as accessible to ImageNow as others. For instance, some custom-built applications may not adhere to all current Windows interface standards. These applications can only deliver bitmapped data to a Windows screen. HyperLearn uses an on-screen character recognition process to gather data from the business application. In simple terms, LearnMode takes a screen shot of the business application window, analyzes its content, and converts the screen characters into text.

Rather than acquire the field data from controls, HyperLearn intelligently interprets the characters presented within a defined region on the window. Although this process can be very demanding, it is a very reliable method. Using this method requires that you know the specific window font used by the business application. You will need to know the specific typeface, point size, and formatting style. Without this knowledge, you will be unable to use this LearnMode type. If necessary, contact the original manufacturer or designer of the application to obtain this information. Once the font is determined, LearnMode defines document keys by drawing boxes around the text boxes in the captured window. This method can usually define the screen label for you by getting the text in the title bar of the captured
window. For more information on fonts, refer to the Fonts book in ImageNow Application Plan Designer Help.

**Viewpoint**

Viewpoint, a point dialog based integration, replaces Window Text. It is used with some GUI applications that conform to the Windows interface design guidelines. It is a hybrid between the Window Walker and HyperLearn methods that is used with some Windows applications. It is similar to Window Walker in that it is control-based. However, instead of using address of node in the control tree to identify and locate data, Viewpoint uses x,y coordinates (similar to HyperLearn) to locate a control. The controls can be in a disabled state and the window can be dragged off the screen. Document keys are defined by clicking the pointer in each text box in the captured window. This method can usually define the screen label for you by getting the text in the title bar of the captured window.

**DOS Command Prompt**

LearnMode uses this type with most DOS-based programs. The most common type of program that uses a DOS window is a legacy program written prior to the widespread use of the Windows graphical user interface. If you are uncertain whether your business application runs in a DOS window, contact the person or group responsible for its maintenance.

These programs behave very similarly to programs running under terminal emulation. Therefore, this method is very similar to the Terminal Capture method. LearnMode uses a method of capturing the screen data and copying it to the system clipboard. LearnMode copies the clipboard contents to the captured window in the screen and then defines the document keys by highlighting the text in the captured window. LearnMode defines the screen label in the same way.

**Terminal Capture**

LearnMode uses this type with terminal emulator programs and mainframe programs. This method uses a very straightforward technique of copying the business application’s screen contents to the system clipboard. LearnMode uses this method most commonly with Terminal Emulation programs. The terminal emulator displays data screens from a mainframe or online business application.

Depending on the terminal emulator that you use, the method to copy screen data to the clipboard will vary. A connect string is necessary for each screen that is created. The connect string provides LearnMode with a set of system level program calls that relate specifically to the terminal emulation program being used. Determining the connect string is probably one of the most difficult tasks in this method. LearnMode copies the clipboard contents to the captured window in the screen and then defines the document keys by highlighting the text in the captured window. LearnMode defines the screen label in the same way. It is always a good idea to check with Perceptive Software Product Support and ask if the connect strings have already been determined for the terminal emulator for another customer using the same program. For more information on connect strings, refer to the Connect Strings book in ImageNow Application Plan Designer Help.

**Internet Explorer**

LearnMode uses this type with web-based applications. LearnMode can integrate with HTML, ActiveX, Java, Macromedia Flash or combinations of these programs with any other LearnMode types.

This method uses an HTML parser that conducts browser interrogation to identify index values. LearnMode obtains data automatically and dynamically from the web application running on your desktop. When capturing data from your business application, LearnMode will deliver the unique controls to the application plan. LearnMode uses these controls in the captured window to define document keys and the screen label for the screen.
OLE/DDE Script

LearnMode uses this type with applications that possess OLE or DDE capabilities. It is becoming more common for applications to offer a programmatic interface to other applications on the desktop. This allows applications to communicate back and forth, requesting and retrieving data for various uses. Using this OLE/DDE LearnMode type allows you to build VBScripts that access the OLE, DDE, COM, and ActiveX objects for an application. Every application is a little different, so this method can be a little tricky. It requires a good knowledge of the objects and properties that are available to an external application. However, it is extremely effective, and can open the doors to more advanced automation techniques.

Manual Entry

ImageNow uses this type to create a stand-alone application plan. In special situations, ImageNow can be set to run as a stand-alone imaging system. In this case, ImageNow indexes and retrieves images without the use of a business application. Screens in these application plans have one of two uses. The first use is to operate as an alternative to another dynamic application plan. In other words, use a manual entry screen if the host environment is unavailable for one reason or another. The system does not render ImageNow useless just because the business application is not available. With a manual entry screen, users would be able to link scanned images into ImageNow. However, you must enter the document keys manually, and the possibility for data entry error becomes a factor. The second use for this method is the complete absence of a business application that is relevant to the images you are storing. You may discover uses for ImageNow that fall outside of the original intended use.

