

**OpenText Exstream Designer 16.6**

**OpenText Experience Suite**

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| Learning Services

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Comments or suggestions about this manual can be sent to [LearningContentDev@opentext.com](mailto:LearningContentDev@opentext.com).

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Developed by OpenText Learning Content Development and Learning Services

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Course Number: 1-7610

Part Number: 1-7610-166-00

## Welcome

OpenText Exstream Designer is the foundation for all Exstream training. This five-day instructor-led course provides a high-level overview of Exstream. During this course, you will learn conceptual information that identifies how your organization can implement some of the available features of Exstream.

The course is designed using a scenario-based approach to create hands-on experiences through the application development process within Exstream, including the following:

- Communicating requirements
- Developing an application
- Designing documents that meet the requirements
- Producing and reviewing draft documents

By the end of this course, you will have applied conceptual knowledge by designing a personalized customer correspondence and a personalized customer account statement that contains targeted legal information and marketing communications for specific customers.

References to the Exstream user documentation will be provided for additional conceptual information that is outside of the scope of the scenario or for complex functionality - including functionality that can be implemented through multiple approaches.

For more information about the user documentation, see the Welcome to Exstream Design and Production guide.

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## Text Conventions

This workbook uses the following conventions:

Convention	What it is Used For
<i>Italic</i>	Italics are used for Workshops and Exercises.
Monospace	Monospaced text is used to represent sample code.
<b>Bold</b>	In instruction steps, indicates the action to be taken. In text it indicates emphasis
<>	Angle brackets (<>) represent an element of syntax you must substitute with a specific value.
	This icon represents a lesson symbol where the student watches the instructor.
	This icon represents a lesson symbol where the student follows along with the instructor.
	This icon represents a lesson symbol where the students perform the exercise on their own.
	This icon represents an optional or advanced lesson symbol where the students perform the exercise on their own.
	This icon represents a note that supplies additional information.
	This icon represents a tip that supplies additional shortcut information.
	This icon represents a collection of Tricks, Tips, and Traps that is used the end of a chapter.
	This icon represents a caution that supplies warning information.



**Student Attendance Form**

**Training Date:** \_\_\_\_\_

**Instructor:** \_\_\_\_\_

**Location:** \_\_\_\_\_

**Student Name:** \_\_\_\_\_

**Position:**      Management       Technical       Other   
                  Implementation       End User       Administrator

**Industry:**      Federal Government       Legal   
                  Other Government       Manufacturing   
                  Education       Financial/Insurance   
                  Integrator       Other

**Company:** \_\_\_\_\_

**Street Address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**E-mail:** \_\_\_\_\_

**Phone Number:** \_\_\_\_\_



## 1. Course overview

### Objectives

After completing this course you should be able to:

- Explain the value of Exstream to your organization.
- Navigate the user interface of Exstream to create and organize the design objects needed to produce personalized customer communications.
- Explain how Exstream can be used to manage the document process.
- Explain how Exstream can be used to personalize customer communications using variable data.
- Design the layout of personalized customer communications, including designs that contain content in multiple languages.
- Target content for specific customers based on preferred language and locale.
- Produce draft documents that can be used to review customer communications before going to production.
- Explain the testing tools that can be used for troubleshooting.
- Search the Exstream documentation set for information.

### Course scenario

For the majority of this course, you will act as a representative for Mobi Communications, a leading provider of national wireless phone and mobile data services. Mobi Communications recently purchased Exstream as part of an initiative to update their customer communication strategy. Their primary goals include the following:

- Streamline their document processes and systems to save money and time.
- Provide paperless billing options for their customers.
- Present a more modern design on their outgoing communications.

Your role at Mobi Communications is to work on the design team for the new communications. To do this, you must learn to use the Exstream software that was recently installed on your PC, so that you can turn the business requirements for two types of customer communications—a customer correspondence and a customer account statement—into document designs that are production-ready for customer data.

In the later chapters, you will act as a representative for FirstHaven, a fictitious company that offers its customers property, health, and auto insurance policies.

Your role at FirstHaven is to work as part of the design team and create a property insurance document and a health insurance booklet. As you complete the exercises in these modules, you will build a highly personalized Property Insurance Policy for a customer list consisting of seven newly-joined policyholders who live in different states across the country. You will also create a seven-page booklet in a Promote Healthcare application for FirstHaven.

To be in line with most Exstream enterprise models, the work that you complete will be based on the assumption that the development process includes work completed by multiple individuals or teams with different specialty areas. For example, in this course, your primary role is as a designer, which means that you will work on the visual layout and design of the documents the customer will eventually see in their mailbox, email inbox, or on-screen at the company's website. During the course, objects typically provided by another role, such as the environment set up provided by a system administrator, data provided by a database administrator, logos provided by the marketing department, or stock content provided by the legal department, will be provided for you to use.

## 2. Getting to know Exstream

### Objectives

After completing this course you should be able to:

- Describe the value of Exstream to your organization.
- Explain how the programs within Exstream work together.
- Identify and use the key user interface features of Designer.
- Identify and use the key user interface features of Design Manager.
- Access and search for information in the documentation.

### Important terms

The following terms are used in this module:

- **Designer** – The program that you use in the design environment to create the visual layout of customer communications. You use Designer to insert design objects such as charts and tables, text, and variables, which create personalized content for each customer at engine run time.
- **Design environment** – The programs that you use to design and test applications.
- **Design Manager** – The program that you use in the design environment to create and manage the objects that are used to build applications. You use Design Manager to set object properties, map data, organize application objects, configure printers and production equipment, and run the test engine to produce output.
- **Production environment** – The programs, scripts, and files that you use to produce customer-ready, personalized documents from finalized applications.

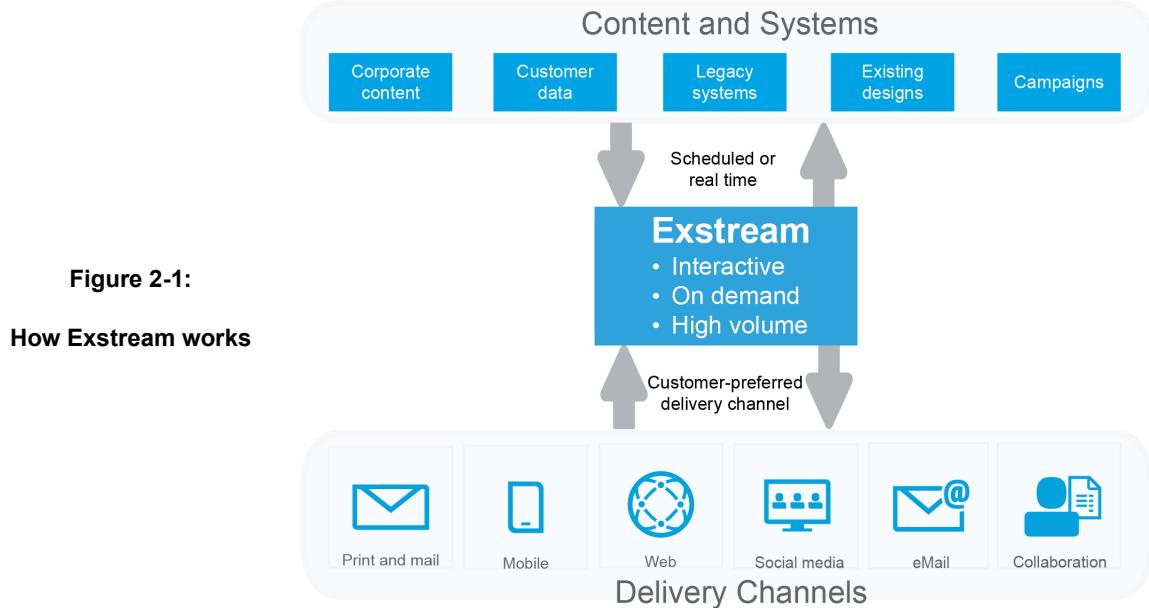
### About Exstream

Exstream is a modular software solution that can be customized to meet your organization's customer communication needs, integrate into your existing IT environment, and leverage existing content and data.

Exstream can help you simplify your business processes, even in regulated environments. With the design capabilities of Exstream as a central point of control for designs, your organization can create and deliver higher quality, more consistent, and more effective communications.

The modules of Exstream provide the flexibility that is necessary to meet high-volume, on-demand, and interactive delivery requirements.

<b>How Exstream works</b>	<p>Exstream can help your organization move forward by leveraging existing enterprise systems or service oriented architectures. Your organization can use a combination of standard and module-based functionality to integrate the following existing sources of data and content:</p> <ul style="list-style-type: none"> <li>• <b>Legacy systems</b> – Exstream lets you dynamically access data and content from multiple sources. Exstream can share data with enterprise systems through standard file access methods, message queues, and Web services to acquire content, update systems, or create documents on demand.</li> <li>• <b>Customer data</b> – Exstream lets you use data in a wide variety of data formats, including columnar, delimited, XML, ODBC sources, and legacy data formats like COBOL copybooks and print files.</li> <li>• <b>Existing content</b> – Exstream lets you dynamically access and import text and image files from enterprise systems. You can also integrate PDFs as images for delivery to certain output channels, and PDF forms can be pre-filled and mined for useful data and content.</li> <li>• <b>Print and mail</b> – Exstream lets you process vast quantities of documents through a high-volume printing and mailing facility. You can maximize high-volume production efficiency by controlling postage weights, preparing data for postal sort, driving inserters, and householding documents to save costs.</li> </ul>
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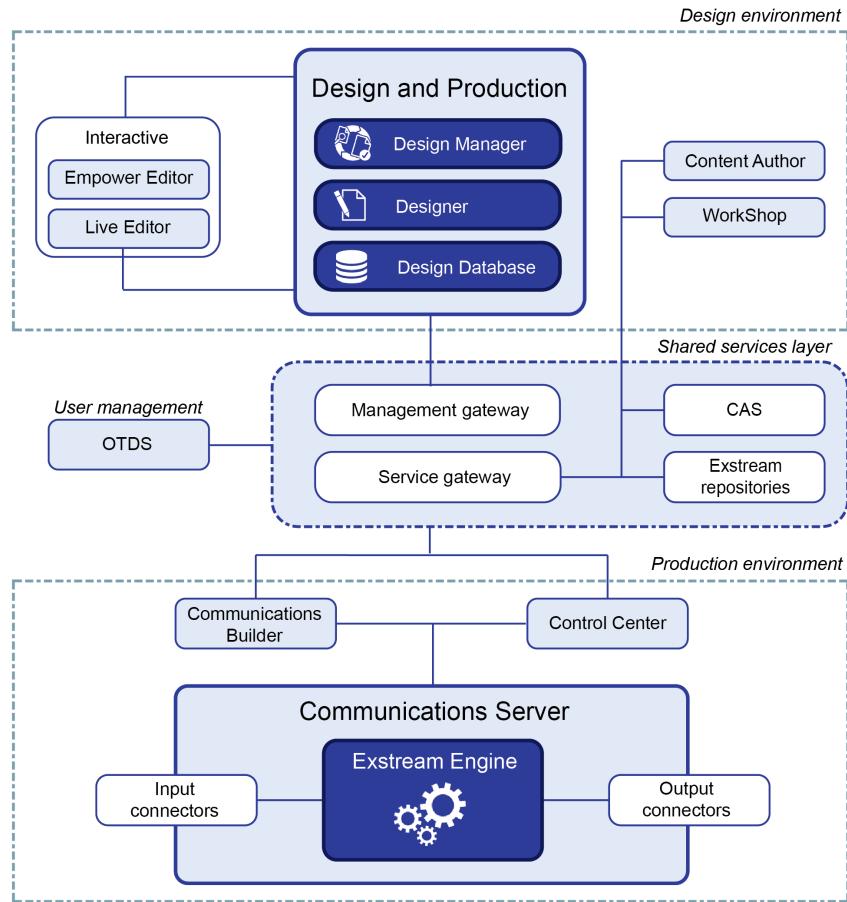
Design and production users interact with Exstream through the design interface, which is connected to the design database. Exstream also lets your organization customize your design interface based on the following business needs:

- **Collaborative design** – From one design interface, an unlimited number of design users within your organization, including those in distributed locations, can collaborate on a single design. These design users can work on content, design, and rules to produce any type of fully-personalized customer communication for high-volume, on-demand, interactive, or multi-channel delivery. Additionally, design components are stored in a design database for reuse or re-purposing across many applications, so that you can design once and use anywhere.
- **Existing designs** – Exstream lets you import dozens of supported formats either directly into the design or on-the-fly during production. You can also use one of the available tools to leverage existing designs in multiple formats by converting them to Exstream-native formats.
- **Interactive document design** – Exstream lets you increase the efficiency of one-to-one-communications with interactive documents. When you design interactive documents, you can add editing controls and rules so that you can manage end user interactions, making some areas of the document editable, while locking others down. Interactive documents can be used to drive document processes, extract data, trigger document process events, create other documents, or insert content within another document, which can then be delivered to customers in any output channel.
- **Multi-channel delivery** – Exstream offers licensing for more types of output channels than any other product on the market. With Exstream, you can create customer communications for multiple output channels (such as print, web, email and SMS) using a single application design.

### Exstream design and production overview

As a module-based system, your organization licenses only the features needed. Later, if your requirements change, you can license additional modules. For more information about licensing, see the *Exstream Installation and Upgrade Information* guide and the *Exstream System Administration* course.

**Figure 2-2:**  
**Exstream design and production**



Exstream is made up of two distinct environments that are used together to produce customer communications:

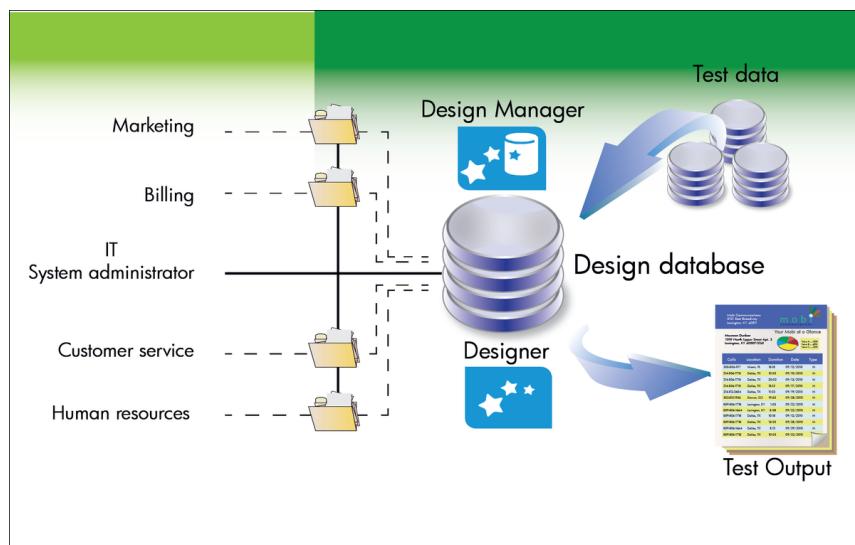
- **Design environment** – The Exstream design environment consists of a design interface and design database. The design interface allows users to create design components and add personalization to customer communications. Exstream can also be configured so that different users can manage different aspects of the design process (for example, formatting, versioning, or workflow controls). The design database allows users to store the design objects and their settings.
- **Production environment** – The production environment processes the documents for delivery after the application has been developed, tested, and approved in the design environment.

## The design environment

In Exstream, you can use the design environment to create and test designs. The design environment consists of the following programs:

- **Design Manager** – This program lets you create and manage all designed objects, specify the contents and settings of each run of the Exstream engine, and configure your printers and other production equipment.
- **Designer** – This program allows you to design customer communications using formatted text and graphics, rules, and variables.
- **Design Engine** – This produces sample output that lets you verify your design on a workstation.

**Figure 2-3:**  
**Exstream design environment**



In this course, you will use the design environment to create and test designs.

Some organizations might have business needs for one or more of the additional programs that can be licensed and used in conjunction with Designer and Design Manager.

The following programs are not covered in this course:

- **Interactive documents** – LiveEditor and Empower Editor are separate products that can be deployed to end users (for example, field agents or customer service representatives) to let them view or edit an interactive document. Users can then merge content and data from interactive documents back into the production environment to trigger document processes or create new customer communications.

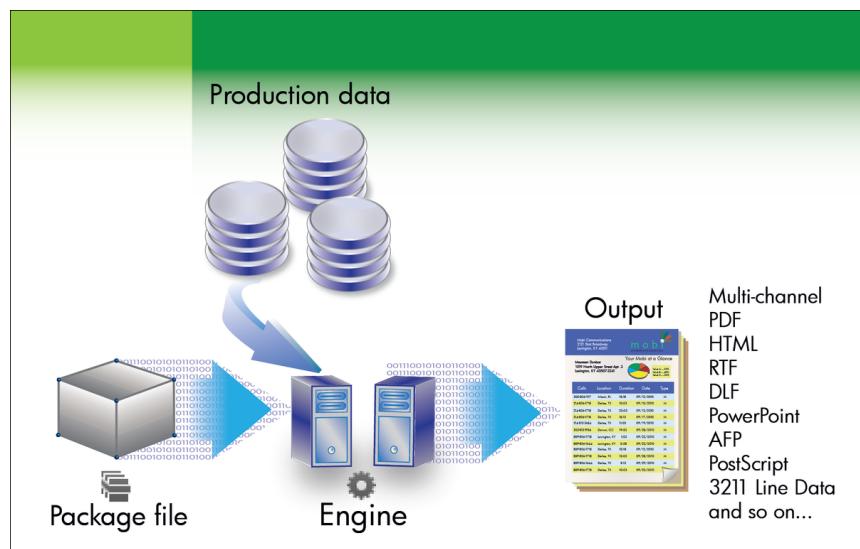
- **Exstream Remote Collaboration** – Exstream remote collaboration is a browser-based program that can be deployed to remote content experts (for example, marketing, legal, and copyright departments), who can then collaborate on content creation during application design work (such as creating and designing messages) without affecting design or production parameters like document layout, data, output, and operational controls.
- **Conversion tools** – If you maintain legacy applications or designs outside of Exstream, then you can use Exstream conversion tools to convert those designs into an Exstream-compatible format. Converted designs can be stored as page objects in the design database, just like pages that you create using Designer. For more information about the Exstream conversion tools, see the *Importing Designs* guide.

The design environment includes a design engine that lets you test applications and preview how documents will appear to the customer after production. You can run this engine from the design interface.

#### The production environment

In Exstream, you can use the production environment to process applications that have been built and tested in the design environment. You can run the engine manually from the command prompt and create scripts to manage job production properties and the delivery of outputs. If you have licensed Command Center, you can automate job production tasks such as job scheduling, job triggering, workflow management, output delivery, and reporting.

**Figure 2-4:**  
**Exstream production environment**



## Exploring Design Manager

Design Manager is a program that lets you create, configure, and manage the design objects that make up an application (for example, data files, variables, printers, or production equipment). You can also perform system administration tasks (for example, creating and managing design users and design groups), customize the design environment for users, or define design components (for example, allowed fonts and colors). In Design Manager, you also build applications and configure test and production engine runs.

To gain hands-on experience in Design Manager, you will complete exercises and view demonstrations related to the following topics:

- Logging into Design Manager
- Selecting a design database
- Exploring the Library
- Customizing the Design Manager interface

### Logging into Design Manager

You must log into Design Manager each time you open the program. Your system administrator determines how you will log in, either by using a user name and password set up in Exstream or by using your Windows login credentials.



Passwords are case-sensitive in Exstream.

When you log into Design Manager for the first time, you must select a valid key. In Exstream, keys control the features that are available based on the modules that your organization has licensed.

During this course, you will log in using super user credentials with a fully-enabled key. The view that you have of the design environment during this course might not reflect your workplace experience with Exstream.



#### **Exercise 2.1: Log in to Design Manager using admin credentials**

1. Open Design Manager from the installation directory using the shortcut on the **Start** menu or by double-clicking the `DesignManager.exe` file.

The login screen opens. By default, the Windows user ID from your system is displayed in the **User** box.

2. In the **User** box, enter `exadmin`.
3. In the **Password** box, enter `opentext`.
4. Click **OK**.

Design Manager opens.



### Instructor demonstration

1. *Watch the instructor-led demonstration of the System Configuration dialog box, where you can view the functionality that your key enables.*

#### Selecting a design database

When you are working with objects in the design environment, the objects and all of their associated settings are stored in a design database. Design databases in Exstream store information about objects that have been created, modified, or deleted. They also store system settings and configuration information, such as which modules are available or which users have access to which folders.

In the Windows environment, Data Source Names (DSNs) let you connect to the design database through open database connectivity (ODBC) technology. XOB files are provided on the OpenText MySupport portal for the purposes of training, testing, and troubleshooting, but these single-user databases are not well-suited for a multi-user environment. Exstream also supports connections to Oracle, SQL Server, and DB2 databases—with or without multiple database schemas. You can create design databases for single-byte or double-byte applications.

When you upgrade to a new version of Exstream, sometimes new features are introduced that require you to update the structure of a database. For convenience, the required database structure is tracked and you are notified if you must perform an update. The Database Administrator utility lets you perform the actions that are necessary to update the database, or convert from a single-byte to a double-byte structure.

For a list of currently supported database versions or information about the Database Administrator utility, see the *Exstream Installation and Upgrade Information* guide.

To complete the exercises in this course, you must select a specific design database.



### Exercise 2.2: Select a design database

1. From the Menu, select **File > Change Database**.

The Select Database dialog box opens.

2. From the **Select the database to open** area, select **Introduction** from the Select the database to open panel.
3. Select **Specify user and password** from the Database authentication method list.
4. Set the **User** to `exstraining`.
5. Set the **Password** to `opentext`
6. Click **OK**.

The Design Manager login window displays.

7. Click **Open**.

Design Manager prompts you to log in.

8. If it does not already appear in the **User** box, enter `exadmin`.
9. In the **Password** box, enter `opentext`.
10. Click **OK**.

You are now logged in to the design database that you will use to complete this training course (**Introduction**).

## Exploring the Library

The Library is a hierarchical structure in Design Manager that displays all of the design objects that are used to build your applications. As its name suggests, the Library contains all of the design objects, and stores them in an organized manner. Like any good library, the Library offers ways to search its contents, provides a means of exchanging information, and lets users ‘check out’ objects. The objects that you see in the Library can vary based on the modules your organization has licensed.

Each of the headings in the Library contains a specific type of object, which is identified by a descriptive icon.



### Instructor demonstration

1. Watch the instructor-led demonstration of how objects are organized in the Library.

To gain hands-on experience in the Library, you will complete exercises and view demonstrations related to the following topics:

- Creating a Library object
- Referencing a Library object
- Deleting a Library object
- Exploring the Property Panel
- Exploring the Edit Panel

- Searching the Library

**Creating a Library object** The process for creating a new Library object is similar regardless of its type. For example, you can create any type of object by right-clicking on a folder, selecting **New Object**, and then selecting the type of new object that you want to create. Additionally, you can create any type of object by selecting **Insert** from the Menu bar and then choosing the type of new object that you want to create.

Another way to create a specific type of object, such as a new page, is by right-clicking the **Pages** heading and selecting **New Page**.

Because the Library can contain many objects, having accurate and descriptive information associated with objects makes it easier to search for specific objects or to determine which object to use during application development.

The following are best practices associated with naming objects:

- Use descriptive names for your objects.
- Include thorough descriptions, since this information is included in engine reports and messages.
- Organize the objects by folder with the properties of the folder restricted by object type.



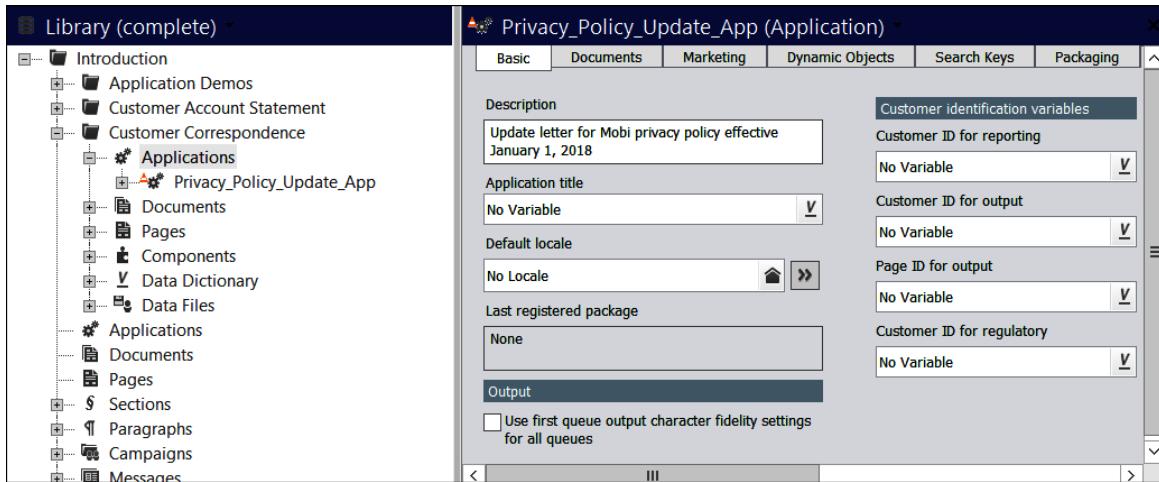
#### **Exercise 2.3: Create a Library object in Design Manager**

1. In the Library, expand the **Introduction > Customer Correspondence** folder.
2. Right-click the **Applications** heading and select **New Application**.

The New Application dialog box opens.

3. In the **Name** box, enter *Privacy\_Policy\_Update\_App*.
4. In the **Description** box, enter *Update letter for Mobi privacy policy effective January 1, 2018*.
5. Click **Finish**.

The application object opens in the Property Panel. You can expand the **Applications** heading to see the application object that you just created. If it does not appear in the list, press F5 to refresh the Library.



**Figure 2-5: New application object**

6. *Close the application object.*

**Referencing a Library object** Instead of creating the same object to use for each application, you can create an object once and reuse it in multiple locations by creating a reference for it. For example, suppose that you have a customer driver file that will be used in multiple customer communications. You can create the data file object once and reference it across applications as needed.

To reference an object, drag the original object from its location in the Library to another object of higher order. For example, you can create a reference for a page within a document by dragging the page object and dropping it on the document object.

All referenced objects have a small arrow at the lower left corner of the icon.



**Figure 2-6:**  
**Referenced object**



**Instructor demonstration**

1. *Watch the instructor-led demonstration of how objects are organized in the Library.*

**Deleting a Library object** If you no longer need a Library object, you can delete it by dragging it from the Library to the trashcan. To select multiple objects to delete, hold down the CTRL key while clicking each object. If you delete multiple objects simultaneously, you receive a prompt as each object is deleted.

If you delete a referenced object, you are deleting only the reference for the object (not the object itself). An object cannot be deleted until all of the references to it have been previously removed.

Items in the trashcan can be restored to the Library unless you permanently delete them.



**Instructor demonstration**

1. *Watch the instructor-led demonstration of how to delete an object.*

**Exploring the Property Panel** The Property Panel lets you configure Library objects. Each Library object has specific options that you can set to customize it for your business needs. The settings that you see in the Property Panel can vary based on the modules your organization has licensed.

To work with an object in the Property Panel, do one of the following:

- From the Library, drag and drop an object to the Property Panel.
- Right-click an object and select **Properties**.
- Double-click an object.
- Select the object and then from the Menu bar, select **Edit > Properties**.
- Select the object and press **CTRL + P**.



**Instructor demonstration**

1. *Watch the instructor-led demonstration of how to use the Property Panel.*

**Exploring the Edit Panel** The Edit Panel lets you manage certain Library objects. For example, you can set special properties for an application, document, or campaign; or you can view, map, and test data files. For lists, folders, or parent objects, the Edit Panel provides a columnar view of object-specific information, such as the description, last modification date, and status.

To work with an object in the Edit Panel, do one of the following:

- From the Library, drag and drop an object to the Edit Panel.
- Right-click an object and select **Edit**.
- Select the object and then from the Menu bar, select **Edit > Edit**.
- Select the object and press **CTRL + E**.

Not all objects open in the Edit Panel. When you drag objects that contain text and graphic content (for example, pages, sections, paragraphs, and messages) to the Edit Panel, they open in Designer.



#### **Instructor demonstration**

1. *Watch the instructor-led demonstration of how to use the Edit Panel.*

**Searching the Library** In Design Manager, you can search within Library objects for matching text, fonts and formats, styles, or variables.

Additionally, you can specify replacement criteria to quickly perform a search and replace. Click **Replace** to view each occurrence of the matching search criteria and then either:

- Manually select when to insert replacement criteria.
- Or click **Replace All** to automatically replace all occurrences.

Another type of search, called a filtered search, lets you find specific objects in the Library that meet the criteria that you define (for example, the name of the object, object creator, creation date, or metadata object names and values).



#### **Exercise 2.4: Search the Library for objects**

1. *From the Menu bar in Design Manager, select Tools > Search & Replace.*

The Search & Replace dialog box opens.

2. *In the Search in folder area, make sure that **Introduction** appears and that the **Search sub-folders** check box is selected.*
3. *In the Search for area, select the **Text** radio button and enter account in the text box.*

If you want the capitalization of the word or phrase to be specific, you can also select the **Case sensitive** check box.

4. *In the Search object types area, click All.*

The check boxes can be used to further narrow the search to a particular object type.

5. *Click Search.*

An informational message appears, displaying the number of occurrences found and the number of objects in which the occurrences were found.

6. *Click OK.*

The search results are displayed as a list in the Edit Panel. You can double-click an item to view its properties in the Property Panel. To change an object such as a page in Designer, right-click the item and select Edit.



### **Exercise 2.5: Perform a filtered search**

1. In the Library, select the **Introduction** folder.

Selecting this folder will search all of the objects in the Library. To narrow the search to specific object types, select the heading for the type of object that you want to search for, such as **Documents** or **Rules**.

2. From the Menu bar, select **View > Filtered Search**.

The Filtered Search dialog box opens.

3. In the **Criteria** area, select the **Name** check box and enter *policy* in the adjacent box.
4. Click **OK**.

The search results are displayed in a list in the Edit Panel.

## **Customizing the Design Manager interface**

Your system administrator configures your organization's interface for Design Manager, including the menu and toolbar options that are available. You can further customize your workstation by setting personal options for Design Manager and Designer. For example, if you design in a language other than the default, U.S. English, you can change the working language.

For more information about customizing the Design Manager interface, see the *Welcome to Exstream Design and Production* guide.

Since configurations can vary, some of the menu options or toolbars that you see during this training course might not be available in your organization's implementation of Exstream. Toolbars and palettes can be hidden, docked along the outer edge of the interface, or float, so the interface might appear differently on different computers. To hide a toolbar or palette, select it from the **View** menu. To move a toolbar or palette, drag and drop it to the desired location.



### **Instructor demonstration**

1. Watch the instructor-led demonstration of how to show, hide, dock, and move toolbars and palettes.

## Exploring Designer

Designer is the graphic design interface for Exstream. You use Designer to create and format content for pages and messages, insert graphics, insert variables to personalized documents, and put together the overall design and layout for customer communications.

To gain hands-on experience in Designer, you will complete exercises related to the following topics:

- Logging in to Designer
- Opening a design page
- Exploring the design window
- Customizing the Designer interface

**Logging into Designer** There are several ways to log into Designer:

- If you already have Design Manager open, you can skip logging in and just open Designer by selecting **Tools > Run Designer** from the Menu bar.
- Use the shortcut on the **Start** menu.
- Double-click the **Designer.exe** file.

**Opening a design page** You can open an existing design page in the following ways:

- In Design Manager, drag a page object from the Library to the Edit Panel to open the page in Designer.
- In Design Manager, right-click a page object in the Library and select **Edit**.
- In Designer, from the Menu bar, select **File > Open** and then select the page you want to open.



### Exercise 2.6: Open an existing page

1. Open the Designer application and ensure that you are connected to the **Introduction** database, by selecting **File > Change Database** and selecting **Introduction** from the **Select database to open** area.
2. From the Menu bar, select **File > Open**.

The Select the item to edit dialog box opens.

3. In the **Object type to show in list** area, select **Pages**.
4. Next to the **Folder** box, click the folder icon.

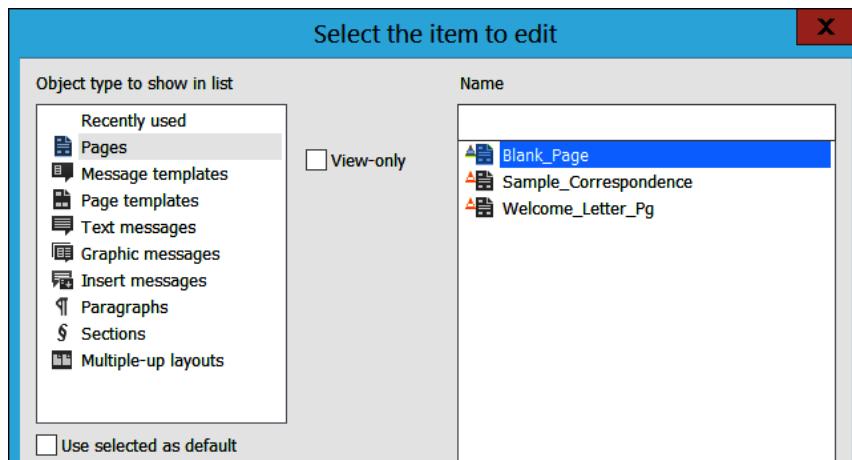
The Folders dialog box opens.

5. Select the **Customer Correspondence** folder and click **OK**.

The Folders dialog box closes.

6. In the **Name** area, select **Blank\_Page**.

**Figure 2-7:**  
**Opening an existing page**



7. Click **OK**.

The page opens in Designer.

#### Exploring the design window

The design window is the area within Designer where you can create the overall design and layout for customer communications. The design window includes horizontal and vertical rulers, a design area, and a pasteboard (the area outside of the design area).

In the design area, you can create or change one of the following types of Library objects:

- Message templates
- Messages
- Multiple-ups
- Page templates
- Pages
- Paragraphs
- Sections

After you have one of these objects open in the design window, you can achieve your intended design by inserting design objects.

**Inserting a design object**

Design objects include lines, shapes, text boxes, images, forms controls, and so on, that you can use to enhance your design. To insert a design object in Designer, click a button on the Drawing Objects toolbar.



**Figure 2-8: Drawing Objects toolbar**

You can also use the Insert menu or create a keyboard shortcut to insert design objects.

Some objects (for example, images and frames) open additional dialog boxes, for which you must configure additional settings. Other objects change the cursor (for example, charts, text boxes, and shapes). For those objects, position the pointer where you want to insert the object in the design window, and then click and drag until the design object is roughly the size that you want it to be.

**Exercise 2.7: Insert an image on a page**

1. On the **Drawing Objects** toolbar in Designer, click .



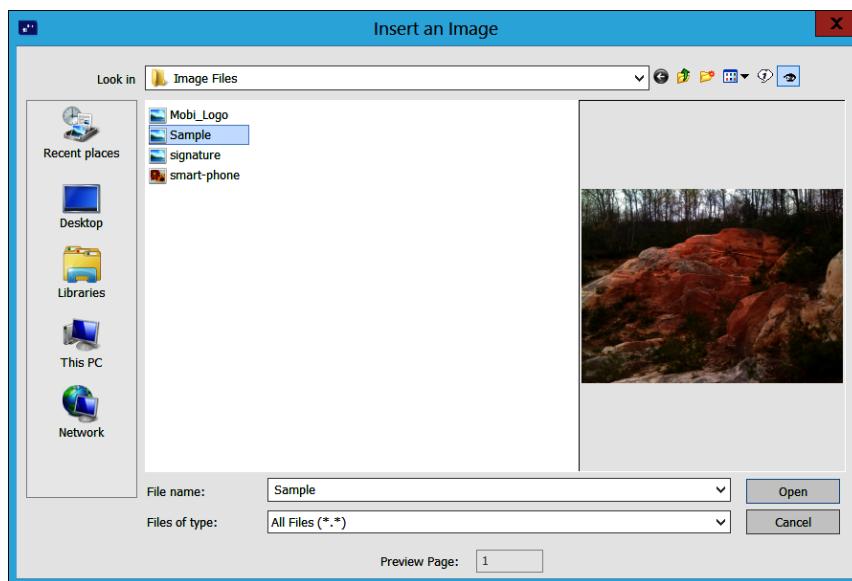
If the **Drawing Objects** toolbar is not visible, you can display it by selecting **View > Toolbars > Drawing Objects**.

---

The Insert an Image dialog box opens.

2. Select the left button/icon to load a local image.
3. Go to `C:\Training\Introduction\Image Files`.

4. Select *Sample.jpg* and click **Open**.



**Figure 2-9:**  
**Inserting an image**

The Import an Image dialog box opens.

5. Click **OK**.

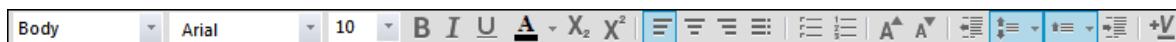
An informational message appears.

6. Click **OK**.

The image appears in the design window. You can resize and move the new image object.

#### Inserting text

In Designer, text can be manually entered, imported from an external file, or inserted by variables at run time. You can also add hyperlinks to open a Web site or to send an email. To contain text in a design, you can use text boxes or convert polygon shapes to allow text. To control the formatting of text, including the font, size, and alignment, highlight the text and use the buttons on the Formatting toolbar. If your organization has licensed the Publication Support module and a style sheet has been applied, you can select a text or paragraph style from the list on the Formatting toolbar.



**Figure 2-10: Formatting toolbar**

Within text, you can insert variables into your design to personalize the communication for your customer. For example, suppose you have a text box that serves as an address block. You can insert variables that represent the customer's name, mailing address, or account number. To insert a variable, open the Variable Palette and double-click the variable that you want to insert. The Variable Palette includes several buttons that let you filter the list based on various criteria (for example, list only system variables).

Figure 2-11:  
Variable palette filters



#### **Exercise 2.8: Insert text on a page**

1. In Designer, on the **Drawing Objects** toolbar, click **A**.

The cursor changes to **I\_A** when the pointer is positioned over the design window.

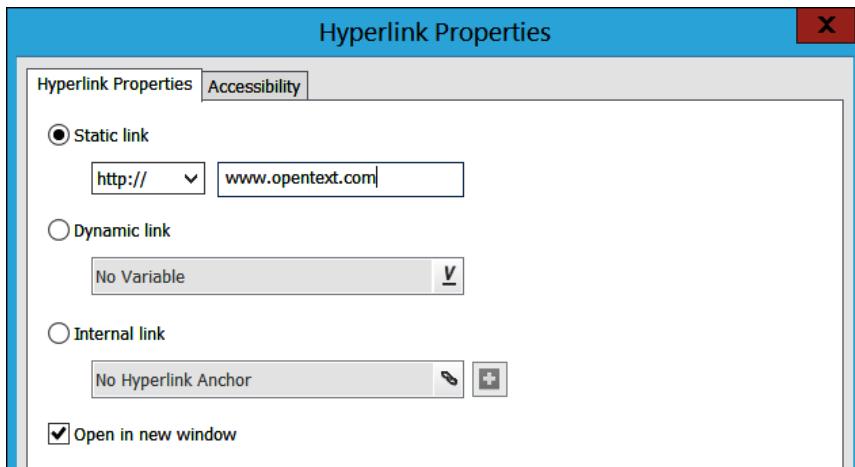
2. Click inside the design window wherever you want to place a text box and drag a handle to resize it.

You can make adjustments to the text box size and placement later, if necessary.

3. Place the cursor inside the text box and enter some text.
4. Highlight portions of the text and apply formatting using the buttons on the **Formatting** toolbar.
5. Add a hyperlink by doing the following:
  - a. In the text box, enter `http://www.opentext.com`.
  - b. Highlight the URL text.
  - c. Right-click the highlighted text and select **Add text hyperlink**.

The Hyperlink Properties dialog box opens.

**Figure 2-12:**  
**Adding a hyperlink**



6. Make sure that the **Static link** radio button is selected.
7. Make sure that **http://** is selected as the prefix for the static hyperlink address.
8. In the text box, enter **www.opentext.com** for the static hyperlink address.
9. Select the **Open in new window** check box and click **OK**.



Note that hyperlinks function in electronic output only.

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You can place design objects in the pasteboard to help keep your design area free of clutter while you create the customer communication content. Objects that overlap the design area and pasteboard are cropped automatically, except when generating multiple-up output that supports bleeds. You should also expect to see a package message for each item on the pasteboard that is deleted.



#### **Instructor demonstration**

1. Watch the instructor-led demonstration of how to use the pasteboard area in Designer to place, arrange and store design objects.

## Customizing the Designer interface

As with Design Manager, your system administrator configures the Designer interface. You can customize Designer on your workstation in the same ways as you can in Design Manager.

For the following exercise, you will complete a common customization that is useful in any design environment; creating a keyboard shortcut. Keyboard shortcuts can increase your efficiency as you work in Designer.

For more information about customizing the Designer interface, see the *Welcome to Exstream Design and Production* guide.

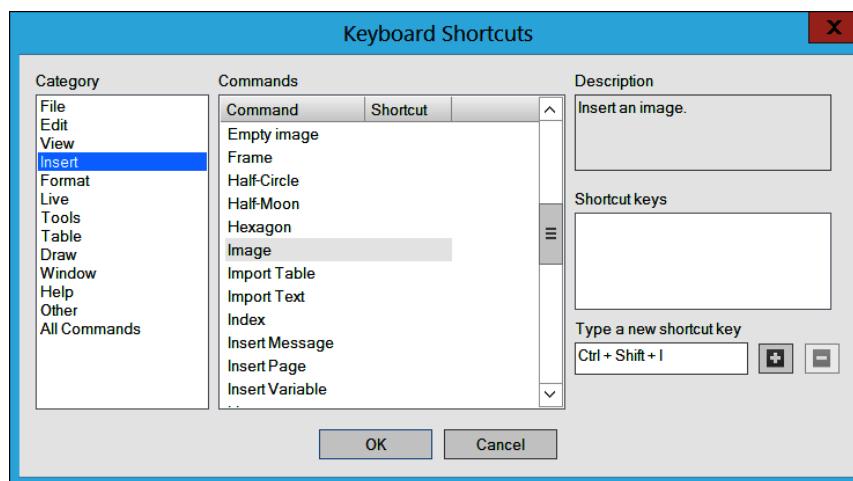
### Creating a keyboard shortcut

The built-in key combinations that are used for keyboard shortcuts are visible when you navigate through the options on the Menu bar, on the right-click menus, and in the tooltips that are visible when you position the pointer over a toolbar button. You can create keyboard shortcuts for the commands that you perform frequently and that do not have a built-in keyboard shortcut defined. You cannot remove built-in keyboard shortcuts, but you can add multiple keyboard shortcuts for the same command. Keyboard shortcuts are program-specific, so you can create keyboard shortcuts in Design Manager and Designer that are independent of one another. The steps to create a keyboard shortcut are the same in both programs.



#### **Exercise 2.9: Create a keyboard shortcut**

1. In Designer, from the Menu bar, select **Tools > Customize**.
- The Keyboard Shortcuts dialog box opens.
2. In the **Category** list, highlight **Insert**.
  3. In the **Commands** list, highlight **Image**.
  4. Place the cursor in the **Type a new shortcut key** box.
  5. Press **CTRL + SHIFT + I**.
  6. Click .



**Figure 2-13:**

### Creating a keyboard shortcut

The key combination appears in the **Shortcut keys** list.

7. *Click OK.*

To test the keyboard shortcut in Designer, repeat the Exercise 2.7 above. This time, use the keyboard shortcut you just created instead of the command on the Menu bar. Then close Designer.

#### Setting spell check options

In Designer, you can run spelling, grammar, and excluded word checks on a word, a paragraph, a text box, or all of the text in a design. Before you begin spell checking, you must select the dictionary you want to use and customize your settings to prevent unnecessary error flags. To set up spell check in Designer, you must specify what you want to be considered misspelled, whether you want spell check to check the use of uppercase and lowercase letters, and which dictionaries you want spell check to use.



#### Exercise 2.10: Set spelling and grammar check options

To set up spell check:

1. *From the **Tools** menu, select **Options**.*

The Designer Options dialog box opens.

2. *Click the **Spelling** tab.*



Figure 2-14:

#### Designer spell check options

3. *Ensure the **Suggest spelling corrections when right-click** check box is selected.*

With this option selected, Designer will suggest spelling corrections when you right-click a misspelled word.

4. *Specify your dictionary options as required.*
5. *Click the **Grammar** tab*
6. *Ensure that the **Check grammar as you type** option is selected.*
7. *Click **OK**.*

## Accessing and searching the documentation

The Exstream documentation set can help you increase your workplace productivity and find solutions to issues you encounter by providing you with conceptual information, steps required for common tasks, and reference materials.

To access the Exstream documentation, you can either press **F1** from within an Exstream application or access the Exstream documentation set from the OpenText My Support portal.



### **Exercise 2.11: Access and search the Exstream documentation**

You can access the documentation set using one of the following methods:

- *Access the documents from within the software - this method for accessing the documentation is the easiest when you are currently working within Exstream and need information. From within the software, you have the following options:*
  - *In Designer or Design Manager, press **F1**.*
  - *In Designer or Design Manager, from the Menu bar, select **Help > Search Documentation**.*
  - *In the search box, enter a word or phrase (for example, currency variable) and press **ENTER**.*
- *Access the documents from **OpenText My Support**:*
  - <https://knowledge.opentext.com/go/ExstreamDocumentation>

The downloadable HTML and PDF versions of the Exstream Design and Production documentation are available as zipped archives from this URL.



You will need an Opentext My Support login to access Exstream documentation from this source.

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## 3. Managing document processes in Exstream

### Objectives

After completing this module, you should be able to:

- Describe the purpose of an Exstream application.
- Explain how organizations can use design users and design groups to manage the application development process.
- Explain how organizations can use workflows to manage the objects used in designs.
- Build an application from existing objects, create a package file, and view output.

### Important terms

The following terms are used in this module:

- **Application** – A parent object for all of the design objects, logic resources, and settings that references your data repository and delivery channels to produce personalized documents for your customers.
- **Approval state** – A Library object that lets you assign a custom name, such as “Legal Review,” to one step of a multi-step approval process. You can then reference an approval state object into one or more approval process objects to define the review stages that an object must go through in an advanced custom workflow.
- **Parent objects** – Library objects that are built using subordinate objects, such as documents, which can contain pages, sections and paragraphs, and message objects.
- **Design group** – A collection of one or more design users or design groups that has specific rights within the design environment, including access to specific features, folders, or approval rights in a workflow.
- **Design user** – An Exstream user with a unique login and password. Design users are assigned to design groups.
- **Document** – A Library object that contains the design objects that make up the visual customer communication (for example, pages, sections and paragraphs, and message objects). At least one document object is required within an application.
- **Engine** – The program that produces customer documents from the application package file. There are two engines—the design engine, which produces sample output from the design environment and the production engine, which produces production-ready output from the production environment.
- **Object status** – An object’s current status (such as “Work in Progress” or “Approved”), which is automatically assigned to each object as it advances through the various stages of the design workflow. The object’s status is indicated by an icon to the left of the object in the Library.

- **Output** – The electronic, print, or multi-channel results of an engine run that represent a preview of the customer communication in the design environment or produce the actual customer communication in the production environment.
- **Package file** – A file (\*.pub) that contains all of the design objects and resources necessary for the engine to produce output.
- **Page** – A Library object that generally corresponds to a sheet of paper or HTML page. Pages contain design objects such as text and images. One or more page objects make up a document.
- **Workflow** – A collaborative development process wherein objects progress through different stages of development.

## Document processes

In general, customer communications require collaboration between people serving in different roles across an organization. Each organization has its own unique processes for managing the development, testing, and maintenance of documents. Many organizations use content management systems and databases to store the content and data that are used to build the documents, as well as electronic document or customer records management systems. These systems are typically separate from the design tools that are used to create the documents. Working between disconnected systems often results in complicated, time-consuming processes to build content and data into documents and move them from the initial design through production.

In this module, you will learn how to use Exstream to manage document processes by exploring the following topics:

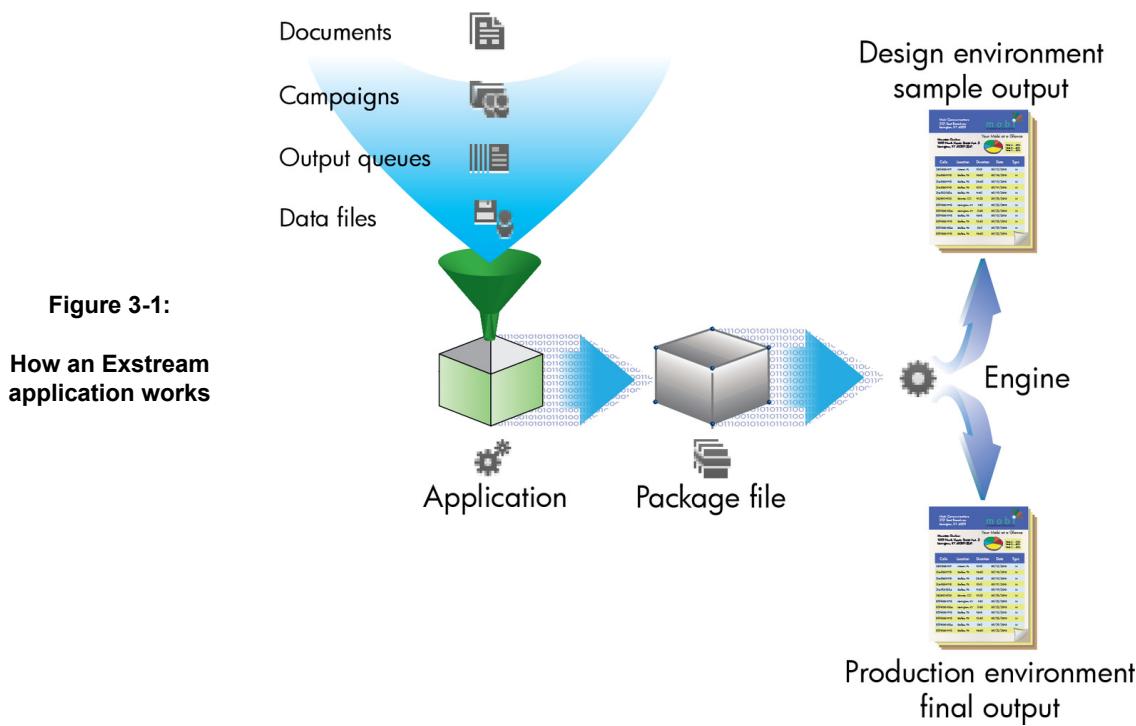
- **Exstream applications** – Applications are a collection of all the design objects, logic, and settings needed to produce personalized customer communications.
- **Managing application development in Exstream** – Your organization can control the document application development process from within the design environment using some common features, including user rights management and document process management.
- **Putting together an application** – Using existing design objects, you will complete a set of exercises to put together an application so you can view sample output for a welcome letter that is personalized for a set of customers.

In addition to the base configuration of Exstream, the functionality associated with the Advanced Design Workflow module is required for the exercises within this module.

## Exstream applications

In Exstream, an application is a Library object that serves as a parent for all of the related objects and settings that make up the design and the connections to your content and/or data repositories and delivery systems.

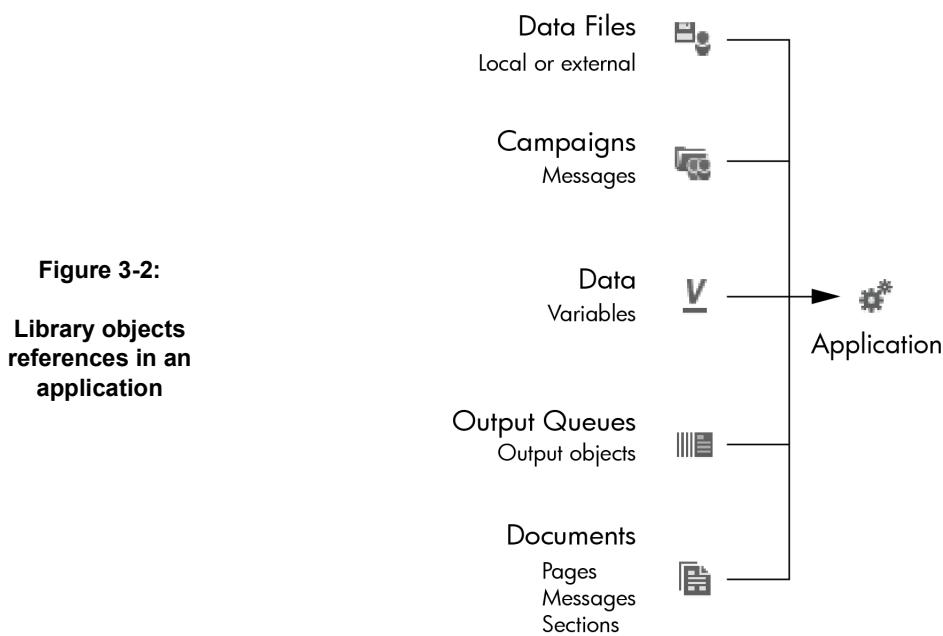
In an application, you create references for other Library objects (for example, data files, outputs, and documents) to the application object so you can see a visual representation of the objects that make up the application. You also use the application object to specify settings that relate to all of the objects in the application (for example, how the paper weights and the number of pages will affect the content that is included in the final customer documents).



To gain more information about how to work with applications in Exstream, you will watch instructor-led demonstrations related to the following topics:

- Building an application in the Library
- Packaging an application and running the engine

**Building an application in the library** An application object can contain up to five different types of Library objects depending on the modules licensed. This hierarchical system of organizing the objects in an application lets you quickly see the objects that will make up a customer's document and let you make high-level changes to the application structure (for example, removing documents or adding an additional output queue).



While most of the objects an application can contain are optional, each application must contain the following Library objects:

- One document
- One page with at least one design object
- One customer driver data file

These three Library objects represent the design and the data portion of the output. You do not have to include output-related objects, such as output objects and output queues, because they are not required when testing an application. It is good practice, however, to add output-related objects during the application development cycle to make sure that the design will appear correctly when it is put into production, since at least one type of output is required for production.



#### **Instructor demonstration**

1. *Watch the instructor-led demonstration of how an application object is organized within the Library.*

The following table describes all of the Library objects that can be referenced in an application:

Object	Required	Icon	Description
<b>Campaign</b>	No		Campaigns are objects for marketing materials. Campaigns are used to target customers and to track response. These types of objects are available only if you have licensed the Campaign Management module or the Advanced Campaign Management module.
<b>Data File</b>	Yes		Data files contain or report information about a customer and are used to drive the production process. At least one customer driver file (a specific type of data file) is required for each application to provide information about the recipients of the application.
<b>Document</b>	Yes		Documents are parent objects for other objects required for the design of a personalized communication. A document must contain at least one page, but it can also include messages, sections and paragraphs, and campaigns.
<b>Message</b>	No		Messages are marketing materials that are used to fill extra blank space in a communication. They can also represent pre-printed materials inserted at print time.
<b>Page</b>	Yes		Pages usually correspond to a sheet of paper or HTML page and are used to design the content a customer sees. They can contain static content and dynamic content that can change based on customer data. In most applications, pages are the most basic object you will use to contain content.
<b>Section</b>	No		Sections are groups of paragraph objects and, optionally, other section objects. They are used to create a hierarchy of content similar to headings and subheadings in a book. Sections and paragraphs are suited to help you design complex documents. One or more paragraphs must be included in each section object.
<b>Paragraph</b>	No		Text paragraphs are distinct blocks of communication that usually correspond to a single subject or theme. Paragraph objects are not necessarily the same as text paragraphs and they can contain one or more text paragraphs. Paragraph objects exist in the Library as reusable objects.
<b>Output</b>	No		Outputs represent the supported drivers for the electronic and print channels that are used to produce the customer communication.
<b>Output Queue</b>	No		Output queues control the devices and processes that are used for final output production. These objects control the properties of both print and electronic output. An output queue must contain an output object.
<b>Variable</b>	No		Variables represent data that change during production to personalize the communication for each customer.