You must define document keys manually using non-dynamic methods. This is different from the other method where the document keys are defined dynamically using values from the captured window. There are features available during document keys definition that can make manual entry less manual. For example, you can create and apply pre-defined lists to document keys that will present the user with a list of choices when indexing an image. However, usually all the indexed document keys are entered manually. You must type the label for the screen for this method. For more information on manually creating an application plan, refer to the topic "Manually create an application plan" in ImageNow Application Plan Designer Help.
What is Application Plan Designer?

ImageNow Application Plan Designer gives you the ability to integrate your business application with ImageNow. Using Application Plan Designer, you can learn business application screens, define dictionary data elements, map documents and projects, configure view action settings, and test every step of the learning process without leaving the designer window.

The following figure shows the Application Plan Designer window:

The Application Plan Designer includes the following features:

- Screens
- Dictionary
- Screen elements
- Document map
- Project map
- View action
**Screens**

The Screens pane, displays a list of all the screens defined for the application plan. Using this pane, you can add, modify, rename, and delete screens.

The following figure shows the Screens pane:

```
<table>
<thead>
<tr>
<th>Name</th>
<th>Identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Record</td>
<td>PSI Human Res Demo</td>
</tr>
<tr>
<td>Company Record</td>
<td></td>
</tr>
</tbody>
</table>
```

**Dictionary**

In Application Plan Designer, the data elements display in a Dictionary pane. Using this pane, you can add and manage the data elements for the current application plan. From the Dictionary pane, you can also rearrange, rename, delete, and test the data elements.

The following figure shows the Dictionary pane:

```
<table>
<thead>
<tr>
<th>Name</th>
<th>Example Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee ID</td>
<td>123-45-6788</td>
</tr>
<tr>
<td>Employee Name</td>
<td>Thomas, Michael B</td>
</tr>
<tr>
<td>Address</td>
<td>123 Paradise Road</td>
</tr>
<tr>
<td>City</td>
<td>Lawrence</td>
</tr>
<tr>
<td>State</td>
<td>KS</td>
</tr>
<tr>
<td>Zip</td>
<td>66000</td>
</tr>
<tr>
<td>Country</td>
<td>USA</td>
</tr>
<tr>
<td>SSN</td>
<td>123-45-6788</td>
</tr>
</tbody>
</table>
```
Screen Elements

Depending on the method, the Screen Elements tab displays the bitmap (HyperLearn or Viewpoint), text (Terminal Capture or DOS), table (Internet Explorer), or tree (Window Walker) related to the business application screen you are currently trying to learn. From the Screen Elements tab, you can locate and identify the data elements you want to add to the dictionary.

The following figure shows the Screen Element pane:
Document Mapping

Document mapping allows you to map data elements in the dictionary to the document keys and custom properties.

The following figure shows the Dictionary Mapping tab:

<table>
<thead>
<tr>
<th>Property</th>
<th>Source</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawer</td>
<td>System Drawer</td>
<td>Default</td>
</tr>
<tr>
<td>Folder</td>
<td>Dictionary</td>
<td>Employee ID</td>
</tr>
<tr>
<td>Tab</td>
<td>Dictionary</td>
<td>Employee Name</td>
</tr>
<tr>
<td>Field 3</td>
<td>Dictionary</td>
<td>City</td>
</tr>
<tr>
<td>Field 4</td>
<td>Dictionary</td>
<td>State</td>
</tr>
<tr>
<td>Field 5</td>
<td>Current Date and Time</td>
<td></td>
</tr>
<tr>
<td>Document Type</td>
<td>Document Type</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Department</td>
<td>Undefined</td>
<td></td>
</tr>
<tr>
<td>Hire Date</td>
<td>Undefined</td>
<td></td>
</tr>
</tbody>
</table>
**Project Mapping**

Project mapping allows you to add documents automatically to new or existing projects. Project mapping also provides the ability to map any data element in the dictionary to project properties.

The following figure shows the Project Mapping tab:

<table>
<thead>
<tr>
<th>Property</th>
<th>Source</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Name</td>
<td>Dictionary</td>
<td>Employee ID</td>
</tr>
<tr>
<td>Project Type</td>
<td>Project Type</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Hire Date</td>
<td>User Entry</td>
<td></td>
</tr>
<tr>
<td>SSN</td>
<td>Dictionary</td>
<td>SSN</td>
</tr>
</tbody>
</table>
View Action

View action is a feature that drives the subset of documents or projects that the system displays. You can also configure view action to return documents or projects.

The following figure shows the View Action tab:

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawer</td>
<td>Default</td>
</tr>
<tr>
<td>Folder</td>
<td>Employee ID</td>
</tr>
<tr>
<td>Tab</td>
<td>Employee Name</td>
</tr>
<tr>
<td>Field 3</td>
<td>City</td>
</tr>
<tr>
<td>Field 4</td>
<td>State</td>
</tr>
<tr>
<td>Field 5</td>
<td></td>
</tr>
<tr>
<td>Document Type</td>
<td>Human Resources</td>
</tr>
</tbody>
</table>
Create an application plan

ImageNow stores the information you learn, using one of the application methods on a business application, in a container called an application plan. An application plan contains one or more screens, where each screen represents a learned screen or window in your business application. When you create a screen, you capture the data from your business application screen to create document index keys, called document keys, to link the image to the record in your business application.

Create an application plan

Select one of the four methods for creating an application plan and then complete one of the following actions below.

Create an Agent application plan

Complete the following steps to create an agent application plan.

1. On the ImageNow toolbar, click Manage.
2. In the Management Console, in the left pane, expand the Application Plans tree and then click Agent.
3. In the right pane, on the Applications tab, click New.
4. In the Plan Settings dialog box, click the General tab.
5. Under Information, do the following actions:
   - In Name, type a unique name for your application plan.
   - In Description, type a description for your application plan.
   - Select Is active if you want this application plan to be active and available to users.
6. Click OK. ImageNow displays Agent Application Plan Designer.

Create an Interact application plan

Complete the following steps to create an Interact application plan.

1. On the ImageNow toolbar, click Manage.
2. In the Management Console, in the left pane, expand the Application Plans tree and then click Interact.
3. In the right pane, on the Applications tab, click New.
4. In the Plan Settings dialog box, click the General tab.
5. Under Information, do the following actions:
   - In Name, type a unique name for your application plan.
   - In Description, type a description for your application plan.
   - Select Is active if you want this application plan to be active and available to users.
6. Click OK. ImageNow displays Interact Application Plan Designer.
Create a LearnMode application plan

The first step in creating a LearnMode application plan is integrating your business application with ImageNow. Complete the following steps to connect to your business application.

1. Start your business application and open the window that you want ImageNow to learn.
2. Navigate to an active record.
3. On the ImageNow toolbar, click Manage.
4. In the Management Console, in the left pane, expand the Application Plans tree and then click LearnMode.
5. In the right pane, on the Applications tab, click New.
6. In the Plan Settings dialog box, click the General tab.
7. Under Information, do the following actions:
   - In Name, type a unique name for your application plan.
   - In Description, type a description for your application plan.
   - Select Is active if you want this application plan to be active and available to users.
8. Under Application, do one of the following actions:
   - If you want ImageNow to identify the application or screen, do one of the following actions:
     - **Window Title**
       1. If you want ImageNow to identify the business application based on the name that displays in the title of the applications window, select Window Title from the Method list.
       2. Click Identify.
       3. In the Window Selector Starter dialog box, click Start.
       4. Point to the title bar of the host window and click the mouse button. The data captured from the host window appears in the Value box.
     - **Class ID**
       1. If you want ImageNow to identify the business application based on the class ID that is designated for the application, select Class ID from the Method list.
       2. Click Identify.
       3. In the Window Selector Starter dialog box, click Start.
       4. Point to the title bar of the host window and click the mouse button. The data captured from the host window appears in the Value box.
     - **Application Name**
       1. If you want ImageNow to identify the application based on the name of the executable that is running, select Application Name from the Method list.
       2. Click Identify.
       3. In the Window Selector Starter dialog box, click Start.
       4. Point to the title bar of the host window and click the mouse button. The data captured from the host window appears in the Value box.
If you want ImageNow to identify the application or screen based on a value you enter, do one of the following actions:

- **Window Title**
  1. If you want ImageNow to identify the business application based on the name that displays in the title of the applications window, select **Window Title** from the **Method** list.
  2. In **Value**, type the name of the application.
  3. Click **Test**. The system attempts to find the application window or screen with the given string in the **Value** box.

- **Class ID**
  1. If you want ImageNow to identify the business application based on the class ID that is designated for the application, select **Class ID** from the **Method** list.
  2. In **Value**, type the class ID that is designated for the application.
  3. Click **Test**. The system attempts to find the application window or screen with the given string in the **Value** box.

- **Application Name**
  1. If you want ImageNow to identify the application based on the name of the executable that is running, select **Application Name** from the **Method** list.
  2. In **Value**, type the name of the application's executable.
  3. Click **Test**. The system attempts to find the application window or screen with the given string in the **Value** box.

  **Note** The application name is the same name listed on the Processes tab in the Windows Task Manager.

  **Note** The above methods allow you to use wildcard symbols, which are useful when your host screen has long titles, multiple screens with different titles, or multiple screens where only a portion of the screen title changes.

9. Depending on the results, the system displays one of the following messages in the **Status** box:

- **Application found**
  - ImageNow has successfully connected to your business application. You can continue to the next step.

- **Could not find application**
  - Start your business application and open the window that you want ImageNow to learn and repeat step 8.

- **More than one application found**
  - Close all applications, except the business application you want ImageNow to learn and repeat step 8.

10. Click **OK**. ImageNow captures a screen shot of the host window and displays it in **LearnMode Application Plan Designer**.

Create a Manual application plan

Complete the following steps to create a manual application plan.