**Packaging an application and running the engine**

Packaging an application is the first step to producing output. Creating a package file for your application lets you combine all of the objects into one format that is optimized for the engine.

A package file is the connection between the design environment and the engine. It contains the following information that the engine requires to process an application:

- Data file mapping
- All design objects in your application (for example, documents, campaigns, pages, variables, and rules)
- All required resources (for example, fonts and images)
- Pre-composed versions of the static design objects and resources

The package file should contain only the information about the objects that is necessary for the engine to run. One package file is created for each application.

Exstream provides many options for packaging and managing engine runs. However, the method that will be used throughout this course is to package a single application and run the design engine using options set up in Design Manager. This method is commonly used for testing in the design environment, since it allows you to view sample output quickly.

For more information about creating a package file and running the engine, see the *Preparing Applications for Production* guide.



**Instructor demonstration**

1. *Watch the instructor-led demonstration of how to create a package file and run the engine.*

## Managing application development in Exstream

Exstream lets your organization customize the design environment based on your specific requirements. The system-wide defaults and permissions allowed for individual users are set up in Design Manager within the subcategories of the **Environment > System** heading. Within this heading, users with the appropriate permissions can customize the features available to other users, as well as objects associated with content development for multiple languages and locales (including dictionaries).

In this section, you will learn how to use Exstream to manage application development by exploring the following topics:

- **Managing frequently used objects with lists** – Your organization can add frequently used objects to specific lists to make them easier to find and work with in the future.
- **Managing permissions with design groups and design users** – Your organization can manage the permissions of individuals by creating design groups and adding individual design users to the design groups.
- **Managing object approval with design workflows** – Your organization can manage how Library objects are approved by creating approval states and linking them together with design groups to create approval processes, known as design workflows in Exstream.
- **Moving an object through an approval process** – Using existing design user logins and an existing design workflow, you will complete a set of exercises to move a design object (a welcome letter) through an approval process.

**Managing Frequently Used Objects with Lists** A list object is a static or dynamic collection of references to a set of Library objects. A static list contains specific objects that you select, one at a time, to place in the list, such as those objects that you use frequently.

To view available lists in the Library, click the Library title bar and select **Complete View**, **List View**, or **Favorite List View**. To view the list contents, open the list object in the Edit Panel. To sort the list, click the list headings for the column you would like sorted. To export the list to an external file, in the Edit Panel, right-click any list item and select **Export List**.



### Exercise 3.1: Create a static list

1. Open Design Manager.
2. In the Library, under the **Introduction** folder, right-click the **Lists** heading and select **New List**.

The New List dialog box opens.

3. Enter a **Name** and **Description**, and click **Next**.
4. Select the **Static** option and click **Finish**.

The list object opens in the Property Panel.

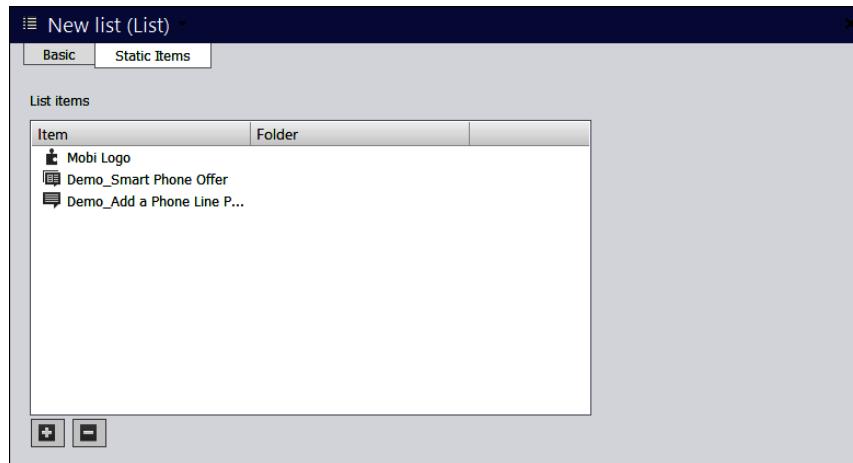
5. On the **Static Items** tab, click .

The Select List Items dialog box opens.

6. Click  and select the **Introduction** folder.
7. From the **Type** list, select **Component**.
8. From the **list** box, select **Mobi Logo** and click **OK**.
9. Repeat step 5 through step 8 to add two message objects to the list from the **Application Demos** folder.

Figure 3-3:

New static list



10. Save and close the list object.

11. From the Library, drag the list object to the Edit Panel to view the contents.

Figure 3-4:

Contents of new list

Static List	Description	Folder	Type	Last Modified	Modified By
Demo_Add a Ph...	Nationwide offe...	Application...	Message	2011-11-16 1...	admin
Demo_Smart Ph...	Upgrade offer a...	Application...	Message	2011-09-16 1...	admin
Mobi Logo		Root Folder	Component	2011-09-21 1...	admin

**Managing permissions with design groups and design users**

In most cases, your organization will want to restrict access to specific features based on job roles. For example, the task of setting up the environment objects in the Library, such as design users, is likely to be restricted to someone in a system administration role, while creating page layouts is likely to be restricted to someone in a document design role. To help manage these permissions, Exstream lets you create design groups and design users.

A design group is a list of one or more design users and/or other design groups. Each design group defines access to Exstream features and functions for the design users assigned to that design group. Design groups also classify similar employees and define the availability of Exstream objects.

A design user can belong to several design groups. Conflicting design group rights do not negate each other. If a design user belongs to two groups and one group restricts a function and the other grants access to the same function, then the design user has access to the function.

**Exercise 3.2: View properties for design users and groups**

1. Open Design Manager.
2. In the Library, expand the **Introduction > Environment > System > Design Users** heading.
3. Open the following design user objects, one at a time, in the Property Panel:
  - a. admin
  - b. Ima\_Designer
  - c. Susan\_Charge
  - d. Wanda\_Marketer
4. Compare the admin design user to the other design users and note that the key difference is the selection of the **Super user** check box.
5. Expand the **Introduction > Environment > System > Design Groups** heading.
6. Open the following design group objects, one at a time, in the Property Panel:
  - a. Design
  - b. Managers
  - c. Marketing
  - d. System Admin

7. Compare the design groups and note the following differences:
- In the **Users included in group** area, each design group has different design users selected.
  - Because each design group has different permissions when they work in the design environment, the selections in the **Functional access** area are different.
  - When you click **Group Configuration**, the selections on the **Group Configuration** dialog box are different for each design group. These differences are based on the features available to the design group for when they work in the design environment.

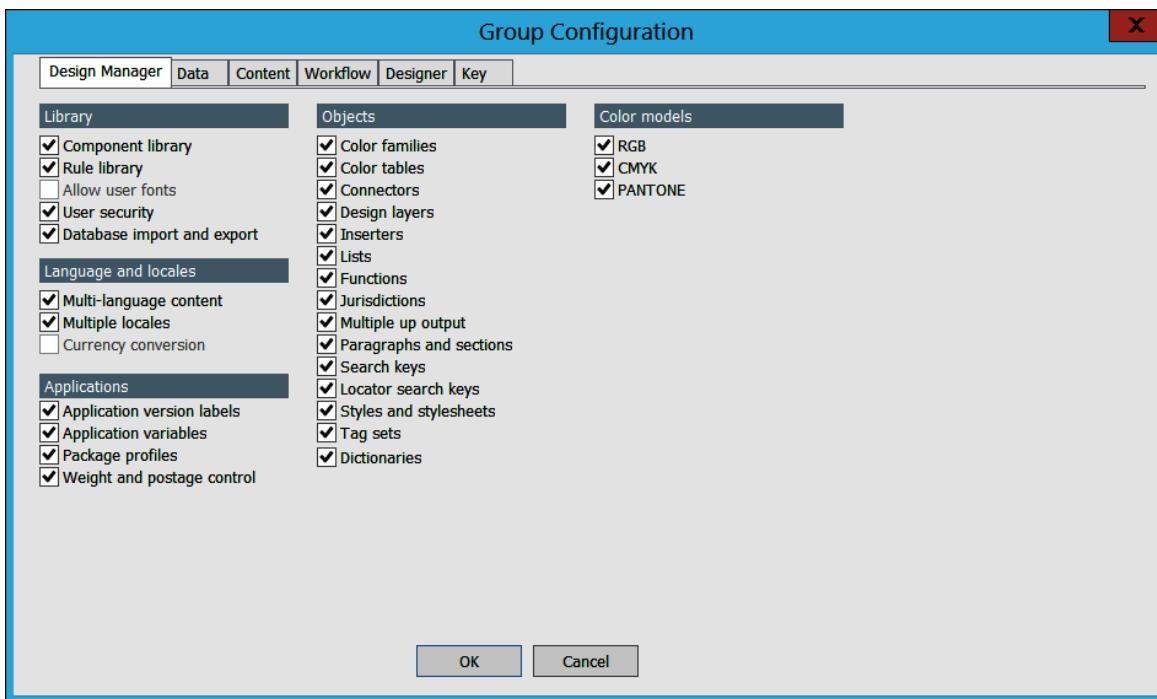


Figure 3-5: Group configuration dialog

#### Managing object approval with design workflows

Organizations typically use specific business processes and tools to test or review the data, content, or designs used in customer communications. Exstream lets you manage the review of Library objects in an application through design workflows.

In Exstream, a design workflow is the progression of an object from initial design to final approval. By submitting all objects in an application to a designated approver, you can ensure that content is consistent and conforms to company standards. Designated approvers are design users who are members of design groups that have Approver access.

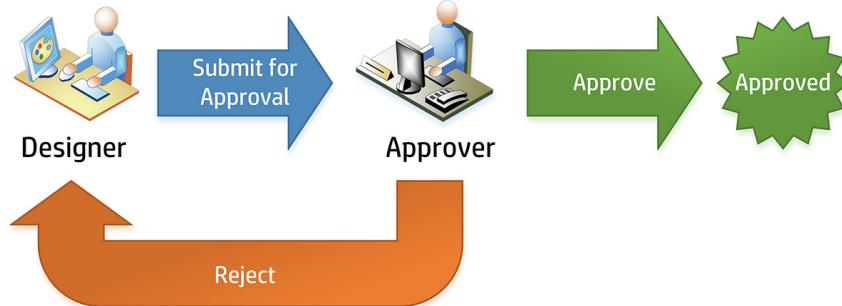
Exstream provides two types of design workflows - the basic design workflow and the advanced design workflow. The basic design workflow is included in the base configuration of Exstream, and it lets you assign one designated approver to approve or reject an object after it has been submitted for approval. The advanced design workflow requires a license for the Advanced Design Workflow module, and lets you create complex workflows with multiple approval steps and multiple approvers to review, approve, or reject an object after it has been submitted for approval.

To gain more information about how to manage object approval with design workflows in Exstream, you will complete an exercise and discuss information related to the following topics:

- Basic design workflow
- Advanced design workflow
- Object status
- Object version
- Moving an object through an approval process

**Basic design workflow** The basic design workflow, if enabled, lets anyone with the proper permissions create new objects in the Library, but these objects must first be approved before they are used in production. With basic design workflow, only one designated approver can approve or reject an object after it has been submitted for approval.

**Figure 3-6:**  
**Basic design workflow**



**Advanced design workflow** The Advanced Design Workflow module offers additional advantages that let you do the following:

- Define as many custom approval steps as needed.
- Assign custom names to approval states (such as Management, Marketing, or Legal).
- Designate any number of approving groups and approvers.

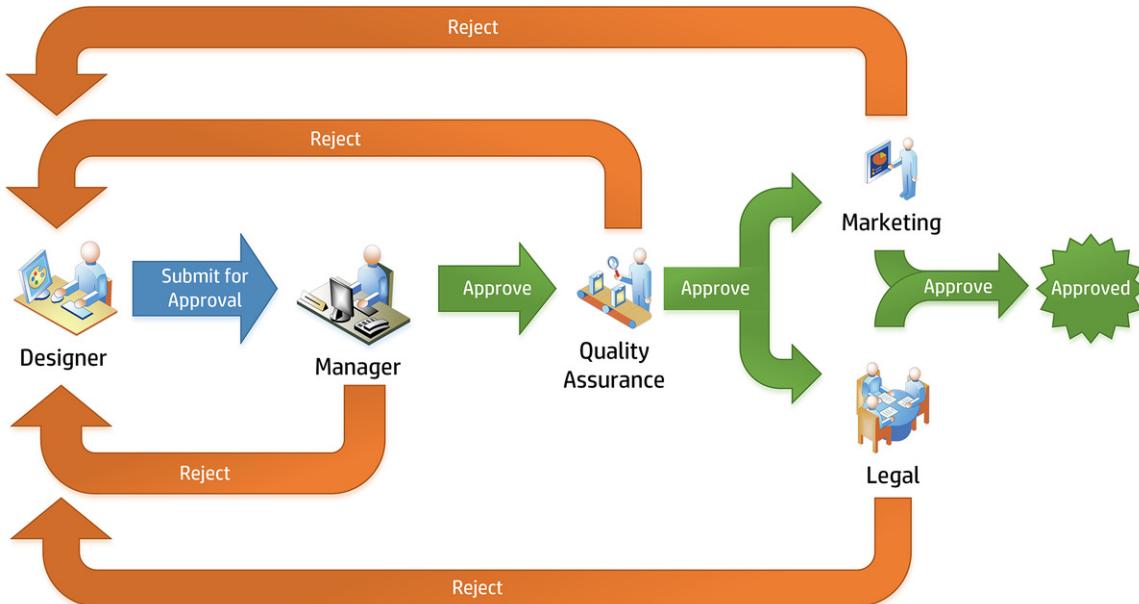


Figure 3-7: Advanced design workflow

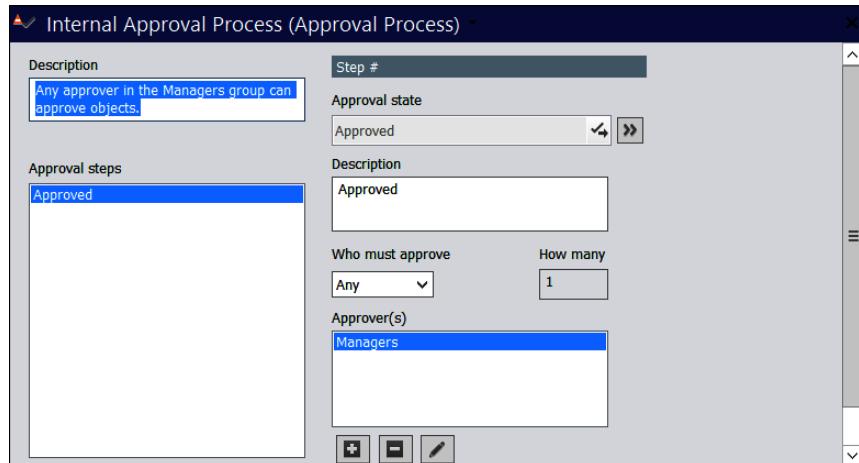
Advanced workflows are defined by creating approval process and approval state objects in the Library. In highly complex design workflows, there could also be multiple custom approval states listed in the **Approval steps** area. A unique workflow is often needed for different projects or publication categories. You can create as many custom approval processes as needed to accommodate workflows with differing steps. The specific approval process to use is defined in the folder properties.



### Exercise 3.3: Compare workflow properties

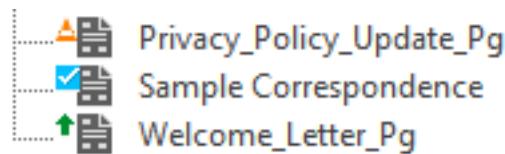
1. In the Library, expand the **Environment > System > Approval Processes** heading.
2. Open the following approval process objects, one at a time, in the Property Panel:
  - a. **Internal Approval Process**
  - b. **External Approval Process**
3. Compare the properties of the two custom approval process objects and look for any key differences.

**Figure 3-8:**  
Comparing workflow properties



**Object status** If your organization uses workflows, objects are assigned a status in the Library (for example, Work in Progress or Submitted) as they move through the approval process. An object's status symbol is located to the left of the object in the Library.

**Figure 3-9:**  
Examples of object status icons



Object statuses are listed in the table below.

Symbol	Status	Description
	Work in progress	The object's design and properties are editable. This is the default status.
	Submitted	The object has been submitted for approval.
	Approved	The object has been approved.
	Rejected	The object has been rejected by one or more of the approvers. You can change the design and properties, and then submit the object again for approval.
	Archived	The object has been archived because a newer version of the object was approved. For example, when version 2 becomes Approved, the status of version 1 changes to Archived. The system administrator can select the number of archived versions of an object to store in the design database.
	Quick fix in progress	If you want to make temporary or unexpected changes to the Approved version and you do not want to put those changes into your Work in Progress version, you can make a Quick Fix in Progress version from the Approved version and make changes.
	Quick fix submitted	The Quick Fix object has been submitted for approval.
	Quick fix rejected	The Quick Fix object has been rejected by one or more of the approvers. The object's design and properties are editable and the object can be submitted again for approval.

**Object version** In Design Manager, the object's version numbers, statuses, and associated dates are automatically tracked and can be reviewed at any time by right-clicking the object and selecting **History**. Your organization can decide, based on business or regulatory requirements, how many archived versions are maintained in the database.

When you right-click an approved object and select **Make Work in Progress**, the Work in Progress object is assigned a version number using incremental whole numbers. For example, suppose that you have an Approved version 1 object. When you make a new Work in Progress object, the version number 2 is assigned. When version 2 is approved, version 2 is changed to the Approved status and version 1 of the object is changed to the Archived status. Keep in mind that if you clone the object, the clone becomes version 1, since clones are treated as new objects in the Library.

When you right-click an approved object and select **Make Quick Fix**, the object is assigned a minor version number using incremental decimal numbers. For example, if the Approved version of an object is version 3, the first Quick Fix version is assigned 3.01. You can create up to 99 Quick Fix versions for an object.

- Moving an object through an approval process** In the following set of exercises, you will move a design object from submission to approval through an existing advanced design workflow, viewing its progress as it is moved through the process.



#### **Exercise 3.4: Submit an object for approval**

1. Open Design Manager.
2. From the Menu bar, select **File > Login as Different User**.

The login screen opens.

3. In the **User** box, enter *Ima\_Designer*.
4. In the **Password** box, enter *xxx*.
5. Click **OK**.
6. In the Library, expand the **Introduction > Customer Correspondence > Pages** heading.
7. Right-click the **Welcome\_Letter\_Pg** page object and select **Submit for Approval**.

The Submit for Approval dialog box opens.

Action	Date	Group	User	Notes

**Figure 3-10: Submitting an object for approval**

8. Click **OK**.

The icon next to the page object changes in the Library to show that the object has been submitted for approval.



In Design Manager, you can submit an object and its child objects at the same time.

From the menu bar, select **Manage > Submit with dependencies**.

You can also create a list to organize a large number of objects requiring approval and then easily check the status of objects on the list in the Edit Panel.

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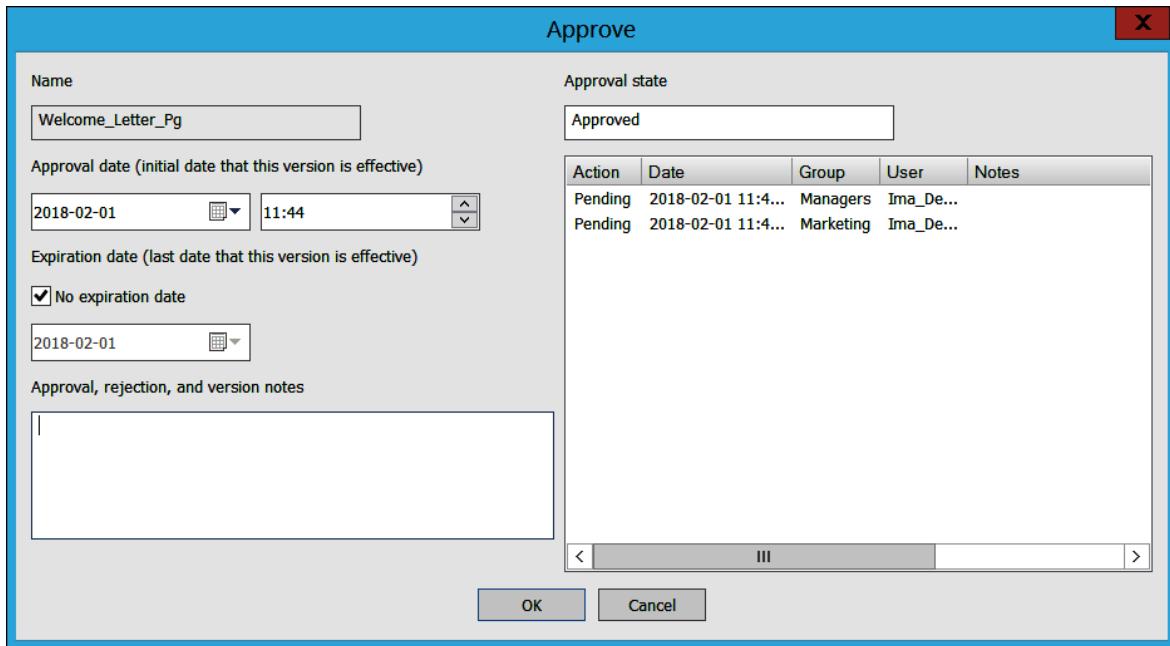
#### **Exercise 3.5: Approve the object**

1. From the Menu bar, select **File > Login as Different User**.

The login screen opens.

2. In the **User** box, enter *Susan\_Charge*.
3. In the **Password** box, enter *xxx*.
4. Click **OK**.
5. In the Library, expand the **Introduction >Customer Correspondence > Pages** heading.
6. Right-click the **Welcome\_Letter\_Pg** page object and select **Approve**.

The Approve dialog box opens.



**Figure 3-11: Approving the object**

7. **Click OK.**

The icon next to the page object in the Library remains the same because all levels of approval have not yet been completed.



In Design Manager, you can also approve an object and its child objects at the same time by selecting **Manage > Approve with dependencies**. You can also create a list to organize a large number of objects awaiting approval and then easily approve objects on the list in the Edit Panel.



**Exercise 3.6: Check the status of the approval process**

1. From the Menu bar, select **File > Login as Different User**.

The login screen opens.

2. In the **User** box, enter **Ima\_Designer**.
3. In the **Password** box, enter **xxx**.
4. Click **OK**.

5. In the Library, expand the **Introduction > Customer Correspondence > Pages** heading.
6. Right-click the **Welcome\_Letter\_Pg** page object and select **Administer**.

The Administration dialog box opens.

7. On the **Administration** dialog box, review the following information about the progress of the object through the approval process:

On the **Basic** tab, the status in the **Version status** box is **Submitted**.

On the **Approval History** tab, the list of status changes provide more information about the journey of the object through the approval process, including action taken, date and time, and the design user who performed the action.

8. Click **OK**.

The Administration dialog box closes.



#### **Exercise 3.7: Approve the object**

1. From the Menu bar, select **File > Login as Different User**.

The login screen opens.

2. In the **User** box, enter **Wanda\_Marketer**.
3. In the **Password** box, enter **xxx**.
4. Click **OK**.
5. In the Library, expand the **Introduction > Customer Correspondence > Pages** heading.
6. Right-click the **Welcome\_Letter\_Pg** page object and select **Approve**.

The Approve dialog box opens.

7. Click **OK**.

The icon next to the page object changes in the Library to show that the object has been approved.

## Assembling an application

In the following set of exercises, you will assemble an application by referencing existing objects in the Library to an application object that you create. Then, you will run the design engine and view the sample output. This set of exercises will introduce you to the tasks that you will repeat in later modules.

To assemble an application, you must complete the following exercises:

- Creating an application object
- Setting up the application properties
- Adding the required objects to the application
- Packaging the application, running the engine, and viewing the output



### **Exercise 3.8: Create an application object**

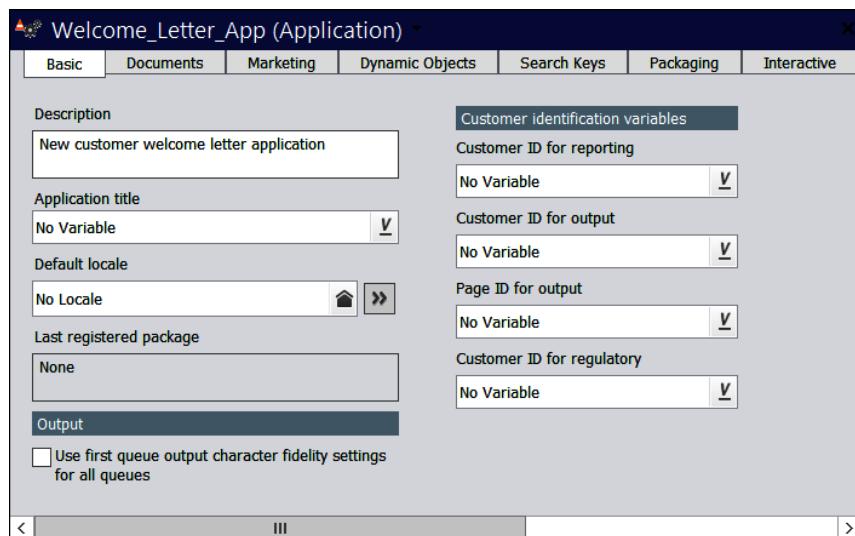
1. *Log in to Design Manager using the system administrator login (admin/xxx).*
2. *In the Library, expand the **Introduction > Customer Correspondence** folder.*
3. *Right-click the **Applications** heading and select **New Application**.*

The New Application dialog box opens.

4. *In the Name box, enter Welcome\_Letter\_App.*
5. *In the Description box, enter New customer welcome letter application.*
6. *Click **Finish**.*

The application object opens in the Property Panel.

**Figure 3-12:**  
**New application object**



**Exercise 3.9: Set up the application properties**

You will now set some basic application properties parameters to specify the default locale for the application, and to specify a variable to identify the customers in the system report.

1. *With the **Welcome\_Letter\_App** application object in the Property Panel, specify the default locale for the application by completing the following steps:*

- a. *On the **Basic** tab, next to the **Default** locale box, click* .

The Select Locale dialog box opens.

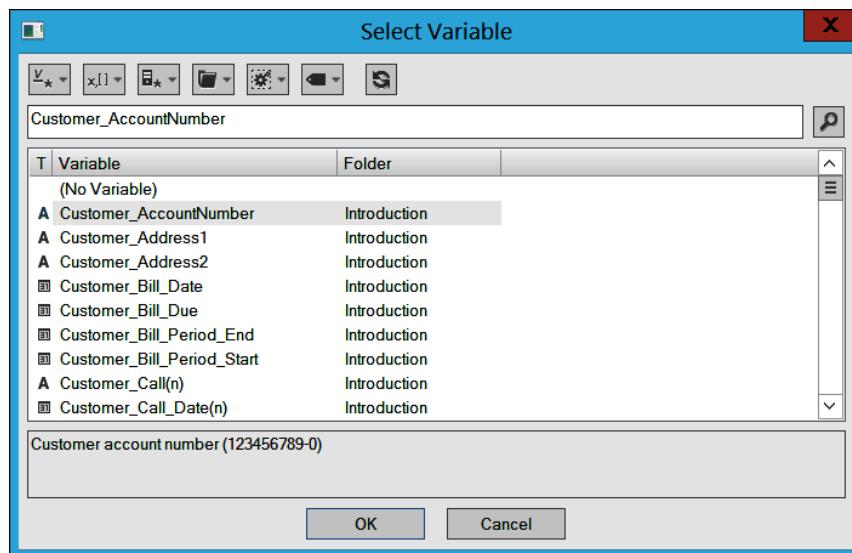
- b. *Select **English**.*
  - c. *Click **OK**.*

2. *To specify a variable that identifies customers in the system report, complete the following steps:*

- a. *On the **Basic** tab, in the **Customer identification variables** area, next to the **Customer ID for reporting** box, click* .