1. On the ImageNow toolbar, click Manage.

2. In the Management Console, in the left pane, expand the Application Plans tree and then click Manual.

3. In the right pane, on the Applications tab, click New.

4. In the Plan Settings dialog box, click the General tab.

5. Under Information, do the following actions:
   - In Name, type a unique name for your application plan.
   - In Description, type a description for your application plan.
   - Select Is active if you want this application plan to be active and available to users.


Add screens

An application plan screen represents a screen or window that you learned by applying one of the LearnMode application plan types to your business application. Screens are only applicable to LearnMode application plans. For each screen or window ImageNow learns, it creates a screen in your application plan. Creating a screen involves capturing the data from your host screen so that you can create document keys to link the image to the record in your application. Once ImageNow creates and tests the screen, you can scan images into ImageNow and link them to a particular record in your business application from that screen. Complete the following steps to learn your business application screens:

1. Start your business application and navigate to the appropriate screen and active record before continuing.

2. In Application Plan Designer, in the Screens pane, click the New Screen button.

   Note When adding a new screen to your application plan, the system attempts to match the window title to the window title you entered in the Value box in the Plan Settings dialog box when you first created the application plan. If a match does not exist, the system displays the error message "Could not find the business application window." For business applications with multiple screens that use different window titles, use a wildcard to find an exact match on a substring of the window title or screen name. For example, a business application with the screens "Sample Module: [HR]" and "Sample Module: [AP]" can be identified with the value "Sample Module: *.

3. In the Screen Properties dialog box, type a unique name and then click OK.

4. In the Screens pane, click the Move Up or Move Down button to change the order of the screens. For example, you can move the first screen in your business application to the top of the list.

5. Repeat these steps for each screen you want to add to your application plan.
Add dictionary elements

The dictionary is a repository containing all defined screen elements in an application plan. You can capture an unlimited amount of metadata, as well as associate dictionary data elements to document index keys, custom properties, and project properties.

1. In Application Plan Designer, in the Dictionary pane, click the New Field button.

   **Note** You can also add data elements to the dictionary by using the mouse to highlight the data in the captured window that you want to define, and then dragging it to the bottom of the data element list in the Dictionary pane.

2. In the Dictionary Field dialog box, under General, do the following actions:
   - In the Name box, type a unique name for your new data element.
   - Under Processing, do one of the following actions:
     - Macros
       - Click Add and then select Macro.
     - In the Select Macro dialog box, select one of the following predefined macros and then click OK:
       - **Alpha Numeric**
         - **Alphanumeric Characters Only** - If you want the system to remove non-alphanumeric characters from the output string, select Alphanumeric Characters Only. This includes all symbols and punctuations.
         - **Alpha Characters Only** - If you want the system to remove non-alphabetic characters from the output string, select Alpha Characters Only.
         - **Numeric Characters Only** - If you want the system to remove non-numeric characters from the output string, select Numeric Characters Only.
         - **Concatenation** - If you want the system to join two dictionary data elements, select Concatenation.
         - **Date Conversion** - If you want the system to display the date in a specific format, select Date Conversion.
         - **Delete Characters** - If you want the system to remove specific characters from the output string, select Delete Characters.
         - **Fixed Length** - If you want the system to limit the number of characters and digits in the output string, select Fixed Length.
         - **Line Search** - If you want the system to capture a value on a specific line, select Line Search.
         - **Number Conversion** - If you want the system to display a number string in a specific format, select Number Conversion.
         - **Split at Delimiter** – If you want the system to capture a value in a string that is separated by a delimiter character, select Split at Delimiter.
         - **Static Search** - If you want the system to capture a value based on a specific string, select Static Search.
• **Trim Character** - If you want the system to remove characters from the output string, select **Trim Character**.

  **Note** For more information on applying macros, refer to the Processing book in Application Plan Designer Help.

  • **Scripts**
    • Click **Add** and then select **Script**.
    • In the **Scripts** dialog box, do one of the following:
      • Select the script you want the system to execute on the dictionary field.
      • Click **Create** and then create the script as you normally would.
    • Click **OK**.

  **Note** For more information on applying scripts, refer to the Processing book in ImageNow Application Plan Designer Help.

3. Optional. In the **Dictionary Field** dialog box, under **Sample**, do one of the following actions:

   • If you selected a macro as your processing type, type an example of the unaltered data in the **Input** box. The system displays the expected **Results** below.
   • If you selected a script as your processing type, type an example of the unaltered data in the **Input** box. Click **Refresh** to update the **Results** and verify the script returns the correct data.

4. Click **OK** to save your changes.

### Define a dictionary element

The dictionary is a centralized repository containing a single listing of all the data elements available within a single application plan. Data elements are the screen elements that ImageNow captures from the business application. Each data element can be defined for more than one business application screen. For example, if you have an account number on your first host screen and second host screen, you only need to define it once.

### Define a dictionary data element for an agent

Use the following procedure to learn an agent.

1. In **Application Plan Designer**, on the **Elements** tab, select the appropriate agent from the **Method** list.

2. Under **Type**, select the data element you want to define, and then do one of the following actions:

   • If the data element is already added to the dictionary, drag it to the appropriate data element in the **Dictionary** pane.
   • If the data element is not in the dictionary, drag it to the bottom of the data element list in the **Dictionary** pane and then modify it as you normally would.
Define a dictionary data element for Interact

Use the following procedure to learn an Interact product.

1. In Application Plan Designer, on the Elements tab, select the appropriate interact product from the Method list.

2. Under Type, select the data element you want to define, and then do one of the following actions:
   - If the data element is already added to the dictionary, drag it to the appropriate data element in the Dictionary pane.
   - If the data element is not in the dictionary, drag it to the bottom of the data element list in the Dictionary pane and then modify it as you normally would.

Define a dictionary data element for a DOS program

Use the following procedure to learn a DOS program.

1. Start your DOS business application.

2. Open the screen in the host program that you want ImageNow to learn and navigate to an active record.

3. In Application Plan Designer, on the Elements tab, select DOS Command Prompt from the Method list. The system copies the screen contents of the screen and displays it in Application Plan Designer.

4. Do one of the following actions to add a data element:
   - If the data element is already added to the dictionary, use the mouse to highlight the data in the captured window that you want to define, and then drag it to the appropriate data element in the Dictionary pane.
   - If the data element is not in the dictionary, use the mouse to highlight the data in the captured window that you want to define, and then drag it to the bottom of the data element list in the Dictionary pane.

5. In the Dictionary Field dialog box, add the data element as you normally would.

6. Repeat these steps for each data element you want to define.

Define a dictionary data element using HyperLearn

Use the following procedure to learn a custom-built business application or other business applications that are not normally accessible to ImageNow as others.

1. Start your Windows business application, and open the window that you want ImageNow to learn.

2. Navigate to an active record.

3. In Application Plan Designer, on the Elements tab, select HyperLearn from the Method list. The system captures a screen shot of the host window and displays it in Application Plan Designer.

4. Click Settings to add or modify the fonts used by the business application. If you do not select the correct font, you will get an error message when trying to define a dictionary data element, document key, or custom property. If this occurs, you must repeat this step until you are able to successfully define a property.
5. Click the mouse button and drag a box around the data element containing the value in the captured window. Extend the box to the end of the control to ensure that the longest value entered for that control will be entered into the dictionary data element and do one of the following actions:

- If the data element is already added to the dictionary, drag it to the appropriate data element in the Dictionary pane.
- If the data element is not in the dictionary, drag it to the bottom of the data element list in the Dictionary pane and then modify it as you normally would.

**Tip** When defining a data element, you can use the LEFT ARROW key, the RIGHT ARROW key, the DOWN ARROW key, or the UP ARROW key to move the box. To resize the box, press SHIFT+LEFT ARROW. You can also use the mouse to move the box or resize it.

### Define a dictionary data element using Internet Explorer

Use the following procedure to learn a web-based application.

1. Start your web browser, type the URL of the application you want ImageNow to learn, and then navigate to an active record.
2. In Application Plan Designer, on the Elements tab, select Internet Explorer from the Method list. The system captures a tree containing the controls on the host screen and displays it in Application Plan Designer.
3. A list of controls appears in the captured window. Scroll down the list as needed to show the various controls from the program. Each row represents an available control. The left column lists the type of control. The right column of the line displays the current data for the control. The screen identifier is the data on your host screen that uniquely identifies the screen.
4. Do one of the following actions to add a data element:
   - If the data element is already added to the dictionary, point to the appropriate control you want to define, and then drag it to the appropriate data element in the Dictionary pane.
   - If the data element is not in the dictionary, click the appropriate control you want to add and define, and then drag it to the bottom of the data element list in the Dictionary pane.
5. In the Dictionary Field dialog box, add the data element as you normally would.

### Define a dictionary data element using Terminal Capture

Use the following procedure to learn a terminal emulator program or mainframe program.

1. Start your terminal emulation program and log in.
2. Open the screen in the host program that you want ImageNow to learn and navigate to an active record.
3. In Application Plan Designer, on the Elements tab, select Terminal Capture from the Method list.
4. Click **Settings**.
5. In the **Terminal Capture Settings** dialog box, do the following actions:
   1. In the **Connect Strings** box, type the connect string.
   2. In the **Retries** box, type the number of times you want the system to attempt to connect to the terminal emulation program.
   3. In the **Delay (milliseconds)** box, type the length of time you want the system to wait between connection attempts.
6. The system copies the screen contents of the screen and displays it in Application Plan Designer.
7. Do one of the following actions to add a data element:
   - If the data element is already added to the dictionary, use the mouse to drag a box around the data in the captured window that you want to define, and then drag it to the appropriate data element in the Dictionary pane.
   - If the data element is not in the dictionary, use the mouse to drag a box around the data in the captured window that you want to define, and then drag it to the bottom of the data element list in the Dictionary pane.