The Select Variable dialog box opens.

**Figure 3-13:**  
**Select variable dialog**



- b. *To filter the list of variables, click and select **Selected Folder**.*

The Folders dialog box opens.

- c. *Select the **Introduction** folder and click **OK**.*

The Folders dialog box closes.

- d. From the list of variables, select <Customer\_AccountNumber> and click OK.

The Select Variable dialog box closes.

3. Save and close the application object.



#### **Exercise 3.10: Add the required objects to the application**

1. In the Library, expand the **Introduction > Customer Correspondence > Applications > Welcome\_Letter\_App** heading.
2. To add a reference to the application for the data file object, complete the following steps:
  - a. Expand the **Introduction > Data Files** heading.
  - b. Drag the **CustomerSample\_Driver** customer driver file object onto the **Welcome\_Letter\_App** heading.

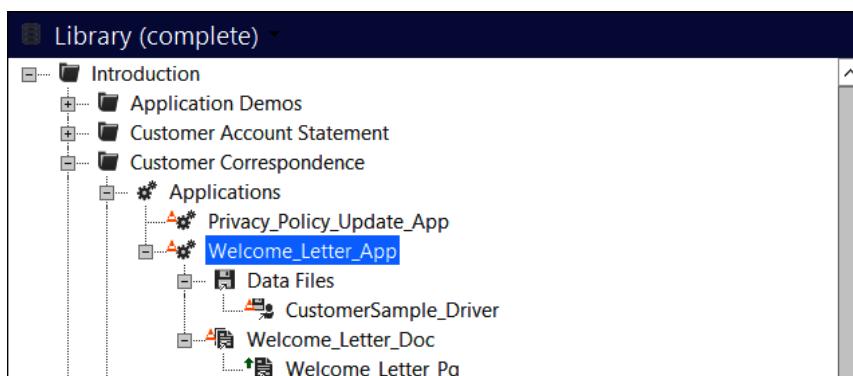
A Data Files heading with a reference for the data file object is added to the application.

- c. Expand the **Data Files** heading to see the reference for the **CustomerSample\_Driver** customer driver file object.
3. To add a reference to the application object for the document object and its contents, complete the following steps:
  - a. Expand the **Introduction > Customer Correspondence > Documents** heading.
  - b. Drag and drop the **Welcome\_Letter\_Doc** document object to the **Welcome\_Letter\_App** heading.

A Welcome\_Letter\_Doc heading with references for the document and page object is added to the application.

- c. Expand the **Welcome\_Letter\_Doc** heading to see the reference for the **Welcome\_Letter\_Pg** page object.

**Figure 3-14:**  
**New objects references added to the Welcome Letter application**



If you do not see the references in the Library, press **F5** to refresh it.

4. To add a reference to the application for the HTML output queue object (which you will require later for the container design module), complete the following steps:
  - a. Expand the **Introduction > Environment > Delivery > Output Queues** heading.
  - b. Drag and drop the **HTML Queue** document object to the **Welcome\_Letter\_App** heading.

An Output Queues heading with references for the HTML Queue is added to the application.

5. Expand the **Output Queues** heading to see the reference for the **HTML Queue** object.



#### **Exercise 3.11: Package the application, run the engine, and view the output**

1. Right-click the **Welcome\_Letter\_App** application object and select **Package**.

The Build Package dialog box opens.

2. To select the save directory for the package file, complete the following steps:

- a. In the **Package** file area, click .

The Open dialog box opens.

- b. Go to the following directory:

*C:\Training\Introduction\Pub Files and select WelcomeLetter.pub.*

- c. Click **Open**.

The Open dialog box closes.

3. To specify the output, complete the following steps:

- a. In the **Package** file area, select the **Specify** output radio button.

- b. Click .

The Select Output dialog box opens.

- c. Select **Exstream Viewer**.

- d. Click **OK**.

The Select Output dialog box closes.

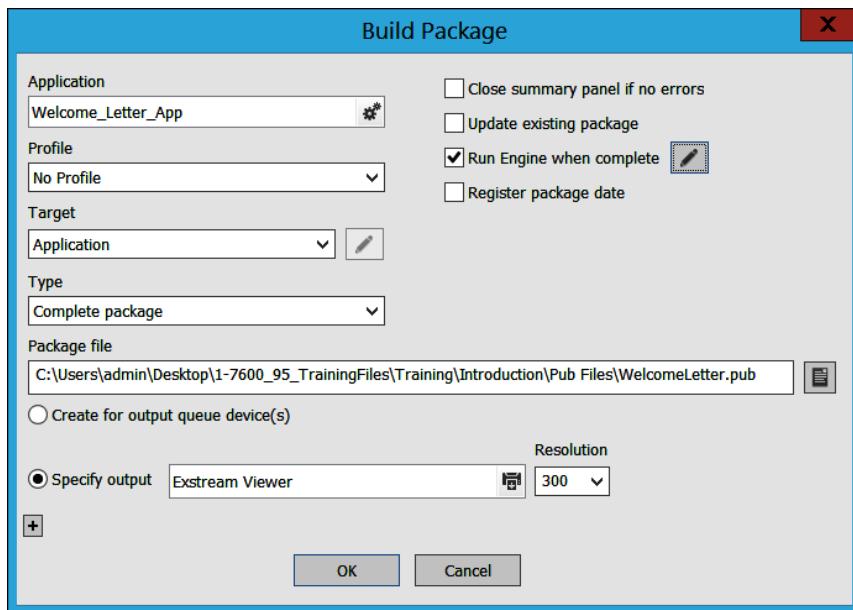
4. Select the **Run Engine** when complete check box.

5. Click .

The Run the Engine dialog box opens.

6. Make sure that the **Package file** check box is selected and that the box adjacent to the **Package file** check box automatically populates with the path that you entered in step 2.
7. Make sure that the **Customers** check box is not selected.
8. Make sure that the **View output when complete** check box is selected and click **OK**.

The Run the Engine dialog box closes.



**Figure 3-15:**  
**Build package dialog**

9. Click **OK**.
10. Click **Yes** to save changes to the application object.

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

11. Click **Yes**.

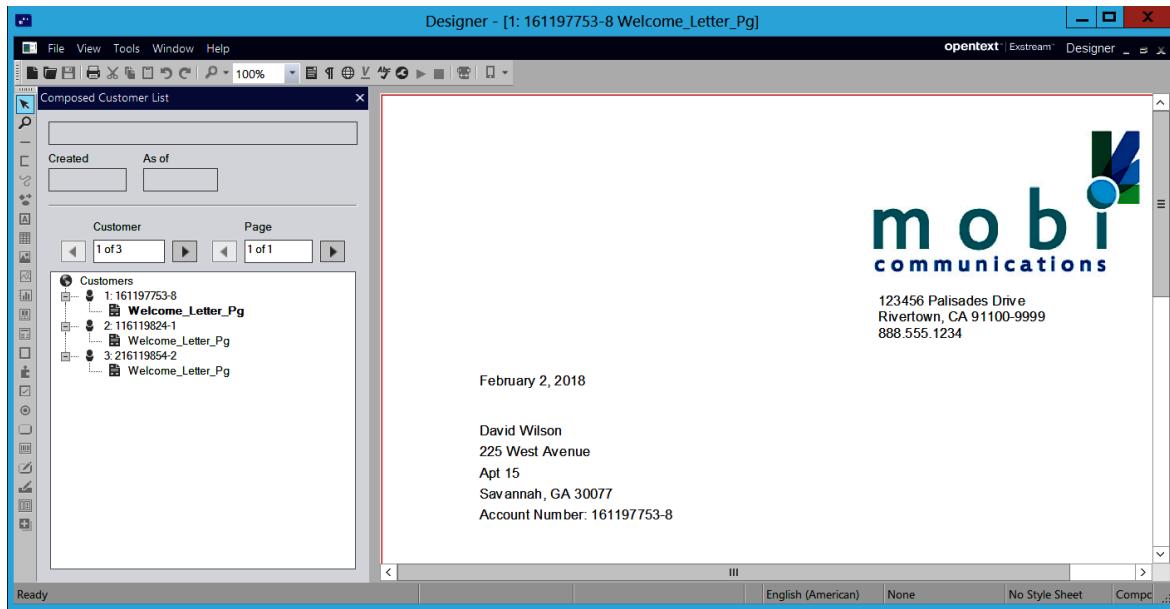
The System Report dialog box opens.

12. Scroll through the messages to review a summary of the engine run.
13. Click **OK**.

The System Report dialog box closes. After the engine has completed the run, the Exstream Viewer opens in Designer to show a preview of the output.

14. Scroll through the customers to see how the welcome letter was personalized for each.

If the Composed Customer List is not visible, then select **View > Composed Customer List.**



**Figure 3-16: Welcome letter preview**

15. Close the Exstream Viewer.

## 4. Creating personalized customer correspondence

### Objectives

After completing this module, you should be able to:

- Describe how variables and data work together in Exstream to personalize customer communications.
- Describe how organizations can enforce standards and branding by using paper types, style sheets, custom dictionaries, excluded word files, and Library components.
- Design a personalized customer correspondence and assemble an application to produce output.
- Use editing tools to help you make your documents more accurate and readable.

### Important terms

The following terms are used in this module:

- **Data file** – A Library object that contains the information required for the engine to locate, read, write, and use data from an external source within an application. There are multiple types of data files.
- **Document** – A Library object that contains all the objects and settings required for the design of a personalized customer communication. A document must contain at least one page.
- **Page** – A Library object that contains the design. A page usually corresponds to a sheet of paper, but not always.
- **Paper type** – A Library object that defines the size, weight, and color of paper stock, as well as media names for printer controls for printed output, or that defines the screen properties for electronic output.
- **Style** – A Library object that represents a specific character or paragraph format in a style sheet.
- **Style sheet** – A Library object that contains a collection of styles and defines the character or paragraph formatting, such as font, size, color, indentation, or spacing.
- **Variable** – A Library object that represents data that changes at engine run time from sources such as customer data, current date and time, pages in a document, or a calculated value.

## Personalized correspondence

Correspondence is one of the most common types of documents produced by any organization, and is one of the most important relationship-building opportunities you can have with customers. A major challenge faced by organizations is creating correspondence that is personalized for the customer, so it is not regarded as impersonal, or ‘junk mail.’ Exstream lets you create correspondence that is timely, relevant, and personalized for each customer.

In this module, you will learn how to use Exstream to create personalized customer correspondence by exploring the following topics:

- **Personalizing communication with variable data** – Exstream lets you incorporate variable data into your design so that every communication is personalized for every individual customer.
- **Enforcing organizational standards and branding** – You will explore the features you can use to help your design users create documents that meet organizational standards and branding requirements.
- **Designing the Mobi privacy policy update letter** – You will complete a set of exercises to design a single-page customer correspondence that is personalized for a set of customers. You will also assemble the application from existing objects and create sample output.
- **Using the editing tools** – You will explore Exstream’s spelling, hyphenation, and readability tools.

In addition to the base configuration of Exstream, the functionality associated with the Publication Support module is required for the exercises within this module.

## Personalizing communications with variable data

Exstream uses customer data to create personalized customer communications. Without personalization, all customers would receive the same impersonal communications.

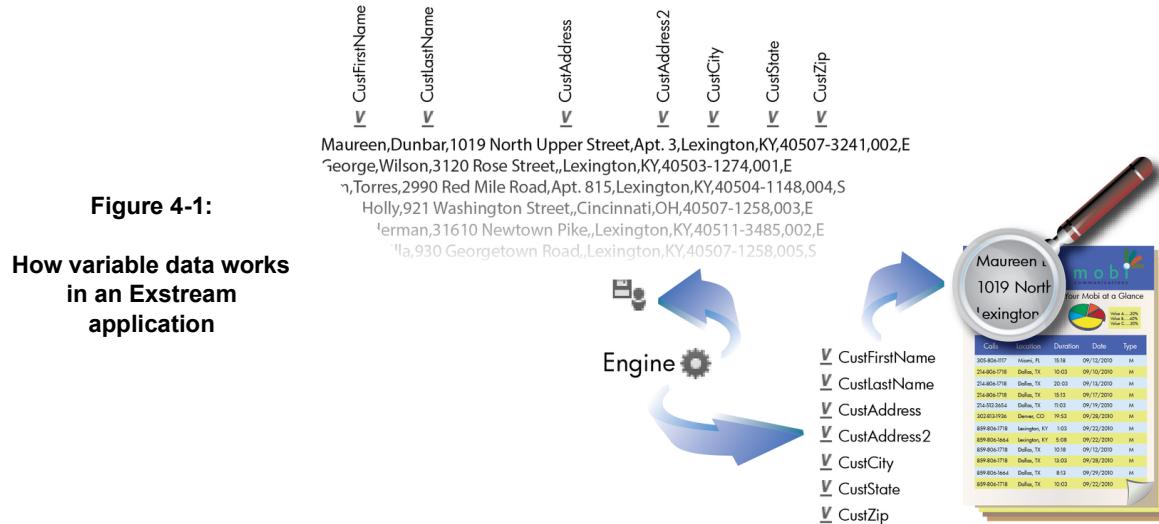
To use data in Exstream, you must create the following types of Library objects:

- **Data files** – Data files define the data that is written when the engine processes an application. A data file object does not contain original data. Instead, data file objects identify and reference external data sources.
- **Variables** – Variables are placeholders for dynamic content. The content can come from data in a data file, information stored on the production system, or information generated during packaging and production. Variables also let you use data during design or production to create customized output and reports.

After you have created data files and variables, you associate the variables with a portion of the data file through a process called mapping. During mapping, you also define how to separate different types of data from each other and the use and format of the data area. When the engine runs, it uses the mapping to populate the variables with the data values in the data file.

Because Exstream is so versatile, it is not the goal of this course to cover all of the possible ways that you can integrate variable data into application objects. Instead, the course will focus only on generally applicable functionality that builds a foundation for more complex application objects.

For more information about creating and formatting data files and variables, see the *Using Data to Drive an Application* guide.



## Data files

Data files are Library objects that let you connect to your data sources so that your customer information can be incorporated into your design. Organizations can have different types of data with a variety of uses and requirements. Exstream lets you create different types of data files and specify different types of formats (for example, columnar, delimited, and XML) to offer the flexibility needed to accommodate the differences in use and requirements.

Some data files only store information. Others load essential data first and store it in memory before the engine performs any other actions to reduce processing time when you go to production. Only the customer driver file, which contains the customer information, is required for every application. Other data files can be used in conjunction with the customer driver file as needed.

If you use multiple data files within an application, they must be placed in a specific order within the application object. Regardless of the type of data file or its format, all data files are mapped in the Edit Panel.

## Variables

Variables are Library objects that are mapped to areas in the data files to represent data that populates at engine run time and personalizes your customer communications. Because organizations have different types of data, variables can be assigned different types of formatting (for example, currency or a text string).

All of the variables that you use in Exstream belong to one of the following categories:

- **System variables** – System variables are variables with values that are automatically set within Exstream. Their data type cannot be changed, and they cannot be renamed or deleted. System variables are identified with a prefix of 'SYS\_' or 'SYSLD\_' (if you have licensed Exstream Interactive documents).
- **User-defined variables** – User-defined variables are variables that your organization creates according to business requirements for your designs. When you create a variable, you must select the type of data that the variable represents, such as a text string, a date, or currency. Some variable types also let you customize the formatting in the output based on the customer locale. For example, if you are creating a variable to represent the days of the week, the values can change based on the language you specified for a customer. User-defined variables can be named according to your organization's naming conventions, but they must meet certain Exstream requirements (the names must not contain spaces and must be under 255 characters).

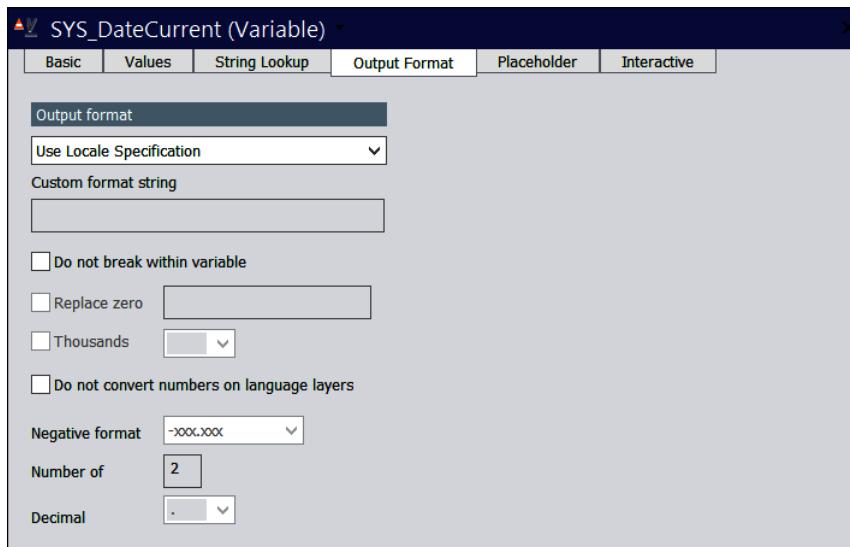


### **Exercise 4.1: View system variables in the Property Panel**

1. Open Design Manager.
2. In the Library, expand the **Introduction > Data Dictionary** heading.
3. Open the **<SYS\_DateCurrent>** variable object in the Property Panel.

Notice that most properties are inactive. You cannot make changes to most system variables, though some require you to set the value.

4. Click the **Output Format** tab and notice that these properties can be set for the <SYS\_DateCurrent> variable object.



**Figure 4-2:**  
Viewing system variable properties



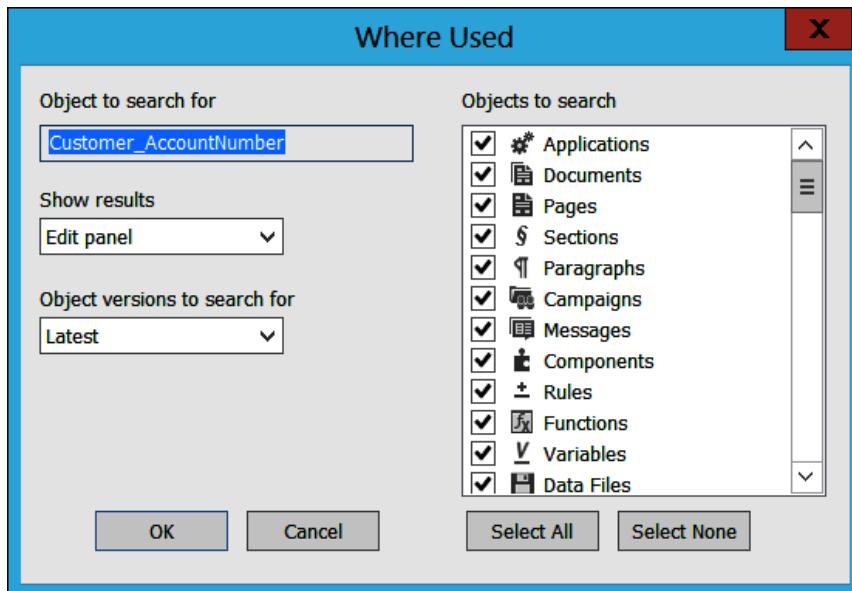
#### Exercise 4.2: View user-defined variables in the Property Panel

1. In the Library, open the <Customer\_AccountNumber> variable object in the Property Panel.
2. Notice that most properties are active.

Since you have super user access during this course, you can make changes to user-defined variables. Keep in mind that you might not have access to make changes to user-defined variables at your workplace.

Before you make a change to a variable, it is a best practice to first check where it is used by right-clicking on the variable and selecting **Where Used**.

**Figure 4-3:**  
**Where used dialog**



#### **Instructor demonstration**

1. *Watch the instructor-led demonstration of how variables are displayed in Designer and how to toggle between the variable and design views.*

You can embed variables in imported text by placing the variable name in angle brackets (<>). When the text file is imported, Designer inserts the variable into the design.



#### **Exercise 4.3: View variables embedded in a text file**

1. *Go to the following directory:  
C:\Training\Introduction\Text Files.*
2. *Double-click Mobi\_PrivacyPolicy\_Update\_010112.txt.*
3. *Review the text file and note that the variable Customer\_Name\_First appears in the body as <Customer\_Name\_First>.*
4. *Close the text file.*

## Enforcing organizational standards and branding

Enforcing styles and standards for customer-facing documents ensures that your communications keep a professional, consistent appearance.

In the following sections, you will explore the following features you can use to help your design users create documents that meet organizational standards and branding requirements:

- **Paper types** – Paper types help control document design across your organization by letting you define the physical properties of the page.
- **Style sheets** – Style sheets let you control the formatting of the text on the page by defining paragraph and text styles that can be applied to the design. You can use style sheets to enforce font usage for branding purposes or to set paragraph spacing for optimal appearance of text in a design.
- **Custom dictionaries** – Custom dictionaries let you add words to the standard Exstream spelling dictionary or control word usage by identifying words that should not be used in customer communications.
- **Components** – Components are objects, such as an address block or company logo that you create in Designer and save to the Library for reuse in multiple designs.
- **Templates** – You can create templates for pages and messages to enforce the size and other physical properties of areas in the design.

### Paper types

In Exstream, documents do not contain content. Documents are parent objects that are used to organize other Library objects that contain the document content, such as pages, messages, and sections. You can use documents to organize the objects that contain content into logical categories. For example, suppose you are creating an application to send policy information to customers. You might use one document object to contain the pages that provide cover letter information and a second document object to contain the pages and sections that provide the policy information.

In Exstream, page objects contain your design. They can also be parent objects for other objects that contain content, such as messages, sections, and paragraphs. You can also set up your design so that a sheet of paper holds multiple pages (called multiple-ups), which is often the case in large-scale print jobs. Page objects are stored in the Library and then edited in Designer.

Pages in the design environment often correspond to a physical sheet of paper, but not always. For example, if you create output in an electronic format, such as HTML, a page in the design environment does not always equate to a page in the output device. You can also use containers to create a layout that is optimized for the devices that customers use to view the content. For more information about designing the layout and content using containers, see the Designing in Exstream guide.

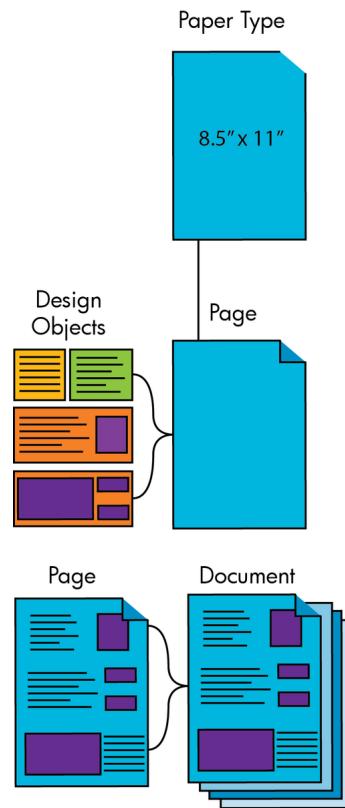


### Instructor demonstration

1. Watch the instructor-led demonstration of how document objects are structured within the library.

Paper types help control document design across your organization by letting you define the physical properties of the page (for example, they define the paper dimensions and paper weight). Paper types can also control output-specific options, such as copygroup names and formdef options for AFP output. Unlike page templates, paper types do not control the styles, fonts, or design capabilities that are available for pages created using the paper type..

**Figure 4-4:**  
**Document design using a paper type**

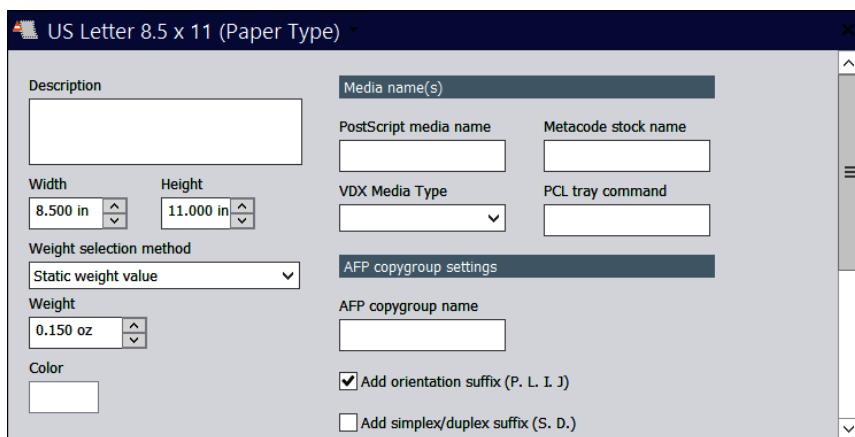


You will use a pre-existing paper type to create a new page in the exercise 'Creating a page using a paper type' below.



#### **Exercise 4.4: View a paper type object in the Property Panel**

1. In Design Manager, under the Library, expand the **Introduction > Environment > Design > Paper Types** heading.
2. Open the **US Letter 8.5 x 11** paper type object in the Property Panel.
3. Review the properties.



**Figure 4-5:**

**Paper type object**

4. Close the paper type object.

#### **Style sheets**

Style sheets let you define text styles for designs to ensure consistency across the organization. After you apply a style sheet to a template, page, message, or paragraph object, all of the styles assigned to that style sheet are available for use. You can use style sheets if your organization licenses the Publication Support module.

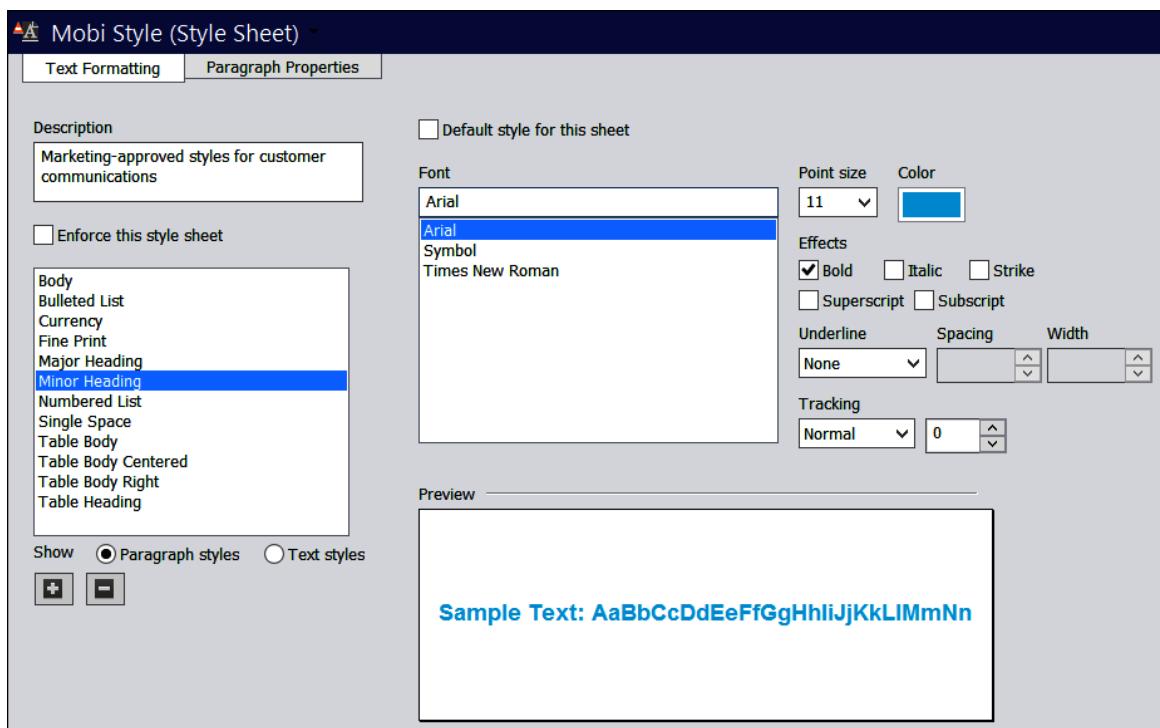
Styles define formatting, which affects the appearance of documents. There are two types of styles:

- **Paragraph styles** – Define the formatting of the text, as well as paragraph settings (for example, spacing, indentation, bullet styles, and flow). Paragraph styles apply the formatting to the entire paragraph.
- **Text styles** – Define the formatting of text font, size, and usage. Text styles apply formatting only to highlighted text. You can also apply text styles to the parts of a paragraph that are formatted with a paragraph style.