8. In the Dictionary Field dialog box, add the data element as you normally would.

9. Repeat these steps for each data element you want to define.

**Define a dictionary data element using Viewpoint**

Use the following procedure to learn GUI applications that conform to the Windows interface design.

1. Complete one of the following actions:
   - Start your Windows business application and open the window that you want ImageNow to learn.
   - Start your web browser and type the URL of the business application you want ImageNow to learn.

2. Navigate to an active record.

3. In Application Plan Designer, on the Elements tab, select Viewpoint from the Method list. The system captures a screen shot of the host window and displays it in Application Plan Designer.

4. Optional. If you are using Viewpoint with a browser-based business application, complete the following steps:
   1. Click the Enable point dialog button.
   2. On the bitmap, position the pointer on the appropriate area where the business application is located and click the mouse. ImageNow removes unrelated browser-based components, such as toolbars and menus, from the bitmap and leaves on the business application you are trying to integrate.

5. Do one of the following actions to add a data element:
   - If the data element is already added to the dictionary, point to the business application field you want to define, and then drag it to the appropriate data element in the Dictionary pane.
   - If the data element is not in the dictionary, click the business application field you want to add and define, and then drag it to the bottom of the data element list in the Dictionary pane.

6. In the Dictionary Field dialog box, add the data element as you normally would.

7. Repeat these steps for each data element you want to define.

**Define a dictionary data element using Window Walker**

Use the following procedure to learn GUI applications that conform to the Windows interface design.

1. Start your Windows business application, and open the window that you want ImageNow to learn.

2. Navigate to an active record.

3. In Application Plan Designer, on the Elements tab, select Window Walker from the Method list. The system captures a tree containing the controls on the host window and displays it in Application Plan Designer.

4. You will see a list of window controls displayed in the captured window. Expand the list as needed to show the various controls from the program. Click the PLUS SIGN (+) to expand the tree. Each row in
the tree represents an available control. The first part of the row lists the type of control. The second part of the line (to the right of the arrow) displays the current data for the control. For example, [+]. ThunderRT6MDIForm> PSI Higher Ed Demo.

5. Do one of the following actions to add a data element:
   - If the data element is already added to the dictionary, point to the business application control you want to define, and then drag it to the appropriate data element in the Dictionary pane.
   - If the data element is not in the dictionary, click the business application control you want to add and define, and then drag it to the bottom of the data element list in the Dictionary pane.

6. In the Dictionary Field dialog box, add the data element as you normally would.

7. Repeat these steps for each data element you want to define.

Map to a document

After your dictionary data elements are defined, you use document mapping to create and link documents using data from your business application. Document mapping allows you to map your data elements in the dictionary to document keys and custom properties. This mapping enables you to select the data from your business application that is used to categorize and display your documents in ImageNow.

You can quickly map elements by using drag and drop elements from the dictionary to your document keys and custom properties. When the name of your dictionary element matches a custom property name, you can automatically populate the value of your custom properties with the values of your dictionary element. You can also test the mapping you define directly in Application Plan Designer.

1. In Application Plan Designer, click the Document Map tab.
2. In the Screens pane, select the screen for which you want to enable document mapping.
3. Select Enable Document Mapping to allow document mapping for this screen.
4. For each property that you want to assign a value, do the following:
   - **Drawer**
     1. Double-click the Drawer document key.
     2. In the Drawer Attributes dialog box, under General, do one of the following:
        - **System Drawer**
          1. From the Source list, select System Drawer.
          2. From the Drawer list, select the system drawer you want to associate to this document key.
        - **System Drawer List**
          - If you want to allow the user to select from a list of drawers to which he or she has access, select System Drawer List from the Source list.
• Dictionary
  1. From the Source list, select Dictionary.
  2. From the Dictionary list, select the dictionary data element you want to associate with this document key.

  Note Dictionary is only an option if you have data elements defined in the dictionary.

• Folder, Tab, Field3, Field4, and Field5
  1. Double-click the Folder, Tab, Field3, Field4, or Field5 property.
  2. In the <Property> Attributes dialog box, under General, do one of the following:
     • If you want this property to share a value with a data element in the dictionary, select Dictionary from the Source list, and then select the appropriate data element from the Value list.

       Note Dictionary is only an option if you have data elements defined in the dictionary.

     • If you want the value of this property to be empty, select Undefined from the Source list.

     • If you want to apply a literal value to this property, select Literal from the Source list, and then type the value in the Value box.

     • If you want the user to enter a value for this property during the linking process, select User Entry from the Source list.

     • If you want the user to select from a list of predefined values during the linking process, select Predefined List from the Source list, and then select the appropriate list from the Value list.

     • If you want to set the value of this property to the name of the current user, select Username (Current) from the Source list.

     • If you want to set the value of this property to the name of a user from a predefined list, select Username (Select) from the Source list.

     • If you want to assign the current date to this property, select Current Date/Time from the Source list.

     • If you want to use a published sequence to acquire a new value for this property, select Sequence Number from the Source list, and then select the appropriate sequence from the Value list.

     • If you want the system to provide a unique ID to this property, select Unique ID from the Source list.

• Document Type
  1. Double-click the Document Type property.
  2. In the <Property> Attributes dialog box, do one of the following:
     • Document Type
       1. From the Source list, select Document Type.

       2. From the Value list, select the document type you want to associate with this property.
• **Document Type List**
  1. Select **Document Type List** from the **Source** list.
  2. From the **Value** list, select the document type list you want to associate with this property.
    
    **Note** Click **Edit List** if you want to edit the selected document type list.

• **Dictionary**
  1. From the **Source** list, select **Dictionary**.
  2. From the **Dictionary** list, select the dictionary data element to which you want to associate with this property.
    
    **Note** **Dictionary** is only an option if you have data elements defined in the dictionary.

5. Optional. Under **Advanced**, do the following:
   
   • If you want the system to display something other than the default label, enter the name in the **Alternate label** box.
   
   • If you want the system to associate a script to this property, select the script from the **Script** list.
   
   • If the value of the property can be empty, select **Allow empty**.
   
   • If the value of the property can be modified by the current user during the linking process, select **User modifiable**.
   
   • If you want ImageNow to remember the last user-modifiable value, select **Remember last value**.
   
   • If you want this property to overwrite the proposed key, select **Overwrite proposed key**.

6. Click **OK**.

7. Close **Application Plan Designer**.

### Map to a project

After your dictionary data elements are defined, you use project mapping to automatically create new projects during the linking process. This mapping enables you to select the data from your business application that is used to categorize and display your projects in ImageNow.

If a project already exists for a defined type and name, ImageNow automatically adds the document to that project. You can also specify which type of project (or document) to create and which custom properties can be automatically populated. In **Application Plan Designer**, click the **Project Map** tab.

1. In the **Screens** pane, select the screen for which you want to enable project mapping.

2. Select **Enable Project Mapping** to allow project mapping for this screen.

3. For each property that you want to assign a value, do the following:
   
   • **Project Name**
     
     1. Double-click the **Project Name** property.

     **Note** When you clear the **Enable Document Mapping** check box on the **Document Map** tab, the **Document Custom Property** and the **Document Key** options do not appear in the **Source** list.
2. In the **Project Name Attributes** dialog box, under **General**, do one of the following:
   - If you want this property to map to a document key, select **Document Key**.
   - If you want this property to map to a document custom property, select **Document Custom Property**.
     
     **Note** Document Custom Property only appears in the **Source** list if a custom property is linked to the selected document type.
   - If you want this property to share a value with a data element in the dictionary, select **Dictionary** from the **Source** list, and then select the appropriate data element from the **Value** list.
     
     **Note** Dictionary is only an option if you have data elements defined in the dictionary.
   - If you want the value of this property to be empty, select **Undefined** from the **Source** list.
   - If you want to apply a literal value to this property, select **Literal** from the **Source** list, and then type the value in the **Value** box.
   - If you want the user to enter a value for this property during the linking process, select **User Entry** from the **Source** list.
   - If you want the user to select from a list of predefined values during the linking process, select **Predefined List** from the **Source** list, and then select the appropriate list from the **Value** list.
   - If you want to set the value of this property to the name of the current user, select **Username (Current)** from the **Source** list.
   - If you want to set the value of this property to the name of a user from a predefined list, select **Username (Select)** from the **Source** list.
   - If you want to assign the current date to this property, select **Date/Time** from the **Source** list.
   - If you want to use a published sequence to acquire a new value for this property, select **Sequence Number** from the **Source** list, and then select the appropriate sequence from the **Value** list.
   - If you want the system to provide a unique ID to this property, select **Unique ID** from the **Source** list.

- **Project Type**
  1. Double-click the **Project Type** property.

     **Note** When you clear the **Enable Document Mapping** check box on the Document Map tab, the **Document Custom Property** and the **Document Key** options do not appear in the **Source** list.
  2. In the **Project Type Attributes** dialog box, under **General**, do one of the following:

     - **Document Key**
       1. From the **Source** list, select **Document Key**.
       2. From the **Value** list, select the document key you want to associate to this property.
• **Document Custom Property**
  1. From the **Source** list, select *Document Custom Property*.
     
     **Note** Document Custom Property only appears in the **Source** list if a custom property is linked to the selected document type.
  2. From the **Value** list, select a document custom property.

• **Project Type**
  1. From the **Source** list, select *Project Type*.
  2. From the **Value** list, select the project type you want to associate to this property.

• **Project Type List**
  1. Select *Project Type List* from the **Source** list.
  2. From the **Value** list, select the project type list you want to associate to this property.
     
     **Note** Click **Edit List** if you want to edit the selected project type list.

• **Dictionary**
  1. From the **Source** list, select *Dictionary*.
  2. From the **Dictionary** list, select the dictionary data element you want to associate with this property.
     