### Exercise 4.5: View a style sheet in the Property Panel

1. In the Library, expand the **Introduction > Environment > Design > Style Sheets** heading.
2. Open the **Mobi Style** style sheet object in the Property Panel.
3. Click through the list of paragraph styles and text styles to see the different formatting assigned to each.
4. Compare the paragraph and text styles and note that the key difference between the two is that the text styles do not have a **Paragraph Properties** tab that provides additional formatting options. This difference is because text styles apply only to selected text instead of the whole paragraph.



**Figure 4-6: Style sheet properties**

#### Custom dictionaries

In addition to the spell checker and grammar checker functions, Exstream lets your organization customize your word checks by creating two types of custom dictionaries: spelling and excluded word.

In Exstream, spelling dictionaries contain words that are considered misspelled by standard dictionaries, but that your organization wants to be considered correct. For example, "Mobi" is considered an incorrectly spelled word in a standard dictionary; however, it is the company's brand identity, so it must be considered correct. The spelling dictionary entries function as your organization's custom additions to the regular spell checker that is delivered with Exstream.

Excluded word dictionaries contain words that your organization does not want to be used in customer communications. For example, suppose that Mobi Communications prefers the phrase “mobile device” instead of “cell phone” in their customer communications. They can create entries in an excluded word dictionary for “cell” and “phone.” During an excluded word check, if the words “cell” or “phone” appear in the text of a design, then Designer marks the words with a wavy brown line to indicate to the design user that the words are not permitted.

You will explore custom dictionaries, spelling and grammar checks, excluded words and hyphenation in the exercises at the end of this chapter.

## Components

To save time and ensure a consistent appearance across multiple applications, your organization can create and use components in designs. Components are design objects that you save to the Library from Designer so that they can be reused in multiple designs. You can save objects that you create in Designer as components, or you can save objects that you import, such as images, as components. For example, your organization can save its logo as a component so it can easily be added to future designs. When you create a Library component, you can set up restrictions on the object to restrict users from changing the size or placement of the object in the design.



### **Exercise 4.7: View a component in the Property Panel**

1. In the Library, expand the **Introduction > Components** heading.
2. Open the **Mobi Logo** component object in the Property Panel.
3. Review the properties and note that restrictions have been placed on the logo.

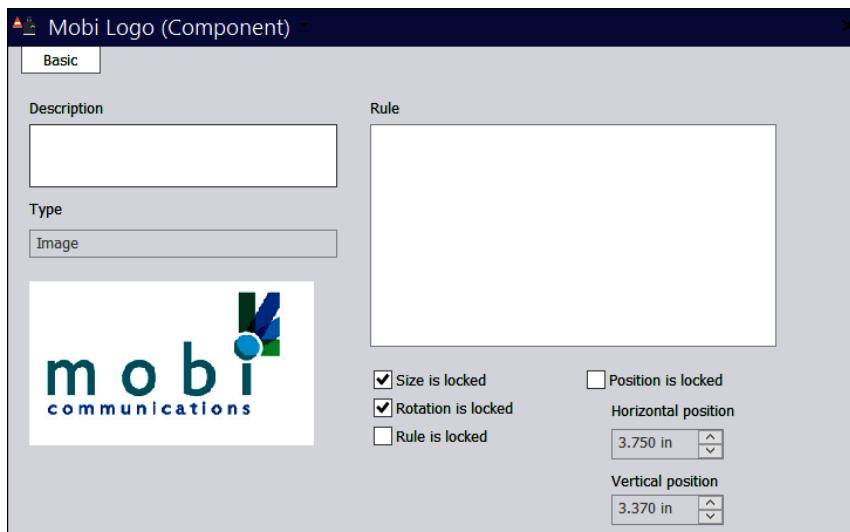


Figure 4-7:

## Component properties

The selected options indicate that design users cannot resize or rotate the Mobi Communications logo when the component is used in a design. Note that this does not prevent a user with the appropriate permissions from creating a copy in Designer and then modifying the properties of that copy.

4. *Close the component object.*

## Templates

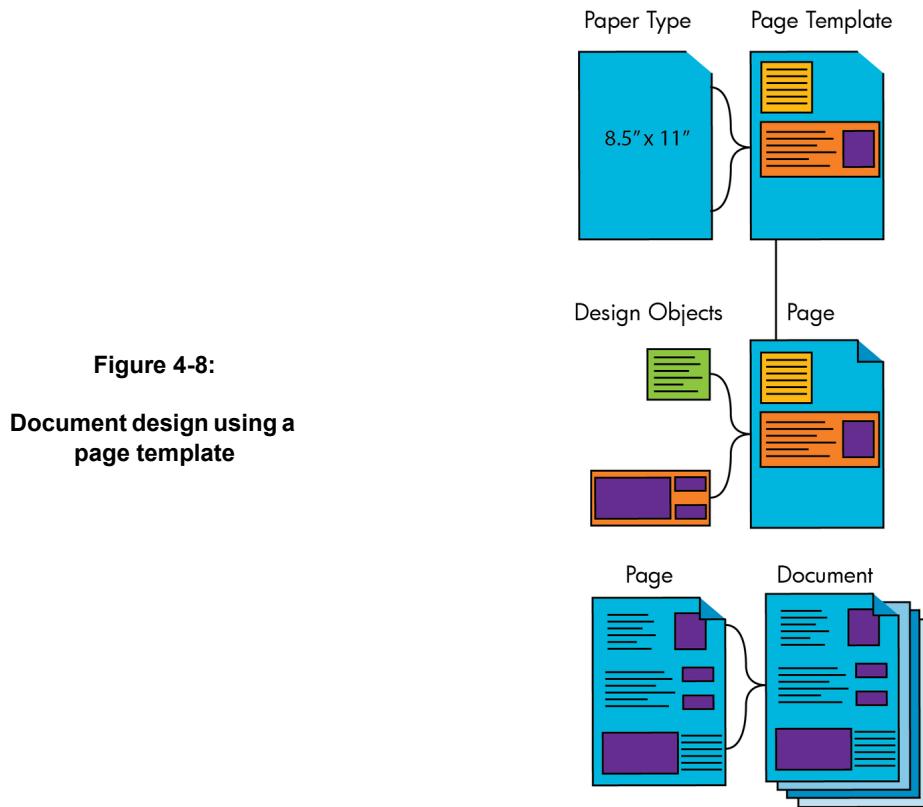
Page templates help control document design across your organization by letting you pre-set objects to ensure that documents have a consistent design, even if multiple people design documents. Page templates provide the background design for your content and enforce design standards by pre-defining design settings and even restricting specific design activities, such as which variables can be used and whether objects can be moved. Page templates provide more control over document appearance than paper types.

Page templates reduce or eliminate the need to recreate common design objects every time you create a new document. They are ideal for containing common design objects that do not change often, or design objects that you want to ensure are used consistently across the organization, such as the following:

- Letterhead content
- Logo placement
- Barcode placement
- Page numbers
- Page footers
- Page orientation
- Style sheets

Many organizations already use page templates as part of their document processes, but these templates often get customized by different departments and become out of sync. For example, suppose your organization has a common letterhead that all departments use, but the finance department and the marketing department have slightly different contact information that they want to use on their communications. Both departments must access a common base template that they can customize based on their needs. Exstream provides a central point for accessing and designing documents for your whole organization. You can create a single template that is designed based on the common letterhead, and each department can insert its own return address block.

In Exstream, page templates are stored in the Library, and can be reused across applications and by any design group that has permissions. You can use page templates to add design suggestions for new pages, insert shapes to shade areas where important information must appear, and add text to provide instructions to the designer on what type of content should or should not be included in the design, such as `Enter text here` in a text box. These design suggestions are known as starter objects.



You will use a pre-existing template to create a new page in the forthcoming 'Creating a page using a page template' exercise.



#### **Exercise 4.8: View the properties of a page template object**

1. In the Design Manager Library, expand the **Introduction > Environment > Design > Templates > Page Templates** heading.

2. Open the **Mobi Correspondence** page template object in the Property Panel.

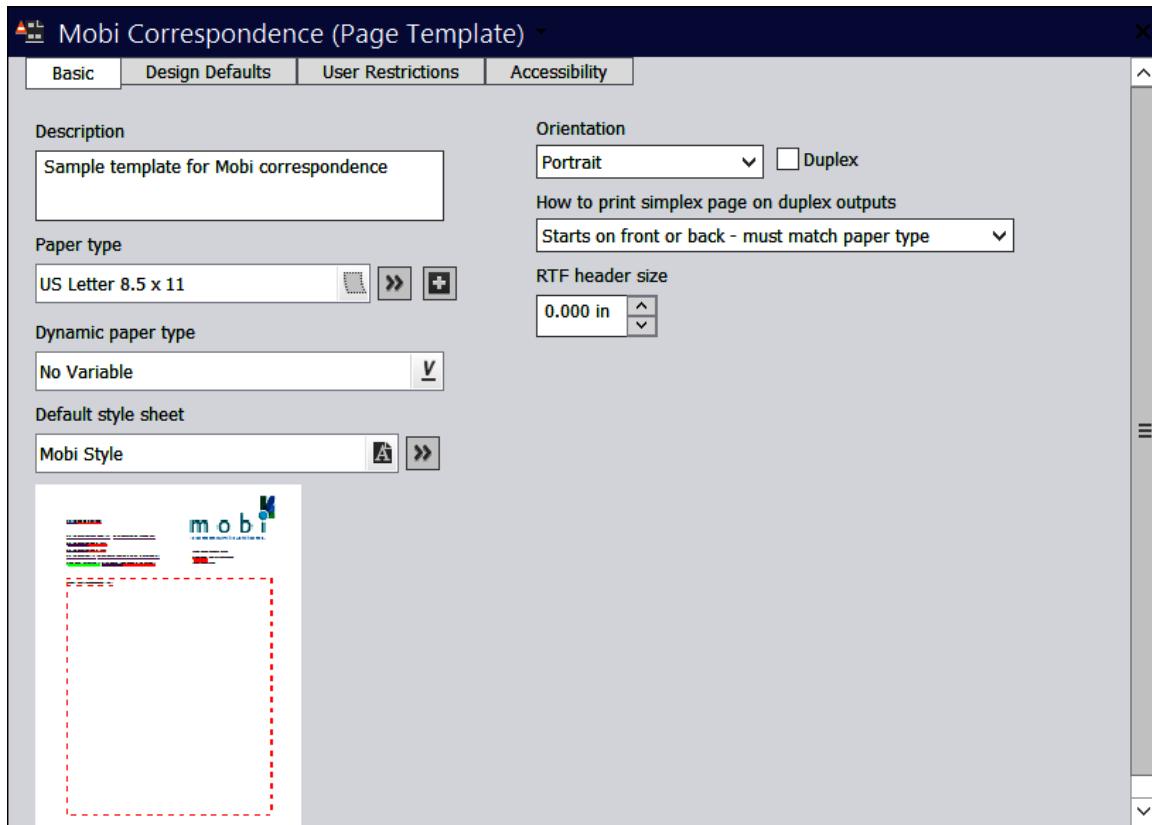


Figure 4-9: Page template properties in Design Manager

3. Review the properties and note that a default style sheet has been defined and user restrictions have been placed on the template.
4. Drag and drop the **Mobi Correspondence** page template object from the Library to the Edit Panel.

The page template object opens in Designer.

5. In the design window, click the text box that contains the text 'Insert correspondence text' and click .

The Text Properties dialog box opens.

6. Click the **Template Object** tab.
7. Make sure that the **Starter object** check box is selected and that the **Starter text** box contains instructional text.
8. Click **OK**.
9. Close the page template object without saving any changes, but leave Designer open for the next exercise.



**Exercise 4.9: View a page object that was created using a template**

1. In Designer, from the Menu bar, select **File > Open**.
2. From the **Object type to show in list** area, select **Pages**.
3. From the **Folder** area, select **Customer Correspondence** and then click **OK**.
4. From the **Name** area, select **Sample\_Correspondence**.
5. Click **OK**.

The page opens in the design window.

6. Review the page design and note that the starter object has a red border and the instructional text is underlined in red.
7. Place the cursor in the text box and enter some text.
8. In the design window, click a blank area of the page to ensure that no design objects are selected. Note that the red border no longer appears around the text box.
9. Close the page object without saving any changes.

## Designing the Mobi Privacy Policy Update letter

Mobi Communications currently uses a collection of Microsoft Word templates to manage customer correspondence. Unique customer data is entered manually or by using Word's mail merge feature, which is prone to error. Mobi regularly sends notices about privacy policy updates to their customers.

As a designer for Mobi Communications, you have been tasked with creating the visual design for the privacy policy update in Exstream. The customer correspondence application must meet the following requirements:

- It must use variable data to personalize the correspondence for each customer, so that their names and addresses appear correctly in the address block.
- It must be designed to match Mobi Communications letterhead, which fits on 8.5" x 11" paper.
- It must meet corporate branding standards for logos, fonts, and wording.
- It must include content the legal department has approved.

Because the Mobi Privacy Policy Update Letter is the first major design project you have been assigned, you have also been tasked with looking for opportunities for speeding up future design projects.

### Creating the correspondence design in Designer

To design the Mobi Privacy Policy Update Letter, you must complete the following exercises:

- Creating the correspondence design in Designer
- Assembling the correspondence application
- Packaging the application and running the engine

To create the correspondence design in Designer, you must complete the following exercises:

- Creating a page using a paper type
- Inserting a component from the library
- Creating a text box
- Importing and formatting text with a style sheet
- Inserting and formatting text manually
- Inserting an image
- Inserting variables
- Creating a component
- Running word checks



#### **Exercise 4.10: Create a page using paper type**

1. Open Designer.
2. From the Menu bar, select **File > New**.

The Create New Item dialog box opens.

3. From the **What to create** area, select **Page**.
4. In the **Name** box, enter *Privacy\_Policy\_Update\_Pg*.
5. In the **Description** box, enter *Updated Mobi privacy policy, effective January 1, 2019*.

6. Next to the **Folder** box, click

The Folders dialog box opens.

7. Select the **Customer Correspondence** folder and click **OK**.

The Folders dialog box closes.

8. Click **Next**.

9. Next to the **Paper type** box, click

The Select Paper Type dialog box opens.

10. From the **Name** area, select **US Letter 8.5 x 11** and click **OK**.

The Select Paper Type dialog box closes.

11. Click **Finish**.

A new blank page opens in Designer.



#### **Exercise 4.11: Insert a component from the library**

1. On the Drawing Objects toolbar, click

The Select Component dialog box opens.

2. From the **Folders** list, make sure that **All folders** is selected.

3. In the Components area, select **Mobi Logo** and click **OK**.

The Select Component dialog box closes and the logo is placed on the design page.

4. Click



**Figure 4-10:**

Accessing the Image Properties dialog

The Image Properties dialog box opens.

5. Click the **Placement** tab.
6. Set the position of the logo as follows:

Box	Enter
Horizontal position	4.75
Vertical position	0.25

You reviewed the properties for this component in Exercise 4.7 for 'Components' above. As you saw during that exercise, resizing is restricted for this component. Because of this restriction, the options for setting the height and width of the object are inactive.

7. Click **OK**.

The Image Properties dialog box closes.

8. Save the page object.

#### Inserting and formatting text

To insert and format the text needed in the Mobi Privacy Policy Update Letter, you must complete the following exercises:

- Creating a text box
- Importing text and formatting with a style sheet
- Manually inserting and formatting text



#### Exercise 4.12: Create a text box

1. On the Drawing Objects toolbar, click  A.

The cursor changes to  when the pointer is positioned over the design window.

2. Click inside the design window wherever you want to place a text box.

3. Click .

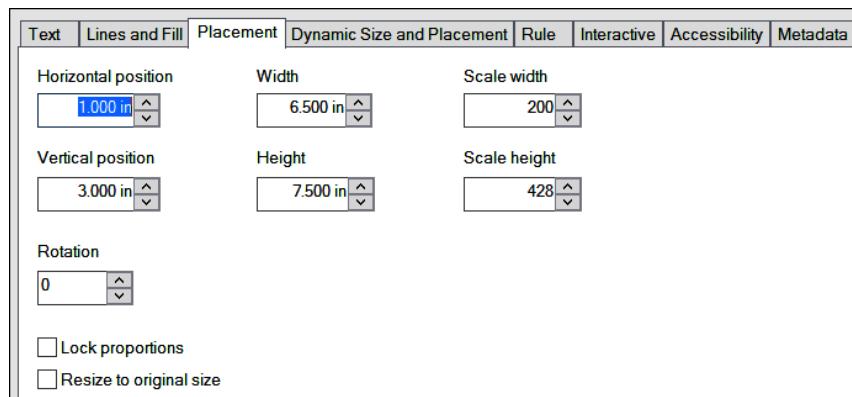
The Text Properties dialog box opens.

4. Click the **Placement** tab.

5. Set the position and size of the text box as follows:

Box	Enter
<b>Horizontal position</b>	1
<b>Vertical position</b>	3
<b>Width</b>	6.5
<b>Height</b>	7.5

**Figure 4-11:**  
Setting the text box properties for placement



6. Click the **Dynamic Size and Placement** tab and complete the following:
- In the **Reference name** box, enter Privacy Policy Update letter body.



It is a best practice to name all of the design objects on the page.

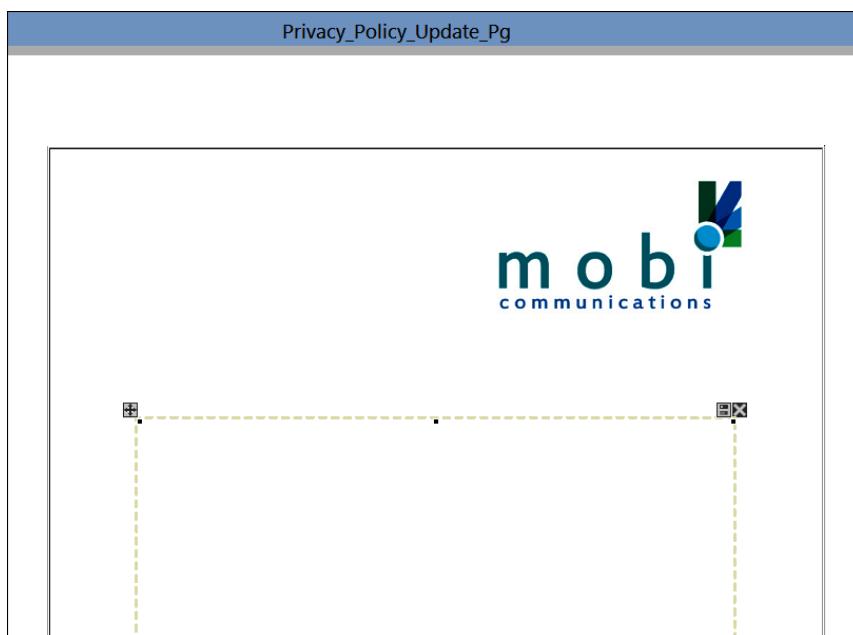
---

The name you enter in the **Reference name** box identifies the object during design in the Outline Viewer, in reports created during testing, or in messages encountered during troubleshooting.

- Clear the **Autosize width** and **Autosize height** check boxes (if set).
7. Click **OK**.

The Text Properties dialog box closes. The text box resizes and repositions, and the name appears in the Outline Viewer.

**Figure 4-12:**  
**Text box and logo in position**



8. *Save the page object.*



#### **Exercise 4.13: Import text and format with a style sheet**

In Designer, you will insert the text of the letter and apply the specified formatting. In this exercise, you will import the text from an external text file. You will also format the text using a pre-existing style sheet.

1. *Place the cursor in the text box.*
2. *Import the text provided by the Legal department by completing the following steps:*
  - a. *From the Menu bar, select Insert > Import > Text File.*

The Open dialog box opens.

- b. *From the list next to the File name box, select Text Files (\*.txt).*
- c. *Go to the following directory:*  
*C:\Training\Introduction\Text Files.*
- d. *Select Mobi\_PrivacyPolicy\_Update\_010112.txt and click Open.*

The Open dialog box closes and the text is imported into the text box.

3. Select the style sheet by completing the following steps:
  - a. From the Menu bar, select **Format > Style > Select Style Sheet**.

The Select Style Sheet dialog box opens.

- b. Select **Mobi Style** and click **OK**.

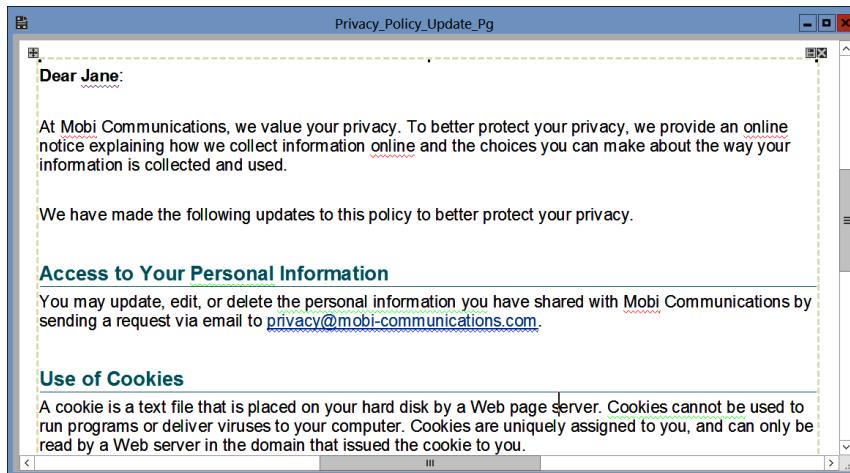
The Select Style Sheet dialog box closes.

4. Apply the required paragraph and text styles to the body of the letter by completing the following tasks (you may need to activate the Formatting toolbar by selecting **View > Toolbars**):

To	Do this
Set a baseline style for the text	<ul style="list-style-type: none"><li>● Place the cursor in the text box and press <b>CTRL + A</b> to select all the text.</li><li>● From the Formatting toolbar, select the <b>Body</b> paragraph style.</li></ul>
Apply a paragraph style to the major headings in the text	<ul style="list-style-type: none"><li>● Place the cursor in the <b>Access to Your Personal information</b> line.</li><li>● From the Formatting toolbar, select the <b>Major Heading</b> paragraph style.</li><li>● Place the cursor in the <b>Use of Cookies</b> line.</li><li>● Repeat step 2.</li></ul>
Apply a paragraph style to the bulleted list items in the text	<ul style="list-style-type: none"><li>● Highlight the following lines:<ul style="list-style-type: none"><li>– Visit <a href="http://www.mobi-communications.com">http://www.mobi-communications.com</a> and click 'Contact Us'</li><li>– Contact us via email at <a href="mailto:privacy@mobi-communications.com">privacy@mobi-communications.com</a>.</li><li>– Call us at (888) 555-1234.</li></ul></li><li>● From the Formatting toolbar, select the <b>Bulleted List</b> paragraph style.</li></ul>

To	Do this
Add static text hyperlinks	<ul style="list-style-type: none"><li>● Highlight the following text strings, one at a time, right-click, and select <b>Add text hyperlink</b>:<ul style="list-style-type: none"><li>– privacy@mobi-communications.com (2 instances)</li><li>– http://www.mobi-communications.com/privacy-policy</li><li>– http://www.mobi-communications.com</li></ul></li><li>● In the <b>Hyperlink Properties</b> dialog box, do one of the following:<ul style="list-style-type: none"><li>– For the email hyperlink, select mailto: from the list and enter privacy@mobi-communications.com in the box.</li><li>– For the other hyperlinks, select http:// from the list and enter the applicable URL in the box.</li><li>– Select the <b>Open in new window</b> check box and click <b>OK</b>.</li></ul></li></ul>
Apply a text style to text that must be emphasized or distinguished from other text	<ul style="list-style-type: none"><li>● Highlight the following text strings, one at a time, and from the Formatting toolbar, select the <b>Emphasis</b> text style:<ul style="list-style-type: none"><li>– Dear CustomerName_First</li><li>– John Thompson</li></ul></li><li>● Highlight the following text strings, one at a time, and from the Formatting toolbar, select the <b>Hyperlink</b> text style:<ul style="list-style-type: none"><li>– privacy@mobi-communications.com (2 instances)</li><li>– http://www.mobi-communications.com/privacy-policy</li><li>– http://www.mobi-communications.com</li></ul></li></ul>

**Figure 4-13:**  
Formatted text using style sheet



5. Save the page object.



#### Exercise 4.14: Insert and format text manually

In Designer, you will insert a text box and the text of the return address and apply specified formatting. In this exercise, the text will be manually entered and formatted.

1. In the design window, click a blank area of the letter to ensure that no design objects are selected.
2. Create a text box with the following specifications applied in the **Text Properties** dialog box:

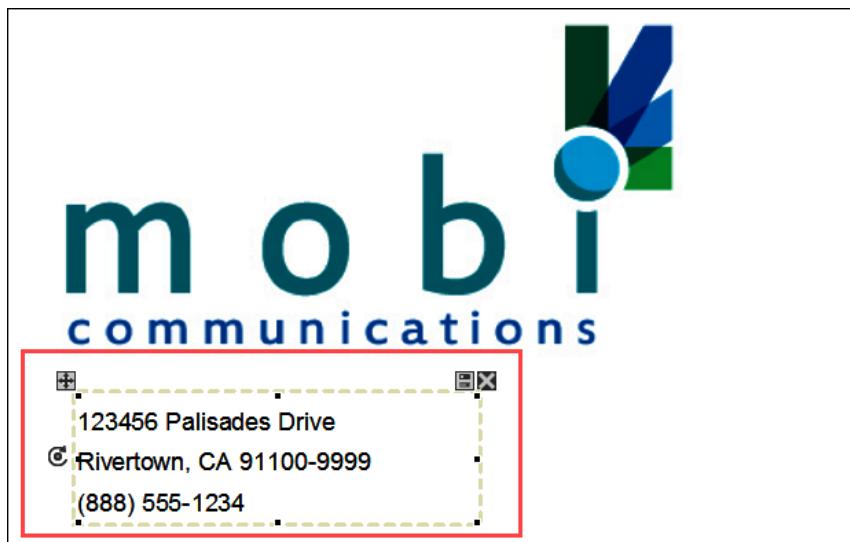
To	Do this
Set the position and size of the text box	<ul style="list-style-type: none"> <li>Click the Placement tab.</li> <li>In the <b>Horizontal position</b> box, enter 5.</li> <li>In the <b>Vertical position</b> box, enter 2.</li> <li>In the <b>Width</b> box, enter 1.75.</li> <li>In the <b>Height</b> box, enter 0.55.</li> </ul>
Specify a reference name for the text box	<ul style="list-style-type: none"> <li>Click the <b>Dynamic Size and Placement</b> tab.</li> <li>In the <b>Reference name</b> box, enter Mobi Return Address.</li> <li>Clear the <b>Autosize width</b> and <b>Autosize height</b> check boxes.</li> <li>Click <b>OK</b> to close the <b>Text Properties</b> dialog box.</li> </ul>

3. Place the cursor in the text box.
4. Enter the following text:

123456 Palisades Drive  
Rivertown, CA 91100-9999  
(888) 555-1234

5. Select all the text in the text box and, using the Formatting toolbar, apply Arial, size 8 font.

Figure 4-14:  
Text box with return address



6. Save the page object.



#### Exercise 4.15: Insert an image

1. In the body of the letter, place the cursor in the blank line above John Thompson.
2. On the Drawing Objects toolbar, click or use the keyboard shortcut that you created earlier and press **CTRL + SHIFT + I**.

The Import an Image dialog box opens.

3. Go to **C:\Training\Introduction\Image Files**.
4. Select **signature.jpg** and click **Open**.

The Import an Image dialog box opens.

5. From the **Change list**, select **Convert to design resolution**.
6. Click **OK**.

An informational message appears.

7. Click **OK**.

The Embed Properties dialog box opens.

8. Verify that, from the **Embed method** list, **Inline (within text)** is selected.

9. Click **OK**.

The Embed Properties dialog box closes and the signature is embedded in the text box.

10. Select the image and click .

The Image Properties dialog box opens.

11. Click the **Dynamic Size and Placement** tab.

12. In the **Reference name** box, enter **VP Signature**.

13. Click **OK**.

The Image Properties dialog box closes.

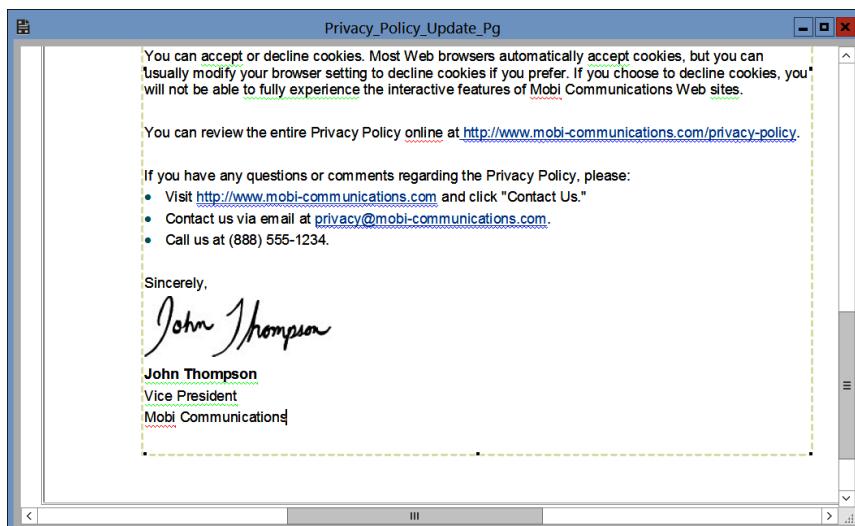


Figure 4-15:

Signature image inserted

14. Save the page object.

**Inserting variables**

To complete the personalization needed for the Mobi Privacy Policy Update Letter, you must complete the following exercises:

- Inserting a system variable
- Inserting a user variables

**Exercise 4.16: Insert a system variable**

In Designer, you will insert the system variable to place the current date on the correspondence. To place the date on the correspondence, you must first create a text box to contain the variable.

1. *In the design window, click a blank area of the letter to make sure that no design objects are selected.*
2. *Create a text box with the following specifications applied in the **Text Properties** dialog box:*

To	Do this
Set the position and size of the text box	<ul style="list-style-type: none"><li>● Click the <b>Placement</b> tab.</li><li>● In the <b>Horizontal position</b> box, enter 1.</li><li>● In the <b>Vertical position</b> box, enter 1.</li><li>● In the <b>Width</b> box, enter 1.5.</li><li>● In the <b>Height</b> box, enter 0.25.</li></ul>
Specify a reference name for the text box	<ul style="list-style-type: none"><li>● Click the <b>Dynamic Size and Placement</b> tab.</li><li>● In the <b>Reference name</b> box, enter Current Date.</li><li>● Clear the <b>Autosize width</b> and <b>Autosize height</b> check boxes.</li><li>● Click <b>OK</b> to close the <b>Text Properties</b> dialog box.</li></ul>

3. *If the Variable Palette is not visible, select **View > Variable Palette** from the Menu bar.*
4. *On the Variable Palette, apply the following filters:*

- a. Click and select **All Types**.

The button changes to .

- b. Click and select **All Folders**.

Designer filters the variable list to display variables in all database folders.

- c. On the **Variable Palette**, click and select **Only System Variables**.

The button changes to  and Designer filters the variable list to display only system variables.

5. From the **Variable Palette**, double-click <SYS\_DateCurrent>.

The variable appears in the text box.

6. Save the page object.



#### **Exercise 4.17: Insert user variables**

In Designer, you will insert a series of user variables to create the customer's address block. To place the address block on the correspondence, you must first create a text box to contain the variable.

1. In the design window, click a blank area of the letter to ensure that no design objects are selected.
2. Create a text box with the following specifications applied in the **Text Properties** dialog box:

To	Do this
Set the position and size of the text box	<ul style="list-style-type: none"> <li>● Click the <b>Placement</b> tab.</li> <li>● In the <b>Horizontal position</b> box, enter 1.</li> <li>● In the <b>Vertical position</b> box, enter 1.5.</li> <li>● In the <b>Width</b> box, enter 3.</li> <li>● In the <b>Height</b> box, enter 1.25.</li> </ul>
Specify a reference name for the text box	<ul style="list-style-type: none"> <li>● Click the <b>Dynamic Size and Placement</b> tab.</li> <li>● In the <b>Reference name</b> box, enter Customer Address Block.</li> <li>● Clear the <b>Autosize width</b> and <b>Autosize height</b> check boxes.</li> </ul>
Set up the text box to remove blank lines for variables that do not contain values  For example, if the customer does not have a second address line, such as an apartment number, then the output will not have a blank line in the text box for 'CustomerAddress2'.	<ul style="list-style-type: none"> <li>● Click the <b>Text</b> tab.</li> <li>● Select the <b>Remove empty variable lines</b> check box.</li> <li>● Click <b>OK</b> to close the <b>Text Properties</b> dialog box.</li> </ul>

3. On the Variable Palette, click  and select **No System Variables**.

Filtering the variable list in the Variable Palette can save you time and increase your accuracy when inserting variables. You can also enter the name (or partial name) of the variable that you want to find and click to filter the variable list.

The button changes to  and the variable list displays only user variables.

4. *Double-click the variable names in the Variable Palette to create the following text block:*
  - a. <Customer\_Name\_First> <Customer\_Name\_Last>
  - b. <Customer\_Address1>
  - c. <Customer\_Address2>
  - d. <Customer\_City>, <Customer\_State> <Customer\_ZIP>
  - e. <Customer\_AccountNumber>
5. *Place the cursor before the <Customer\_AccountNumber> variable and enter Account Number: followed by a space.*



**Figure 4-16:**

**Inserting customer address variables**

6. *Save the page object.*

**Creating a Library component**

Because the address block is a highly-reusable design object for all types of customer correspondence, convert the text box to a Library component in Designer to save time on future designs. Save the component to the root directory so that it is easier to find.



**Exercise 4.18: Create a component**

1. *In the design window, click a blank area of the letter to ensure that no design objects are selected.*
2. *If the Outline Viewer is not visible, select View > Outline Viewer from the Menu bar.*
3. *From the Outline Viewer, right-click Customer Address Block and select Library component > Add to Library.*

The Folders dialog box opens.

4. Select the **Introduction** folder and click **OK**.

The Customer Address Block dialog box opens.

5. In the **Description** box, enter *Block contains customer name, address, and account number*.
6. Click **Next**.

The Library Component Properties dialog box opens.

7. Select the **Size is locked** check box so that the component can not be resized.
8. Click **Finish**.

In the Outline Viewer, an indicator appears next to **Customer Address Block** to show that it is a Library component. In the design window, the resize handles on the text box change to show that it is locked.

**Figure 4-17:**  
**Customer Address Block**  
object with locked  
dimensions



9. Save the page object.
10. In Design Manager, in the Library, expand the **Introduction > Components** heading.

The new component appears in the list and can now be reused in other designs without recreating it.

**Running word checks** In Designer, you will validate the page content by running a combination spell check, grammar check, and excluded word check on the page content. Make corrections as needed.



#### Exercise 4.19: Run word checks

1. From the Designer Menu bar, select **Tools > Options**.

The Designer Options dialog box opens.

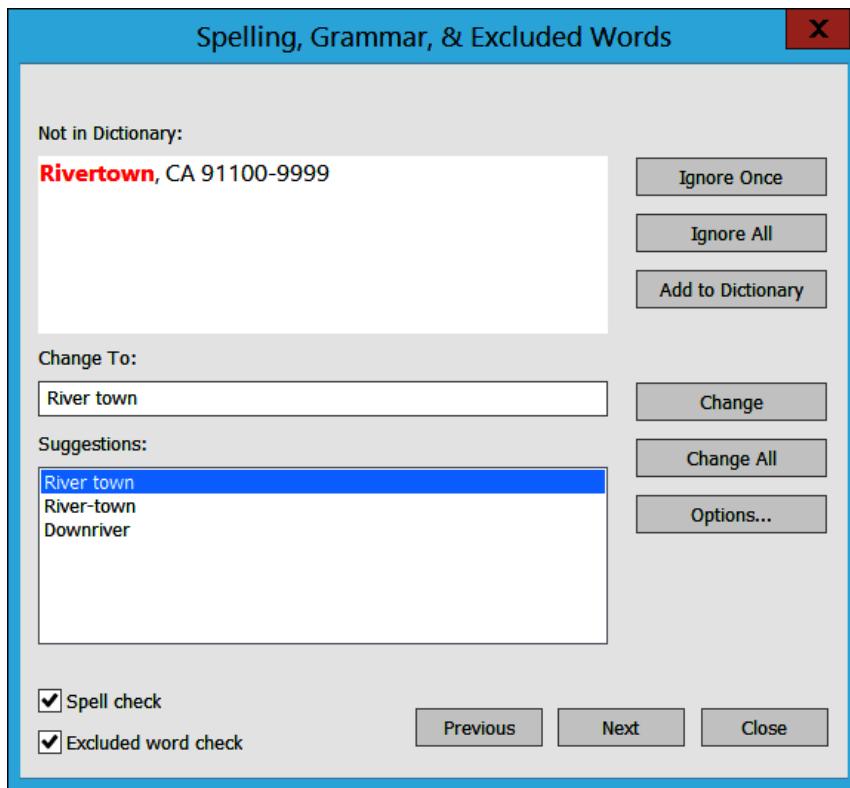
2. Click the **Spelling** tab.
3. Select the **Check with local user dictionary** check box.
4. Click the **Excluded Words** tab.
5. Select the **Check for excluded words** check box.
6. Click **OK**.

The Designer Options dialog box closes.

7. Select the word, paragraph, or text box that you want to check. If you want to check all of the text in a design, click a blank area of the design to ensure that no design objects are selected.
8. On the Standard toolbar, click .

The Spelling, Grammar, & Excluded Words dialog box opens.

9. On the **Spelling, Grammar, & Excluded Words** dialog box, use the buttons to move between errors, making corrections or ignoring as needed.



**Figure 4-18:**  
**Running word checks**

10. Save and close the page object.

**Assembling the correspondence application**

In Design Manager, you will set up the properties for the application object you created in the exercise ‘Creating a Library Object’, and then add all of the objects needed to produce output.

**Exercise 4.20: Assemble the correspondence application**

1. In the Design Manager Library, expand the **Introduction > Customer Correspondence > Applications** heading.
2. Open the **Privacy\_Policy\_Update\_App** application object in the Property Panel.
3. Specify the default locale for the application by completing the following steps:

a. On the **Basic** tab, next to the **Default locale** box, click .

The Select Locale dialog box opens.

- b. Select **English**.
  - c. Click **OK**.
4. Specify a variable that identifies customers in the system report by completing the following steps:

a. On the **Basic** tab, in the **Customer identification variables** area, next to the **Customer ID for reporting** box, click .

The Select Variable dialog box opens.

- b. From the list of variables, select **<Customer\_AccountNumber>** and click **OK**.

The Select Variable dialog box closes.

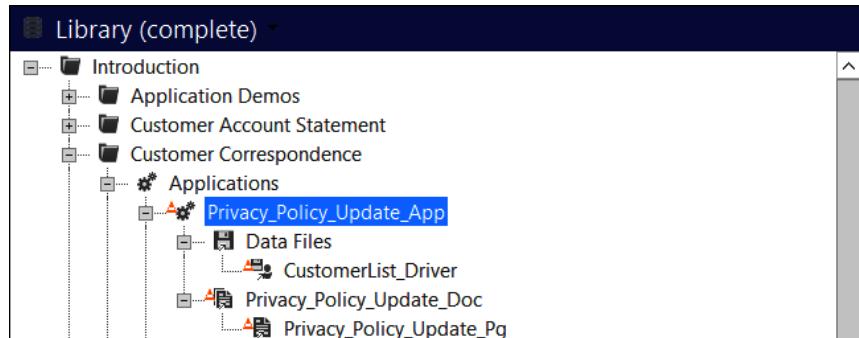
- c. Save and close the application object.
5. To add references to the application object for the document and page objects, complete the following steps:
  - a. Expand the **Introduction > Customer Correspondence > Documents** heading.
  - b. Expand the **Introduction > Customer Correspondence > Pages** heading.
  - c. Drag-and-drop the **Privacy\_Policy\_Update\_Pg** page object to the **Privacy\_Policy\_Update\_Doc** document object.

A reference for the page object is created. To see the reference, expand the document object.

- d. Drag-and-drop the **Privacy\_Policy\_Update\_Doc** document object to the **Privacy\_Policy\_Update\_App** application object to create a reference for the document object.

6. To add a reference to the application object for the customer driver data file object, complete the following steps:
  - a. Expand the **Introduction > Data Files** heading.
  - b. Drag-and-drop the **CustomerList\_Driver** data file object to the **Privacy\_Policy\_Update\_App** application object to create a reference for the data file object.

**Figure 4-19:**  
Assembled Privacy Policy Update application



### Packaging the application and running the engine

In Design Manager, you will create the package file and run the engine to produce output. You will then view the output in the Exstream Viewer.



#### Exercise 4.21: Package the application and run the engine

1. Right-click the **Privacy\_Policy\_Update\_App** application object and select **Package**.

The Build Package dialog box opens.

2. To specify the output, complete the following steps:
  - a. In the **Package file** text box, enter  
*C:\Training\Introduction\Pub Files\PrivacyPolicyUpdate.pub*.
  - b. In the **Package file** area, select the **Specify output** radio button.
  - c. Click .

The Select Output dialog box opens.

- d. Select **Exstream Viewer**.
- e. Click **OK**.

The Select Output dialog box closes.

3. Select the **Run Engine when complete** check box.

4. Click .

The Run the Engine dialog box opens.

5. Make sure that the **Package file** check box is selected.

The box adjacent to the Package file check box should automatically display the path that you entered in step 2.

6. Click **OK**.

The Run the Engine dialog box closes.

7. Click **OK**.

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

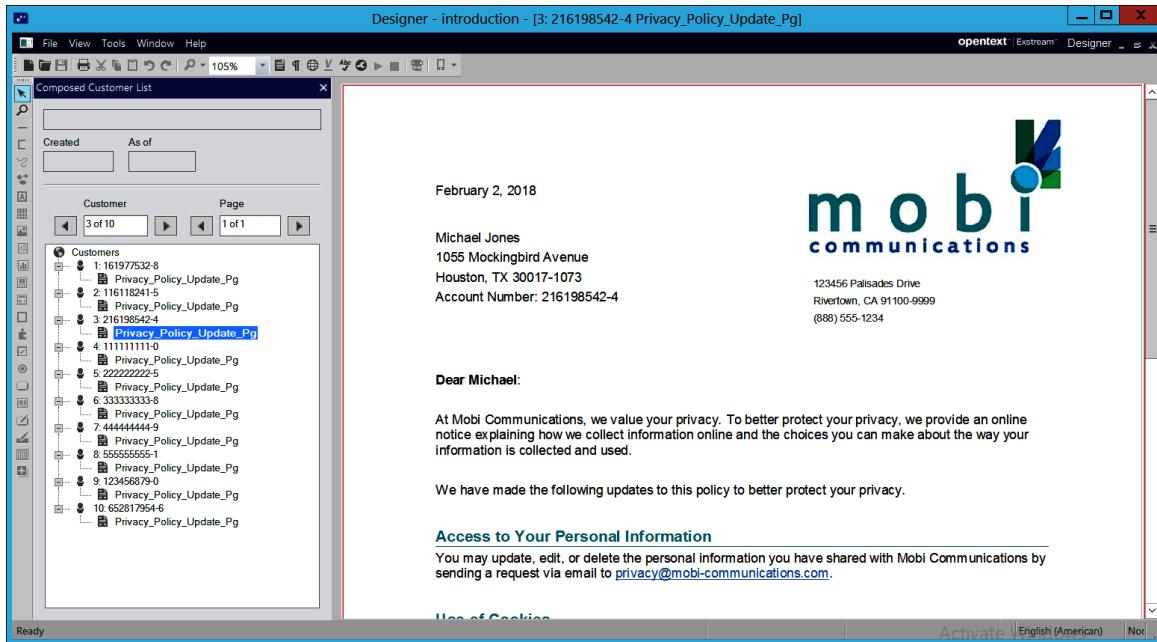
8. Click **Yes**.

The System Report dialog box opens. Scroll through the messages to review a summary of the engine run.

9. Click **OK**.

The System Report dialog box closes. After the engine has completed the run, the Exstream Viewer opens to show a preview of the output.

10. In the **Composed Customer List** area, use the navigational tools to scroll through the customers to see how the customer correspondence was personalized for each customer.



**Figure 4-20: Privacy Policy Updates in Exstream Viewer**

11. Close the Exstream Viewer.

## Editing tools in Designer

Designer offers several features that help you make your documents more accurate, more readable, and more aesthetically pleasing. These features are already built into Designer, so you do not need to order a special software module to begin using them.

The tools include the following:

- **Spelling** – Uses a dictionary you specify that is tied to a language layer, plus any additional words you add
- **Hyphenation** – Uses a dictionary you specify and an optional text file exception list
- **Case conversion** – Uses a text file that contains one word per line, such as FirstHaven
- **Readability** – Uses Flesch analysis to report on an entire document, selected paragraphs, or selected objects

<b>Specifying editing tool options</b>	In Design Manager, you can specify options for the spelling, hyphenation, and case conversion features by dragging a language object located under the <b>Environment &gt; System &gt; Languages</b> heading to the Property Panel: <ul style="list-style-type: none"><li>• <b>Spelling</b> – From the <b>Dictionary</b> list, you select a default dictionary that the spell checker will use for this language.</li><li>• <b>Hyphenation</b> – From the <b>Language</b> list, you select a default dictionary to use with the hyphenation feature for this language. You can also specify the path to test and production text files that include hyphenation examples. These files must contain one word per line, exactly as you want the word to appear.</li><li>• <b>Case conversion</b> – In this area, you specify the paths to test and production text files that indicate how the system should handle mixed case for specific words. The case conversion and hyphenation files are created in a text editor (such as Notepad) containing a list of exceptions to normal rules. For example, a case conversion file might contain FirstHaven. Exstream will recognize FirstHaven as having correct case, and if it runs across a spelling without this case convention, this one will be displayed as the correct spelling.</li><li>• <b>Dictionaries</b> – If your organization installed additional spelling or excluded word dictionaries, click  to add a reference to them.</li></ul>
<b>Spell check</b>	The spell check tool searches for words that do not appear in the dictionary. Words that are not found are underlined with a red wavy line. You can right-click on an underlined word to find spelling suggestions, ignore all similar occurrences of the word, or add the word to the dictionary.
<b>Setting spelling options in designer</b>	In Designer, from the <b>Tools</b> menu, select <b>Options</b> to open the Designer Options dialog box. You can also access the <b>Designer Options</b> dialog box by clicking on the Status bar at the bottom of your Designer window.  On the <b>Spelling</b> tab of the <b>Designer Options</b> dialog box, there are several properties you can set to customize how spell check operates in Designer: <ul style="list-style-type: none"><li>• <b>Check spelling as you type</b> – Select this check box to use spell check while you add text. Designer will mark any words it cannot find in a dictionary with a red wavy line. This is the default setting.</li><li>• <b>Suggest spelling corrections when right-click</b> – Select this check box if you want Designer to suggest words in the shortcut menu that have spellings similar to a word that it has identified as misspelled.</li><li>• <b>Check for doubled words</b> – Select this check box if you want to also check for instances of the same word appearing next to each other.</li><li>• <b>Language</b> – Select the language you want to use for your dictionary from the list.</li><li>• <b>Use this dictionary for all language layers</b> – Select this check box if you want to use the same dictionary for all languages. This is especially useful when you have a custom dictionary that contains words in all the languages you will use.</li></ul>

## Hyphenation

By default, Designer does not hyphenate words that appear at the end of a line. Words that do not fit within the given space at the end of a line are moved to the beginning of the next line, which can sometimes cause the end of lines in a paragraph to have a choppy appearance. Hyphenation can improve the aesthetic quality of your document. Designer lets you set automatic hyphenation breaks at a paragraph level to help you control the appearance of a textual paragraph.

## Setting hyphenation options

For a selected paragraph you can:

- Select the **Automatically hyphenate selected paragraph(s)** check box to enable the automatic hyphenation feature.
- Enter a value in the **Hyphenation zone** box to limit the space from the right margin you will permit words to break.



Hyphenation zone is a balance between aesthetics and readability. Although more hyphens can make the text look evenly spaced, too many hyphens can lower reader comprehension. To enhance reader comprehension, set the next property to limit the number of consecutive hyphenated lines.

- Select the **Limit consecutive hyphens** check box if you want to limit the number of consecutive lines that will end in hyphens.

## Readability

The readability tool helps you make sure that the language you use in a design is at the appropriate level for your customers by offering you a way to measure how well readers would likely comprehend a selected area of text, an object, or the entire document.

Readability analysis in Exstream uses the following two measurements:

- Flesch reading ease
- Flesch-Kincaid grade level

In Designer, select **Tools > Readability** to open the **Readability** dialog box.

From the Readability dialog box you can define the following options:

- Examine either the whole document or the specific object/paragraph/text selected.
- Include text in headers or footers or both.



If no object or paragraph is selected, only the **Entire document** option will be available.

The measurement results then appear in the Readability results box, which include various counts and readability measurements:

- **Counts** – The number of characters, words, sentences, and paragraphs in the selected object appear in the Counts area.
- **Averages** – The average numbers of characters per word, words per sentence, and sentences per paragraph, appear in the Averages area.
- **Readability** – The Flesch reading ease scale gives statistics based on the average number of words per sentence and the average number of syllables per 100 words. Standard writing averages 17 words per sentence and 147 syllables per 100 words.

The scale for the Flesch reading ease level is shown in the following table:

Range	Level
90 - 100	Very easy
80 - 90	Easy
70 - 80	Fairly easy
60 - 70	Standard
50 - 60	Fairly difficult
30 - 50	Difficult
0 - 30	Very difficult

The Flesch-Kincaid grade level readability index is also based on the number of syllables per word and the number of words per sentence. The resulting number indicates the approximate level of education required to read and understand the text.

If you examine short text, do not be alarmed if you see a negative grade level. Generally, documents with a negative grade level lack fully formed sentences or have few words with more than one syllable.



You might not get exactly the same statistics with the same text in a different Flesch readability program because different criteria could be set in each program.

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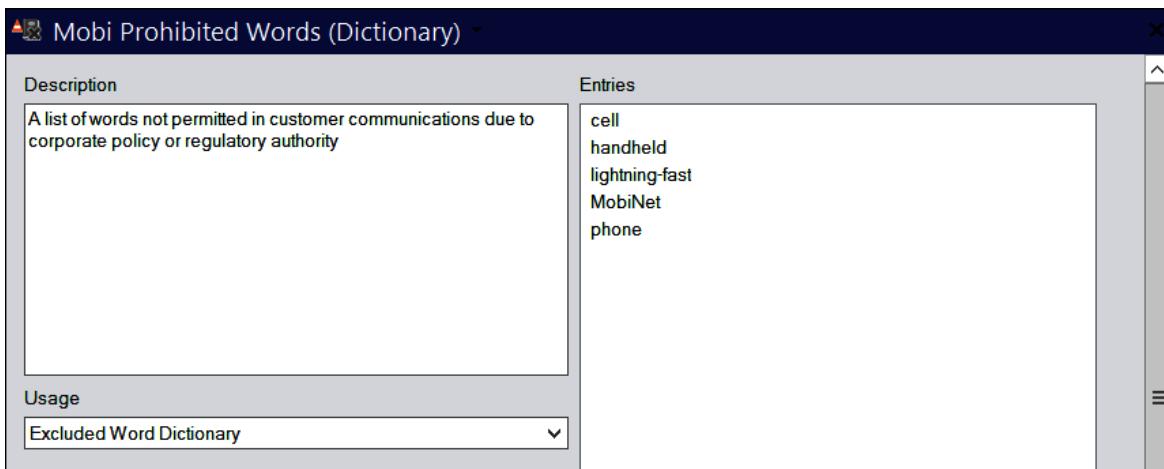
## Using the editing tools

In these exercises, you will use your recently designed application to investigate the spelling, hyphenation, and readability tools.



### **Exercise 4.22: View custom dictionaries in the Property Panel**

1. In the Library, expand the **Introduction > Environment > System > Dictionaries** heading.
2. Open the **Mobi Prohibited Words** dictionary object in the Property Panel.
3. Review the entries.
4. Open the **Mobi Spelling** dictionary object in the Property Panel.
5. Review the entries.



**Figure 4-21: Custom dictionaries (excluded word list)**

How would custom dictionaries benefit your organization when creating customer communications?



### **Exercise 4.23: Use the spell check tool**

1. In the Library, drag the **Privacy\_Policy\_Update\_Pg** object to the Edit Panel.

The page opens in Designer.

2. Click the **Status Bar** at the bottom of the window (or select **Options** from the **Tools** menu).

The Designer Options dialog box opens.

3. On the **Spelling** tab, complete the following steps:
  - a. Make sure that the **Check spelling as you type** and **Suggest spelling corrections when right-click** check boxes are selected.
  - b. Make sure that the **Language** list is set to **English (American)**.
  - c. Make sure that the **Use this dictionary for all language layers** check box is selected.
  - d. Leave the other properties at their defaults.
4. Click **OK**.

The Designer Options dialog box closes and any words that Designer cannot find in the English (American) dictionary will now be underlined with a red wavy line.

5. Position the pointer over **online** and right-click.

A shortcut menu appears.

6. Select **Spell Check > on-line** at the top of the shortcut menu.

The red line disappears from underneath **on-line** and Exstream will ignore other occurrences of the word.

7. Repeat this for other instances of **online** within the page.

8. Save and close Designer.



#### **Exercise 4.24: Use the automatic hyphenation tool**

1. In the Library, drag the **Privacy\_Policy\_Update\_Pg** object to the Edit Panel.

The page opens in Designer.

2. Click in the text box on the left side of the page.
3. Highlight the paragraph beginning '**You can accept or decline ...**'.
4. From the Tools menu, select **Hyphenation**.
5. The **Hyphenation** dialog box opens.
6. Select the **Automatically hyphenate selected paragraph(s)** check box.
7. In the **Hyphenation zone** box, enter **0.100in**.
8. Click **OK**.



**Exercise 4.25: Use the readability tool**

1. With the **Privacy\_Policy\_UpdatePg** page object still open in Designer, hold **CTRL** and select the main text box.
2. From the **Tools** menu, select **Readability**.

The Readability dialog box opens.

3. From the **Content to be examined** list, select **Currently selected object(s)**
4. Click **OK**.

Counts, averages, and readability measurements appear in the **Readability** box.

5. Click **Close**.
6. Save and close Designer.

Since you can view your spelling and hyphenation changes on pages in Designer, it is not necessary to package the application in this exercise.

## 5. Design communications for online delivery

### Objectives

After completing this module, you should be able to:

- Understand the differences between standard and container designs.
- Understand the different container types available.
- Create a container design label.
- Add a container design label to a page.
- Create a container design for a existing standard design page.
- Create an archived package file.
- Specify Device Preview settings.
- Use Device Preview for your new container-based design.

### Important terms

The following important terms are used in this module:

- **Archived package file** – Contains all of the information about your application that the Exstream engine requires in order to generate the Device Preview for your design.
- **Container design** – A design that uses a relative dimension layout, more suitable for electronic distribution.
- **Container design label** – A Library object that identifies an individual container design associated with a page or graphic message.
- **Container type** – One of a number of customizable layouts available to control object flow and placement within a design.
- **Device Preview** – A Designer feature that simulates how your design will appear on specific electronic devices.
- **Standard design** – A design that uses a fixed dimension layout, typically for print-based output.