     **Note** Dictionary is only an option if you have data elements defined in the dictionary.

4. Optional. Under **Advanced**, do the following:
   - If you want the system to display something other than the default label, enter the name in the **Alternate label** box.
   - If the value of the property can be empty, select **Allow Empty**.
   - If the value of the property can be modified by the current user during the linking process, select **User Modifiable**.
   - If you want ImageNow to remember the last user-modifiable value, select **Remember last value**.
   - If you want this property to overwrite the proposed key, select **Overwrite proposed key**.

5. Click **OK**.

6. Close **Application Plan Designer**.

**Create a view action**

View action is the functionality that determines the subset of documents or projects that ImageNow displays. You can configure view action to return documents or projects.

**Document**

Complete the following steps to create a view action for your documents:

1. In **Application Plan Designer**, click the **View Action** tab.
2. In the **Screens** pane, select the screen for which you want to configure view action.
3. From the **Type** list, select **Document**.
4. From the **View** list, select the document view you want to associate with this application plan.
5. If you want to modify the document view properties, do one of the following:

- **Quick Filter**
  - On the **View Action** tab, for each property you want the system to display, click the first column to add the binoculars icon.

- **Full View**
  1. On the **View Action** tab, select **Advanced**.
  2. Click the **Add** button.
  3. In the **Add Condition** dialog box, in the **Constrain By** list, select the kind of constraint that will set up the lists you need in the **Type**, **Field**, and **Operator** boxes.
  4. In the **Type** list, click **Normal** or **Variable**.
     
     **Note** If you are creating a condition for a filter, the **Type** list will also include **Prompted**.
  5. In the **Field** list, click the document field in which the value will be tested by the operator and value you select below.
  6. In the **Operator** list, click the operator.
  7. In the **Value** box, enter or select the value to which the operator will be applied.
     
     **Note** If you selected **Prompted** in step 3, the **Message** box replaces the **Value** box. Enter instructions telling the user what value to enter.
  8. Click **OK**.
  9. Repeat substeps 1-7 for any additional condition rows.
     
     **Note** Each new row begins with **AND** by default. To change **AND** to **OR** or vice versa, click it.

6. Click **Preview** to verify the system returns the current results. Modify column names or column sizes as necessary. ImageNow displays the changes the next time you execute the View Action.

7. Click **OK**.


**Project**

Complete the following steps to create a view action for your projects:

1. In **Application Plan Designer**, click the **View Action** tab.
2. In the **Screens** pane, select the screen for which you want to configure view action.
3. From the **Type** list, select **Project**.
4. From the **View** list, select the project view you want to associate with this application plan.
5. If you want to modify the project view properties, do one of the following:
   
   - **Quick Filter**
     - On the **View Action** tab, for each property you want the system to display, click the first column to add the binoculars icon.
• **Full View**

1. On the **View Action** tab, select **Advanced**.

2. Click the **Add** button.

3. In the **Add Condition** dialog box, in the **Constrain By** list, select the kind of constraint that will set up the lists you need in the **Type**, **Field**, and **Operator** boxes.

4. In the **Type** list, click **Normal** or **Variable**.
   
   **Note** If you are creating a condition for a filter, the **Type** list will also include **Prompted**.

5. In the **Field** list, click the document field in which the value will be tested by the operator and value you select below.

6. In the **Operator** list, click the operator.

7. In the **Value** box, enter or select the value to which the operator will be applied.
   
   **Note** If you selected **Prompted** in step 3, the **Message** box replaces the **Value** box. Enter instructions telling the user what value to enter.

8. Click **OK**.

9. Repeat substeps 1-7 for any additional condition rows.
   
   **Note** Each new row begins with **AND** by default. To change **AND** to **OR** or vice versa, click it.

6. Click **Preview** to verify the system returns the current results. Modify column names or column sizes as necessary. ImageNow displays the changes the next time you execute the View Action.

7. Click **OK**.

8. Close **Application Plan Designer**.
**Test the application plan**

In ImageNow, you can test every step of the learning process without leaving the designer window. You can test the data dictionary, document mapping, and project mapping for your selected application plan.

**Test the dictionary**

Complete the following steps to test the data elements added to your dictionary:

1. In Application Plan Designer, in the Dictionary pane, click the **Test** button.
2. In the Test Results dialog box, verify ImageNow returns the appropriate data from your business application.

**Test document mapping**

Complete the following steps to test the data elements added to your dictionary:

1. In Application Plan Designer, on the Document Map tab, click **Test Map**.
2. In the Document Map Test dialog box, verify ImageNow returns the appropriate data from your business application.

**Test project mapping**

Complete the following steps to test the data elements added to your dictionary:

1. In Application Plan Designer, on the Document Map tab, click **Test Map**.
2. In the Project Map Test dialog box, verify ImageNow returns the appropriate data from your business application.
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