## Designing for HTML and HTML-Email output

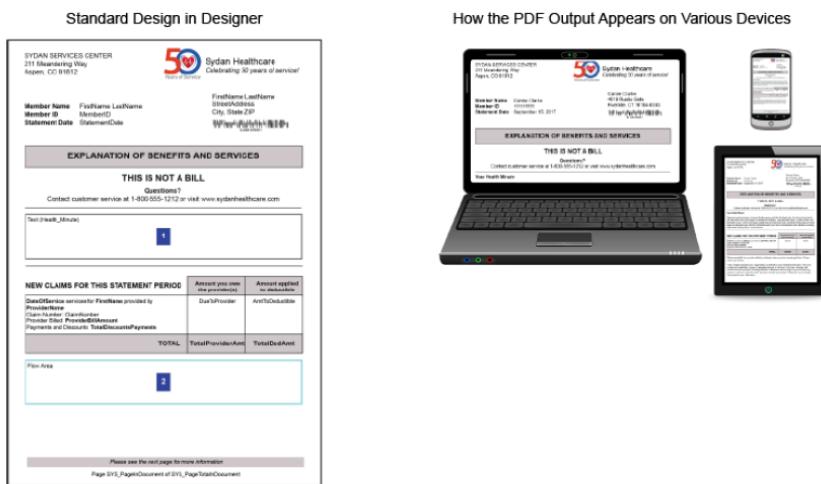
Page objects and graphic message objects in Exstream include two different types of designs: fixed dimension layouts called **Standard Designs**, and relative dimension layouts, called **Container Designs**.

### Standard designs

Fixed dimension layouts are well suited for print-based output, but often do not translate well to electronic output. For example, it's difficult to view a PDF on a smartphone—your customers will likely need to zoom in and scroll back and forth horizontally and vertically to read it.

**Figure 5-1:**

How a standard design might appear on different devices

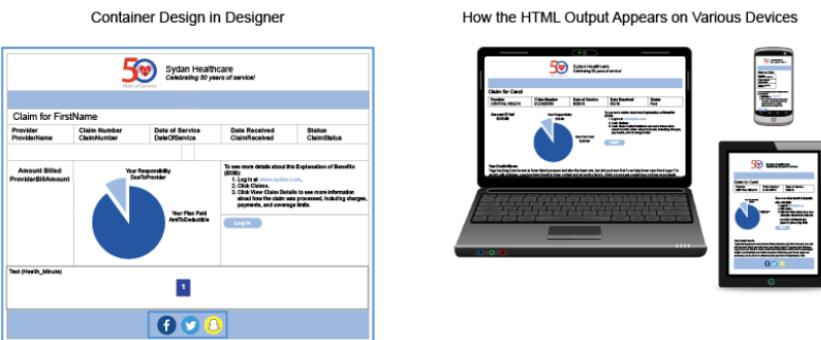


### Container designs

Container designs use a relative dimension layout, so they are not bound by the same measurement and positioning constraints as standard designs. When you produce output from a container design, the content can automatically adjust and re-flow based on the screen size and orientation of the viewing device.

**Figure 5-2:**

How a container design might appear on different devices



In the container design example above, the primary container is a grid layout with 9 rows and 5 columns. Note that some of the rows and columns have been merged to create the layout, and a spacer added to add distance between various elements of the design. In the page footer, a horizontal span container has been embedded to contain some social media icons. These icons, as well as the company logo and the chart, have been set to scale automatically, and a few of the grid cells have been set to hide based on screen size.

In a full-screen browser window, the HTML output resembles the container design. On tablet screens, the HTML output appears differently in a few different ways: a few of the grid cells are hidden, which simplifies the information presentation; the images scale to better fit the screen; and the text reflows. On smartphone screens, the HTML output is dramatically scaled back, so that only the vital information is shown on-screen; in this case, how to log in to get more information about the communication.

Each page or graphic message in your application includes one standard design and one container design by default, but you can add more than one container design to a page or graphic message. Because standard and container designs exist on the same page or graphic message, they share all of the objects that you place on that page or graphic message. Most of the object properties that you apply to an object from one design also apply to any other design where that object is used. This ability lets you add container designs to your pages and graphic messages without sacrificing the content and customer data that you have already included in your existing designs. You can also add design elements and set object properties that are unique to each container design.

You can use objects from your standard design in your container designs, or you can use a combination of objects from your standard design and others that are specific to the container design. You can also apply formatting that is specific to containers to make content easier to read on smaller screens, or add responsive design features and CSS to the container design to allow content to reflow, scale, or otherwise appear differently in the output based on the screen size of the viewing device.

You must build the standard design and all container designs associated with the page or graphic message separately.

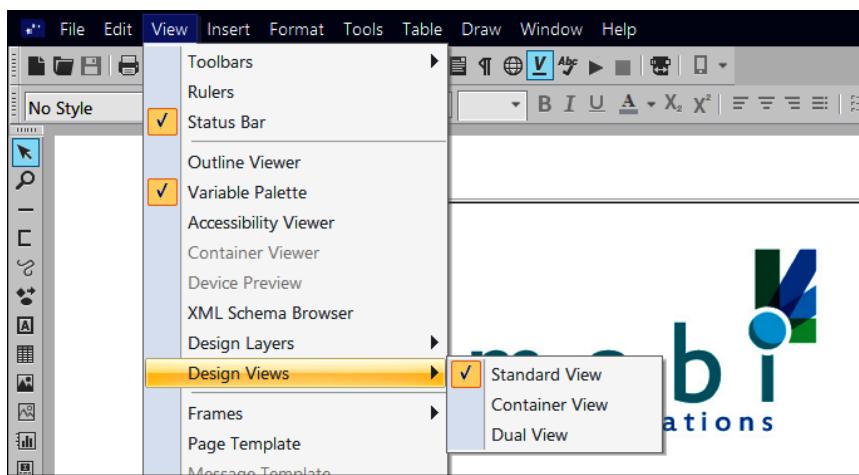
Container designs are supported in HTML, HTML (email), and Multi-Channel XML output.

## The container design environment

The container design environment is built into Designer, which means that you can use most of the same techniques that you use in standard designs to add design elements and set object properties.

Since each page and graphic message includes a standard design and at least one container design, you use different views to access the design window for each design. In addition to the Standard View and the Container View, the Dual View lets you see the design windows for the standard and container designs side-by-side, which is helpful for comparison between the two designs. You can switch between these views using the Design Views toolbar and the **Design Views** menu option.

**Figure 5-3:**  
**Switching design views**



As you work in the Container View, the primary way to organize and configure the elements of your design is by manipulating objects using the Container Viewer panel.

Similar to the Outline Viewer, the Container Viewer lets you view a hierarchy of the objects in the container design. The Container Viewer is separated into two main areas that let you customize your design: **Available Objects** and **Containers**.

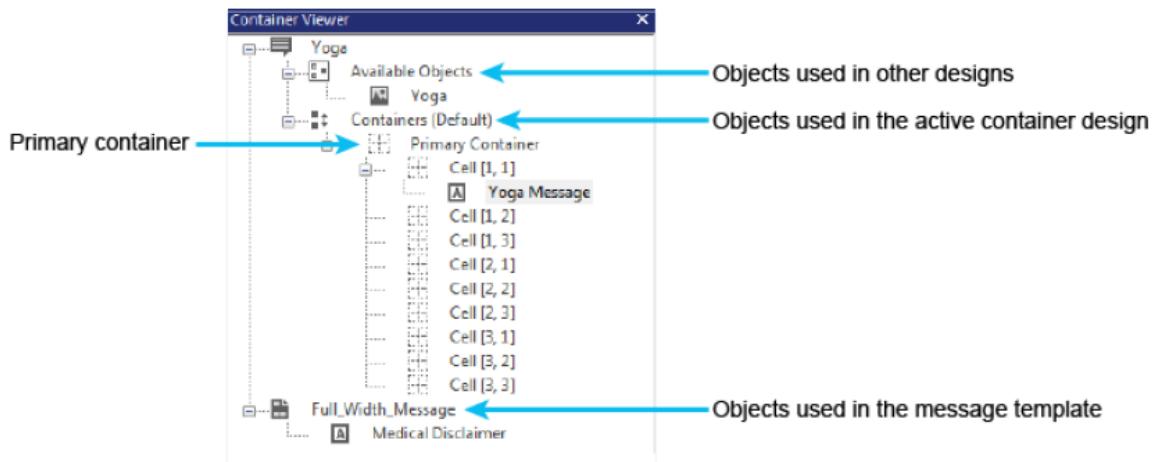


Figure 5-4: Container viewer

If the page has a template associated with it, you will see a heading for the template, with the objects used on that template listed under it. Graphic messages require you to use a message template, so they will always appear in this way in the Container Viewer.



If the Container Viewer or Design Views toolbar is not visible when you open a container design, you can turn it on from the **View** menu.

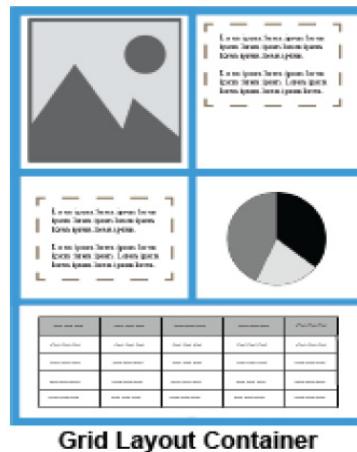
## Container types

Containers control the way objects flow and determine the placement of content in the final design. You can use different types of containers to arrange objects automatically in rows, columns, or tile patterns, or to arrange objects manually in a grid layout or in absolute positions. You can also embed containers within other containers.

**Grid layout containers** A grid layout container lets you manually arrange objects within a defined grid using rows and columns. A 3 x 3 grid layout container is the default container type, but you can add and remove rows and columns, merge cells, or embed child containers to create the layout that you want.

Each cell of a grid layout container can hold only one child object. However, if you want to place multiple objects within a cell, you can add a container to the cell. Then, you can place multiple objects into that container.

When you add objects to a grid layout container, the cells can automatically resize to accommodate the objects in the container.



**Figure 5-5:**

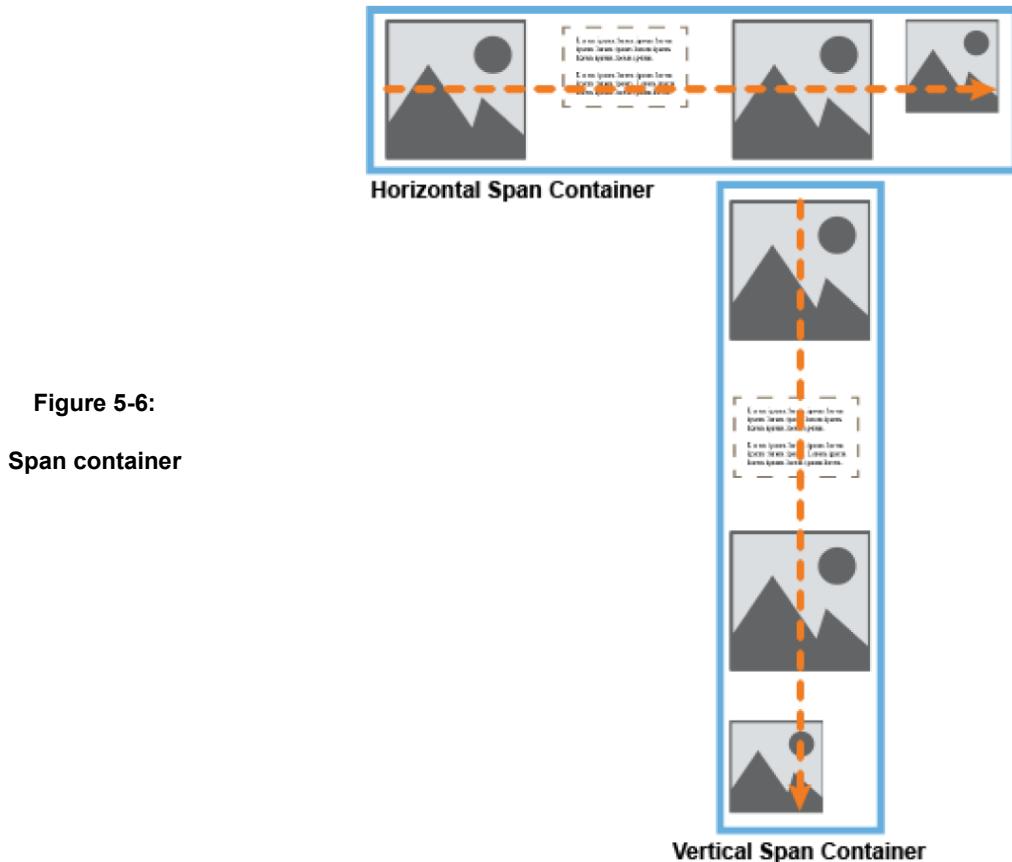
**Grid layout container**

## Span containers

A span container automatically arranges objects in a straight line. There are two types of span containers: vertical and horizontal. The only difference between the two is how the objects in the container are automatically arranged:

- A horizontal span container arranges objects in a single horizontal row.
- A vertical span container arranges objects in a single vertical column.

If one or more objects in a span container are excluded from the output for a specific customer, the remaining objects automatically reflow to fill the gap left by the excluded object.



**Figure 5-6:**

**Span container**

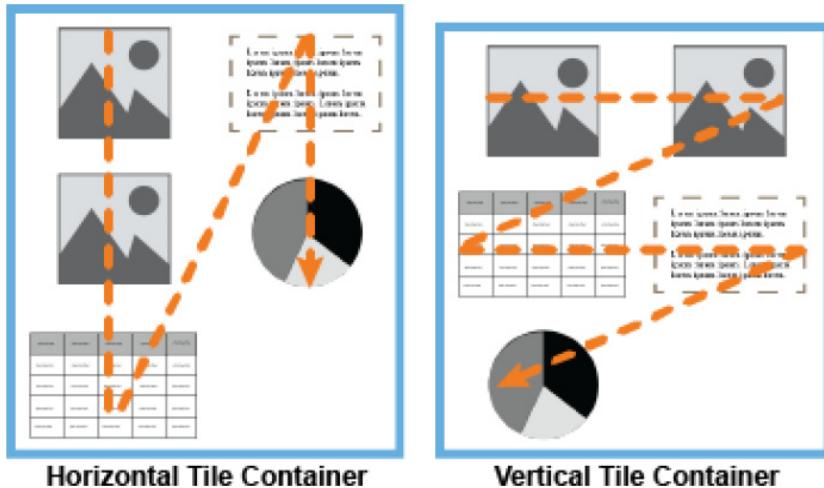
**Tile containers**

A tile container automatically arranges objects in a tile, or a series of rows and columns. There are two types of tile containers: vertical and horizontal. The only difference between the two is how the objects in the container are automatically arranged:

- A horizontal tile container automatically arranges objects in rows and columns to form a tile pattern that expands horizontally (top-to-bottom, left-to-right).
- A vertical tile container automatically arranges objects in rows and columns to form a tile pattern that expands vertically (left-to-right, top-to-bottom).

If you use a tile container, rows and columns reflow when objects are excluded in the engine run. When an object is excluded, the remaining objects will close the space that is left behind to fill the rows or columns.

**Figure 5-7:**  
**Tile container**



### Absolute position containers

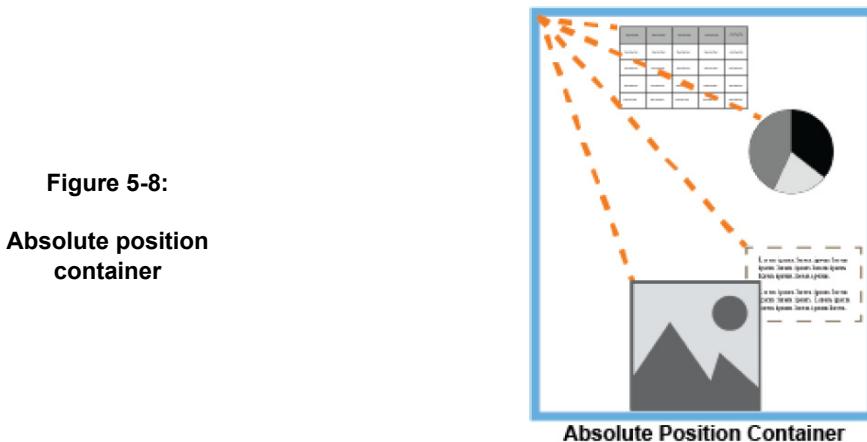
An absolute position container lets you place drawing objects at a specific location in a container design, even if those objects overlap. The object's position is measured from the top-left corner of the absolute position container.

In contrast to other container types where objects reflow to the next available position, objects placed within an absolute position container always maintain their relative position, as measured from the top left corner of the container. In other words, objects in an absolute position container do not reflow when objects are included or excluded using rules. However, the container itself can move and reflow if it is placed inside another container.

If you want to make sure that objects overlap as expected in the final output, consider placing the objects that overlap in the same absolute position container. For example, if you want to overlap a customer name variable over an image, then you should place both the text box and the image in the same absolute position container so that both objects are grouped together and will move together as the design reflows.



Absolute position containers are not supported in HTML (email) output because most email clients do not support absolute object positioning. If you include an absolute position container in an application that produces HTML (email) output, then the engine ignores the absolute position container and all of its contents.

**Figure 5-8:****Absolute position container****Spacer objects**

Though not technically containers, spacer objects are unique to container designs. You can use them to control the amount of spacing between specific design objects within a container, or between objects and the container border. However, spacers can not contain other objects.

You can also add spacer objects to a grid layout container when you want to precisely control the size of specific rows and columns. In span containers, you can add spacers of different widths or heights to separate the adjacent objects. In tile and grid layout containers, spacer objects can be used to maintain blank tile or grid positions in your design.

Spacer objects offer you additional flexibility to support more complex design layouts, compared to using only margin and padding settings that apply the same amount of spacing to all objects within the container. Spacer objects also automatically reflow along with the design objects, so consider this when planning a design that uses rules to include or exclude certain design objects.

**Creating container design labels**

A container design label is a Library object that identifies an individual container design associated with a page or graphic message. Each page and graphic message always includes a default container design that uses the **Default** container design label. If you want to use only a single container design per page or graphic message, then you can create and manage your content with this default container design. However, if you want to use multiple container designs within a page or graphic message, you must create a new container design label for each associated container design.

You can create container design labels in Design Manager or in Designer.

You also use the container design label to indicate which container designs to include in the final output. For example, suppose that all of the container designs that you want to deliver to smartphones use the smartphone container design label. If you associate the smartphone container design label to an HTML or HTML (email) output object, the engine collects all of the smartphone container designs used in the application and includes them in the final output.

**Exercise 5.1: Add a container design label to a page**

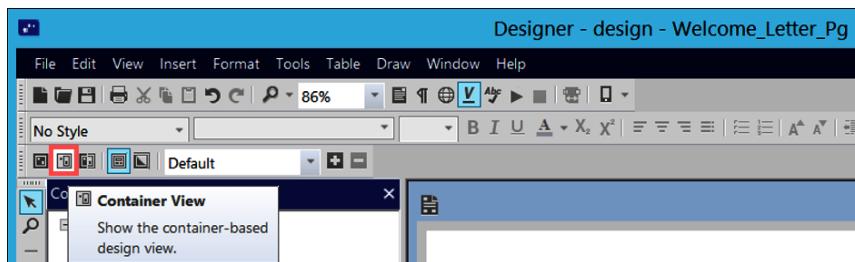
If you create a container design label in Design Manager, you must add it to the page or graphic message in Designer to use it.

1. In the Library, expand **Introduction > Customer Correspondence > Pages**.
2. Drag **Welcome\_Letter\_Pg** to the Edit Panel to open the page in Designer.

The page opens in Designer.

3. Ensure that the **Design Views** toolbar is displayed by selecting **View > Toolbars > Design Views**, if necessary.
4. Switch to **Container View** by clicking the icon on the Design Views toolbar.

**Figure 5-9:**  
**Switching to container view**



Designer switches to Container View.

5. On the Design Views toolbar, click .

The Create New Container Design dialog box opens.

6. In the Create New Container Design dialog box, in the **Select a container design label** list, select the **HTML** container design label that you created above and click **OK**.
7. Save the container design, but leave the page open in Designer.

**Objects supported in container designs**

In a container design, you can add most of the design objects that are supported for standard designs. You can also reuse supported design objects that are included in the standard design or any other container designs on the same page or graphic message.

If you make changes to the object properties from any standard design or container design, then those changes are also reflected in all of the other designs within the page or graphic message that use the same objects. For example, if you resize a logo image that is shared between a standard design and a container design, then the new image size is applied in both designs.

The properties on the Container Design tab are the exception—they are unique to each container design that includes the object. For example, if you set an image to automatically scale to fit various screen sizes, the percent width that you apply in one container design is not retained in any other container designs that include the object.

Several object types are rendered as images in the HTML or HTML (email) output. In HTML output, images are always separate files that are referenced inline in the HTML, so specifying the storage location for the images is important. You can specify the way that images are referenced and stored for the output using a relative path, an absolute path, or a variable for each individual image or for all of the images in the output.

For information about managing image resources, see *Creating Output* in the Exstream Design and Production documentation.

## Creating an HTML version of the welcome letter

You will now create a container design for the welcome letter document that you created earlier. For this design we will use the default grid layout container provided for us in the container view in Designer.



Each grid cell in a grid layout container can hold only one child object. If you want to place multiple objects within a grid cell, you must add a child container that accommodates multiple objects (such as a span or tile container).



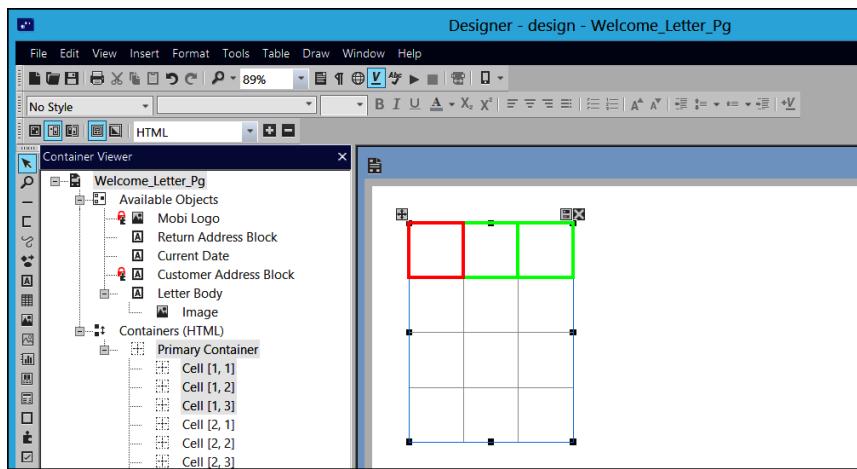
### **Exercise 5.2: Create a container layout for welcome letter**

1. In Designer, click in the empty 3 x 3 grid layout to select the container.
  2. Click the icon to access the container properties.
- The Container Properties dialog opens.
3. Review the available parameters, including the **Container type** list, which allows you to select different container types for your design.
  4. Select the **Restructure grid layout container** check box.
  5. Set the value in the **Rows** field to 4.
  6. Click **OK**.

The Container Properties dialog closes.

7. Click and drag to select the first row of the grid (3 cells).

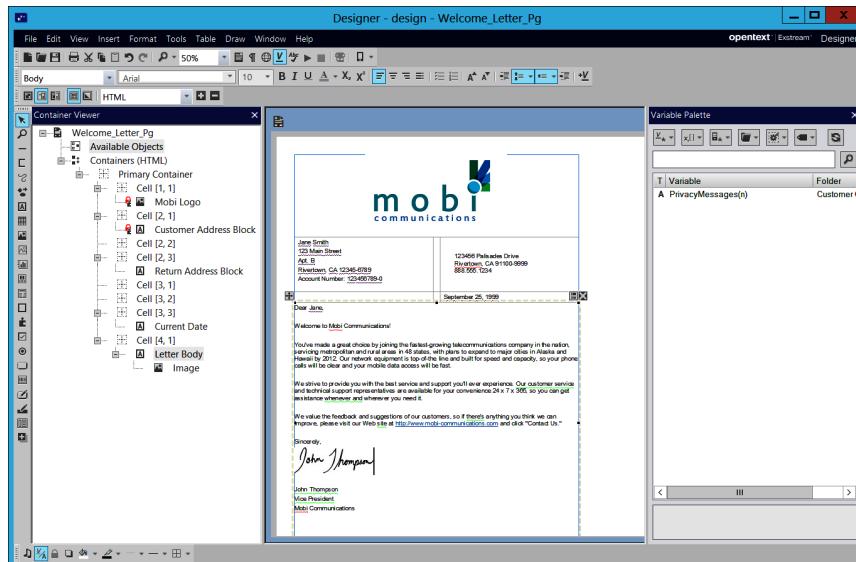
**Figure 5-10:**  
**Selecting the entire first row**



8. Right-click in the first row and select **Merge Cells**.
9. Repeat steps 7 and 8 for the last row of the layout container.
10. Drag the **Mobi Logo** image object from the Container Viewer into the first row of the grid.
11. If the Container Viewer is not visible, activate it by selecting **View > Container Viewer**.
12. Drag object from the Container Viewer to the container layout grid as follows:

Row	Column	Object
1	-	Mobi Logo
2	1	Customer Address Block
2	3	Return Address Block
3	3	Current Date
4	-	Letter Body

The container layout should appear as follows:



**Figure 5-11:**  
Container grid layout for welcome letter

### 13. Save the container design.

#### Previewing and testing container designs

Since HTML and HTML (email) designs are intended for electronic viewing, testing the output on various screen sizes can help you make sure that communications are easily readable by your customers. As you add responsive features, such as hiding or changing the layout of content for smaller screens, you should periodically test the output to see how it will appear on different devices. You might need to check the presentation and tweak the design several times before it is ready for release.

One way to test your design is by using the Device Preview feature in Design Manager. Device Preview simulates how your design looks on a specific device by fitting the content within the maximum viewing area of the device's screen. You can preview your design on a variety of device models, and you can easily switch between these previews.

**Figure 5-12:**  
Device Preview





Device Preview lets you preview only container designs that are associated with pages. It is not supported for previewing container designs associated with graphic messages.

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You can also test how your communications appear on different devices and in different browsers by running the design engine to create output.

For information about running the design engine, see *Preparing Applications for Production* in the Exstream Design and Production documentation.

#### **Using Device Preview for container designs**

To make it easier to design effective HTML and HTML (email) communications, you can create a preview in Designer to see how your designs will look on various phone and tablet screen sizes. This can help you as the design format and placement of objects are being developed. As shown in the following illustration, the Device Preview feature simulates how your design looks on a specific device by fitting the content within the maximum viewing area of the device. This lets you check how your design responds to different screen sizes, especially for issues like content stacking or hiding images on smaller screens.

#### **Creating an archived package file to enable previewing**

Before you can preview your design, you must create an archived package file of your application. The archived package file contains all of the information about your application that the engine requires to generate a preview of your design in Designer.

When you request a preview to be generated in Designer, the engine combines the archived application-level package file with a page-level package file of your latest design to create the preview. Whereas you must first create the archived application-level package file, the engine itself automatically creates a page-level package file in the background each time that you request a preview. The page-level package file contains the current, page-specific information that the engine requires to generate an up-to-date preview of the design.

To create an archived package file in Design Manager, you must package your application using a package profile. A package profile is a saved group of packaging settings that you can use to quickly package an application without manually specifying the same settings individually again. Using a package profile when packaging automatically triggers an archived package file to be saved in the archived package file directory specified in the Options dialog box (from the Menu bar, select Tools > Options). When you request a preview of your design in Designer, the engine automatically accesses this directory to find the archived package file it needs to generate the preview. In the Device Preview Settings dialog box, you specify the name of the package profile that the engine should use to generate the preview.

For more information about package profiles, see *Preparing Applications for Production* in the Exstream Design and Production documentation.



### Exercise 5.3: Create an archived package file

In Design Manager, make sure that you have specified a directory for archived package files.

1. From the Menu bar, select **Tools > Options**.
2. In the **Archived package file directory** box, enter `C:\Training\Introduction\Package_Archive`.

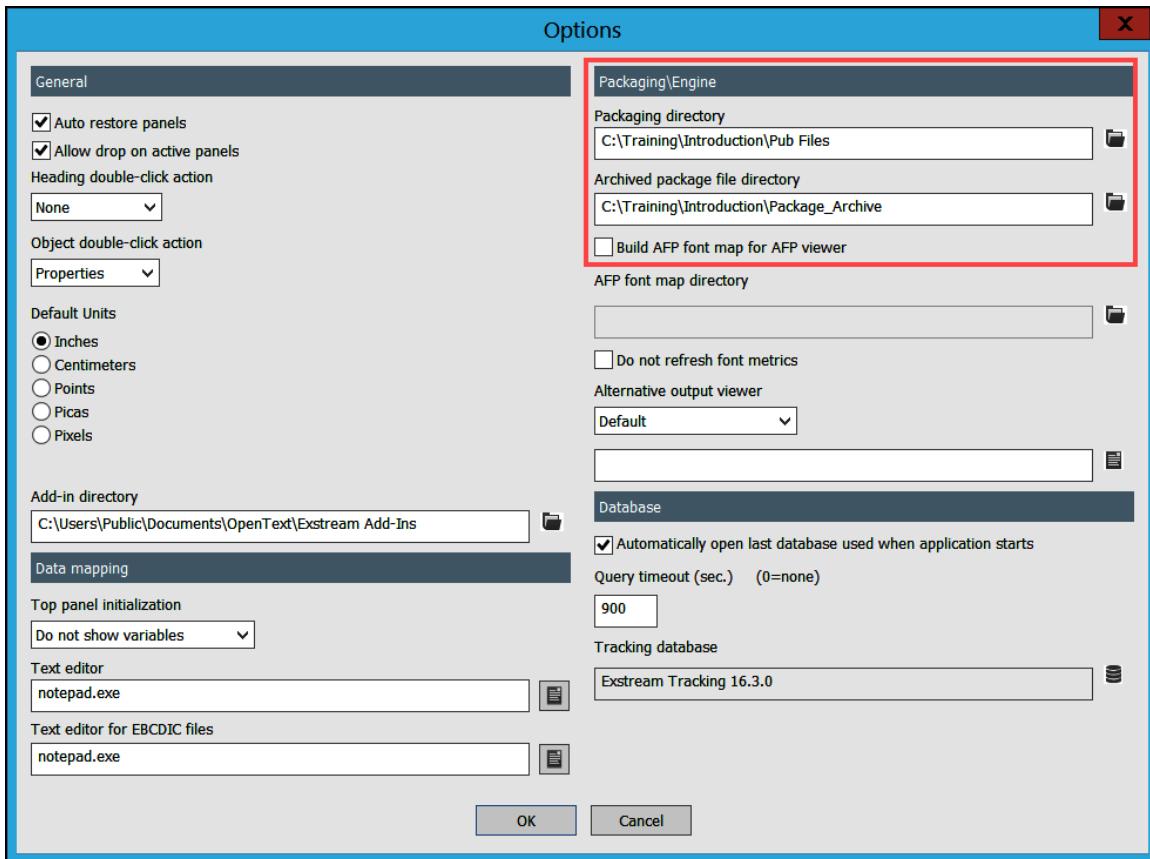


Figure 5-13: Setting the archived package file directory

Design Manager informs you that the specified directory does not currently exist and will be created for you.

3. Click **OK**.
4. In the Library, expand **Introduction > Customer Correspondence > Applications**.
5. Right-click the **Welcome\_Letter\_App** application and select **Package**.

The Build Package dialog opens.

6. From the **Profile** list, select <Create new profile> to create a new profile.

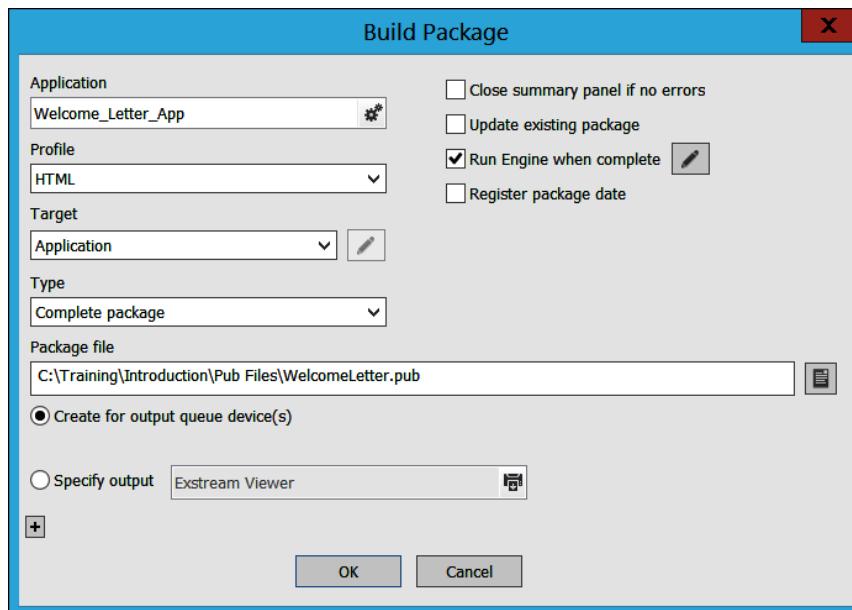


You must use a package profile for packaging in order to create an archived version of the application package file.

The next time that you package an application, the saved profile that you created appears in the Profile list in the Build Package dialog box, and you can select the profile to quickly create a new package file with the settings specified in the profile.

7. Select the **Create for output queue device(s)** option.

**Figure 5-14:**  
**Create for output queue device**



8. In the **Package file** field enter *C:\Training\Introduction\Pub Files\WelcomeLetter.pub*.
9. Click **OK**.

The Create New Package Profile dialog box opens.

10. Enter *HTML* in the **Name** field.
11. Click **OK**.

The Create New Package Profile dialog box closes.

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

12. **Click Yes.**

The System Report dialog box opens. Scroll through the messages to review a summary of the engine run.

13. **Click OK.**

14. **Click Close.**

The package file is automatically saved in the directory that you specified as the archived package file directory in step 2.

#### **Specifying Device Preview settings**

The first time that you generate a preview of a given design in Designer, you must specify the application, package profile, output queue, and customer number that you want the engine to use to generate the preview. The engine requires this information in order to generate an accurate preview of your design.

You specify these settings in the Device Preview Settings dialog box, which appears automatically the first time that you generate a preview of the design. Thereafter, each time that you generate a new preview of the same design, you do not have to specify the Device Preview settings again unless you want to change them. The engine will automatically use the same settings to generate subsequent previews unless you reopen the Device Preview Settings dialog box and change the settings.



#### **Exercise 5.4: Specfy Device Preview settings**

1. In Design Manager, drag the **Welcome\_Letter\_Pg** page object to the Edit Panel.

The Welcome\_Letter\_Pg opens in Designer.

2. If necessary, switch to Container View by clicking the icon on the Design Views toolbar.



You must be in Container View to enable the Device Preview options on the Menu bar and the Standard toolbar.

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3. On the Standard toolbar, click  . Alternatively, you can select **View > Device Preview** from the Menu bar.

The Device Preview Settings dialog box opens.

4. Click in the **Application** field.

The Select Application dialog opens.

5. In the **Look in** field, select **Customer Correspondence**.
6. Select **Welcome\_Letter\_App**.
7. In the **Package Profile** list, select **HTML**.
8. In the **Available Queues** area, ensure that **[HTML Queue] HTML** is selected.
9. Click **Preview**.

**Previewing container designs with Device Preview**

The Device Preview feature allows you to simulate within Designer how your design will appear on current popular models of phones and tablets, so that you can check whether your design is on track as you create it. With this design aid, you can more quickly determine if you need to make adjustments to applied features or the overall layout strategy - without having to first run the engine to produce output for testing.

The Device Preview feature only takes the viewport of the device into consideration when previewing a design. So while the preview can be used to aid in the design layout based on a device's screen size and resolution, the design may look different on the actual device. For instance, depending on the device, some of the available viewport space could be used for displaying a status bar or other elements. Also keep in mind that the preview does not reflect any rendering differences between various email clients.



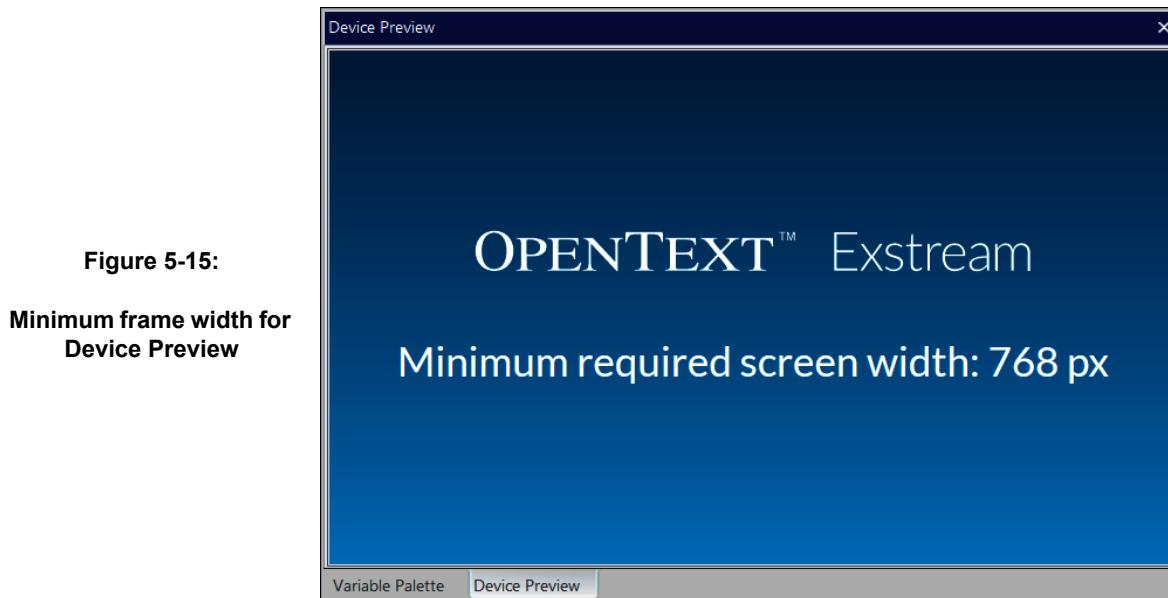
**Exercise 5.5: Use Device Preview for the welcome letter**

Device Preview is now available for the Welcome Letter.

1. In the bottom right of the Designer window, below the Variable Palette, click the **Device Preview** tab.

The right-hand frame switches to Device Preview.

2. You may need to resize the frame to accommodate the minimum width required by Device Preview (768 pixels). The Device Preview display will notify you of this.



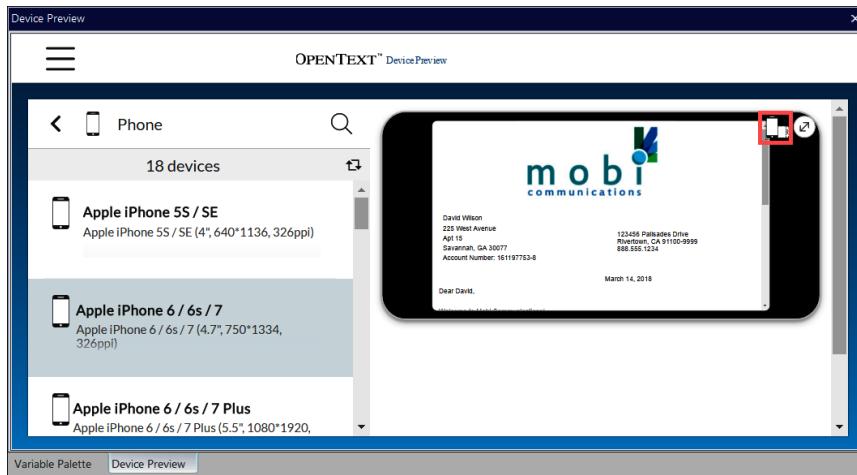
3. Scroll down the list of phone previews and experiment with different selections.



Note that you can drag the Device Preview title bar to dock and un-dock the panel from the rest of the Designer interface.

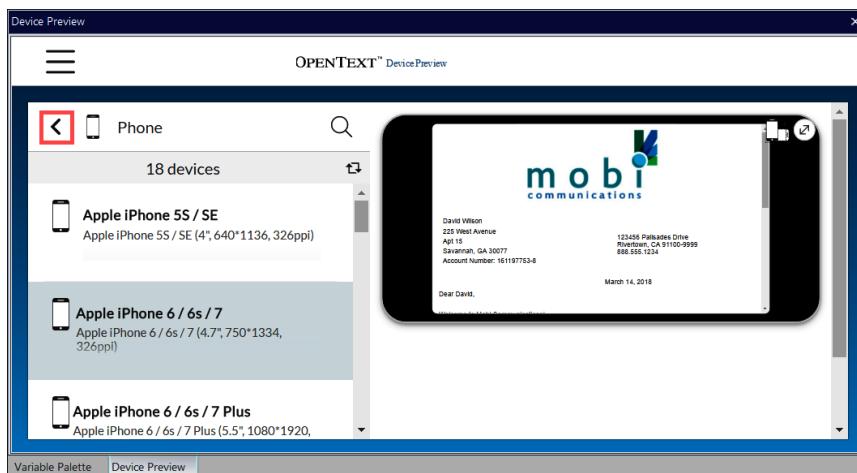
This can make it easier to accommodate previews for larger devices.

4. Click the **Rotate** icon at the top-right of the preview to switch the preview orientation.



**Figure 5-16:**  
Switching between  
portrait and landscape  
for Device Preview

5. Click the chevron next to the word **Phone**.



**Figure 5-17:**  
Changing device groups  
for Device Preview

The Device Groups options are shown.

6. Select **Tablets**, and experiment with the previews for these devices.

## 6. Designing Customer Account Statements

### Objectives

After completing this module, you should be able to:

- Explain how currency variables, formula variables, reference data files, and record types can be used to set up the customer data used in an account statement.
- Describe how organizations can use page templates to control document designs.
- Set up simple and basic automated tables to organize data in a customer communication.
- Set up a bar chart to graphically organize data in a customer communication.
- Set up a design to accommodate customer content that flows beyond the first design page.
- Set up a design to produce PDF output.
- Set up a design to optimize the way that PDF accessibility tools read a customer communication.
- Design a personalized customer account statement and assemble an application to produce output.

### Important terms

The following terms are used in this module:

- **Accessibility tag** – A feature in Exstream that lets you set up design objects for accessibility tools, such as screen readers or text-to-speech converters, so that the text is read, the object is skipped, or alternate text is read from PDF output.
- **Built-in function** – A piece of logic that is included in Exstream that lets you perform routine data manipulation, such as format conversion and value reporting. You can modify the syntax of built-in functions to meet your business requirements. Customized built-in functions can be stored as Library functions.
- **Chart** – A design object that lets you create a visual display of specific relationships between data. Exstream lets you create multiple types of charts.
- **Currency variable** – A type of variable that is used when the value of the variable is a monetary amount that automatically displays the desired currency symbol.
- **Designer** – The program that you use in the design environment to create the visual layout of customer communications. You use Designer to insert design objects such as charts and tables, text, and variables, which create personalized content for each customer at engine run time.
- **Flow page** – A page that is set up to receive overflow content from other pages.
- **Flow frame** – A type of frame that is used as a placeholder for overflow content. They are most often used on a flow page or to place content on a page with multiple columns.

- **Formula variable** – A type of variable for which the value is set based on logic applied to customer data.
- **Frame** – A design object that reserves an area on a page and defines what can be placed in that area.
- **Label** – A description on a chart of what the data point values represent.
- **Legend** – A visual key used to explain what the data areas represent on a chart or table.
- **Library function** – A Library object that contains logic for specific actions based on customer data (for example, including an object based on a customer location) or to analyze data and return findings (for example, calculating the total of the values of a series of variables). Library functions are reusable objects that can be applied to any design object in an application to which you can apply rules or formula variables.
- **Output** – A Library object that you use to set up the format of the final output, which can be print or electronic.
- **Output queue** – A Library object that contains the objects and settings used for high-volume document production. The most common type of object included is the output driver (for example, PDF or HTML), but it can also include inserters, multiple-ups, and output breaks.
- **Page template** – A Library object that provides control over the page so that designers cannot change or delete specific content.
- **Record type indicator** – A character within the data file mapping that identifies specific types of data when multiple types of data exist within a data file.
- **Reference data file** – A type of data file that provides customer data that is not included in the customer driver data file. Reference data files are optional.
- **Starter object** – A design object that can be used on a template to provide helpful hints or instructions during design.
- **Table** – A design object that lets you present data in rows and columns, so that content is organized or categorized and easier to read. Exstream lets you create multiple types of tables.

## Designing statements

Many organizations must design statements or invoices to record account transactions or request payment from customers. When designing account statements, it is important to provide accurate and relevant information that is easy for customers to understand. Because account statements are typically sent to customers on a schedule, it is important that they have a consistent design, so that customers can find the information they need quickly.

In this module, you will learn how to use Exstream to create personalized customer account statements by exploring the following topics:

- **Using variable data for customer account statements** – As with any other document design, Exstream lets you incorporate variable data into your account statements so that every communication is personalized for every individual customer. Currency and formula variables are specific types of variables that are relevant when creating customer account statements.
- **Using tables to organize data in a design** – Exstream lets you use many different types of tables to present data in customer communications. The type of table that you use depends on your business requirements. Simple and basic automated tables are specific types of tables that are relevant when creating customer account statements.
- **Using charts to graphically represent data in a design** – Exstream lets you use many different types of charts to graphically represent data in customer communications. The types of charts that you use depends on your business requirements. In this module, you will create a bar chart to show trends in customer data.
- **Setting up a design to accommodate objects that flow** – Exstream lets you set up special pages, called flow pages, that accept content that flows beyond the first design page due to the number of records in the customer data.
- **Setting up a design for delivery** – Exstream lets you choose one or more output types for delivering customer communications. In this module, you will set up the design for delivery in electronic PDF format.
- **Optimizing a design for accessibility tools** – When you create output in PDF or HTML format, Exstream lets you create accessibility tags for design objects. These accessibility tags provide instructions to accessibility tools, such as screen readers and text-to-speech converters, on how to read the customer communication for customers that use these tools.
- **Designing the Mobi customer account statement** – You will complete a set of exercises to design a multi-page customer account statement that is personalized for a set of customers. You will also put together the application from existing objects and create sample output.
- **Viewing a complex customer account statement** – For demonstration purposes, you will complete an exercise to add an existing design to the customer account statement design. This design contains personalized customer transaction details, including call, text message, and data usage logs.

In addition to the base configuration of Exstream, the functionality associated with the following modules is required for the exercises within this module:

- Advanced tables
- Dynamic charting
- PDF output
- Publication support
- XML input

## Using variable data for customer account statements

Like the customer correspondence you put together in Module 4, the account statement you will build in this module will contain system variables that Exstream automatically sets at engine run time (for example, the current date and page numbers). It will also contain user variables that populate with personalized customer information (for example, addresses and account numbers). The user variables are mapped to the data files that contain all of the customer data, so that each document is personalized at engine run time.

In addition to the objects you've already used to set up variable data, you will also use the following variable data features:

- Currency variables
- Formula variables
- Reference data files
- Record type indicators

For more information about creating and formatting data files and variables, see the *Using Data to Drive an Application* guide.

### Currency variables

Because user account statements include charges, credits, and balances, you must use variables that can be formatted to reflect monetary amounts. In Exstream, these variable types are known as currency variables. Currency values can have positive or negative values, and allow numbers that contain up to 14 digits to the left of the decimal and up to four digits to the right of the decimal.

You will learn about how locales are set up to define the default format of currency for multiple languages in the topic 'Locales'.



### ***Instructor demonstration***

1. *Watch the instructor-led demonstration of how a currency variable object is set up in the Property Panel.*

**Formula variables**

In Exstream, formula variables are variables that use logic to derive a value. You can use formula variables to perform calculations, such as totals for the charges or credits that appear in account statements. You can place a formula variable anywhere in an application where you can use variables.

Formula values can use the following logic elements:

- Variables
- Library functions
- Built-in functions
- Conditions

For more information about the logic elements used in formula variables, see the *Using Logic to Drive an Application* guide.

***Instructor demonstration***

1. *Watch the Instructor-led demonstration of how the formula for a currency variable object is set up in the Property Panel.*

**Reference data files**

Reference data files are optional data files that let the engine access customer information not included in a customer driver data file. A reference data file lets you use a supplemental set of customer data based on one or more variables included in the customer driver data file. For example, suppose that you want to tie your customer driver data file to a reference file using the customer account number. You can map the <Customer\_AccountNumber> variable in each of the data files.

***Instructor demonstration***

1. *Watch the Instructor-led demonstration that shows how a variable is mapped in data file objects in the Edit Panel.*

When you include additional data files in an application, they must be placed in the order in which the data becomes available to the engine. Customer data files are always placed above reference data files in an application.

For more information about using multiple data files in an application, see the *Using Data to Drive an Application* guide.

**Record type indicators** Many types of data files contain rows of data that are similar in nature, called records. Each row or record contains a series of data areas, typically organized into columns or fields. The data can be broken up by customers or sections based on the type of data. At these breaks, you identify the change in the type of records using record type indicators. You might use multiple record type indicators within a data file if you have different types of data that are all related to the same customer.

You can use numbers, letters, spaces, nulls, and most non-printing characters as record type indicators. Records with the same record type indicators have the same type of data. When the record type indicator changes, the type of data changes as well.

Suppose you are creating a bank statement that consolidates all the customers' accounts at the financial institution. Any customer can have multiple accounts, each with deposit, withdrawal, fee, and interest data that must appear in the statement. Each customer's data can be represented using multiple records in the data file.

For example, a data file for a bank statement might include the following record type indicators:

Record type indicator	Type of data represented
C	Customer information, including name, address etc.
D	Customer information, including name, address, etc.
W	Withdrawals, including dates, payees, and amounts
F	Fees, including dates, reasons, and amounts
I	Interest, including dates and amounts

In a customer account statement for Mobi Communications, your data file might have the following types of record types:

- Customer information
- Mobile phone calls
- Text messages
- Data usage
- Taxes



#### ***Instructor demonstration***

1. *Watch the Instructor-led demonstration that shows how a variable is mapped in data file objects in the Edit Panel.*

## Using tables to organize data in a design

Tables are design objects that let you organize and categorize content to make it easier to read. Tables are often used to present complex data that is not easy to read in paragraph form, such as transaction histories or balance statements. You can use labels on the rows and columns to improve the clarity of the data presented in the table.

If your organization has licensed the Advanced Table module, Exstream lets you use several unique table types in your designs. In this course, however, you will only work with the following types of tables:

- **Simple tables** – Simple tables let you create static tabular layouts. They are most often used when the same table format and same type of data is used for each customer.
- **Basic automated tables** – Basic automated tables are tables that can grow and change based on customer data. They are most often used when a table contains variables mapped to customer data with multiple records. For example, the customer account statement for Mobi Communications contains a table that is used to display a summary of the charges and credits for the billing period. The basic automated table inserts the number of rows needed for each customer based on the number of records in the data.

Designer lets you format tables in several different ways. You can set specific options for individual cells, rows, columns, or the whole table. You can add or delete rows and columns, and you can join or split cells. You can perform all of the normal allowed formatting for text within the table, and for design objects embedded within the table (for example, resizing or rotating images).

Designer uses many symbols to let you know how the rows and columns in a table are working together in the table design. For example, specific symbols are used to indicate how sections of a table are grouped together. In addition, each type of row and column has its own symbol.



In Designer, you can access an overview of the table symbols that appear in the design window. From the Menu bar, select **Table > Explain Table Symbols**.

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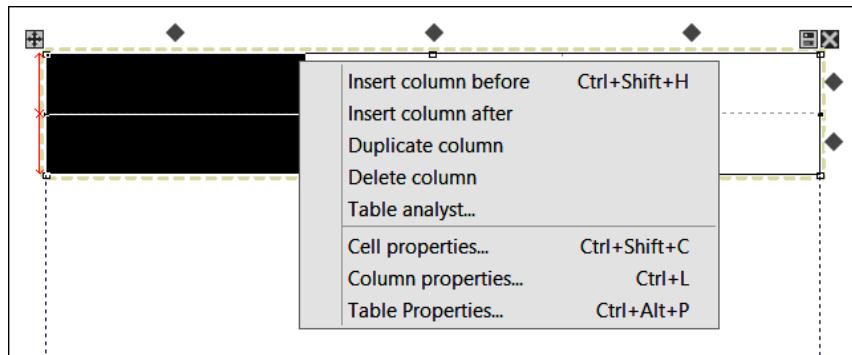


### **Instructor demonstration**

1. *Watch the Instructor-led demonstration of how to access the properties for different parts of a table in the design window.*

Like other objects in a design, you can personalize tables based on customer data or rules. For example, you can hide columns or rows, set up headers and footers to repeat or appear, or even remove specific tables for some customers.

**Figure 6-1:**  
Table element properties accessible via right-click



For more information about table types and table formatting options, see the Designing in Exstream guide.

### Table types

Tables can range from simple to complex. Because you can do so many things to customize a table, choose your table type according to your project's requirements and the functionality available for the table. When you select your table type, you get just the features you need making it easier to make formatting and customization decisions. The following table describes the types of tables available.

Type	Symbol	Description
Simple Table		The table is produced in the finished document exactly as it is drawn. There is no automation of the table.
Basic Automated Table		The table has automated rows, headers, and footers, but there are no table sections that control which parts of the table are generated.
Automated Table with Sections		The table has table sections to control which sections of the table are produced and in what order. This type of table is used for table designs containing many sections, but without levels to control complex header and footer logic.
Automated Table with Levels		The table has table sections with levels to enable complex header and footer logic. For example, you can repeat one master heading from one level across all lower level sections of the table.

Type	Symbol	Description
Basic Automated Table with Automated Columns		The table has automated rows, but there are no table sections that control which parts of the table are generated. This table type also provides automated columns.
User Table		The table has all features enabled to allow you full control over tables. Select this type of table if you want the functionality available in all of the table types.

## Using charts to graphically represent data in a design

Charts are graphical representations that help your customers understand complex data. Charts can illustrate relationships between sets of data, the relationship of a part of the data to the whole, trends in data, a range of data points, and other scenarios. Charts are created at engine run time, so they can be personalized based on each customer's data.

If your organization has licensed the Dynamic Charting module, Exstream lets you use several unique chart types in your designs. In this course, however, you will only work with the bar chart.



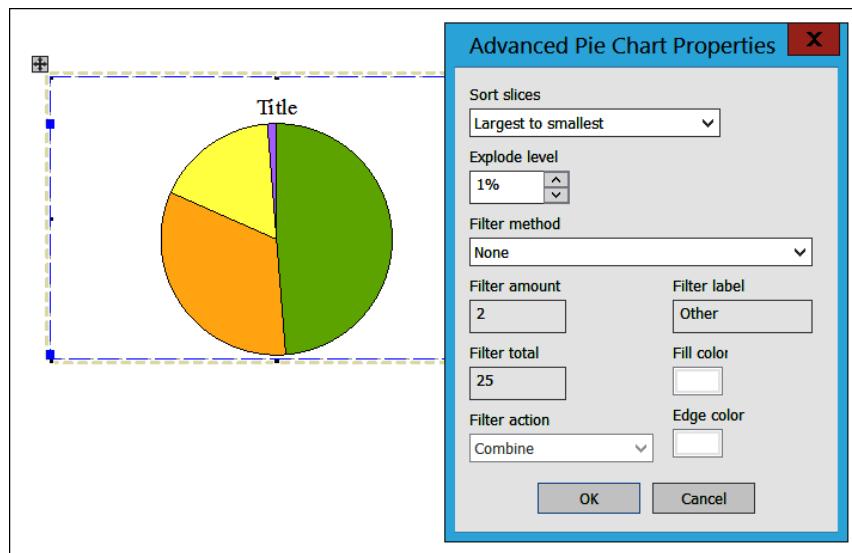
### Instructor demonstration

1. *Watch the Instructor-led demonstration of how to access the properties for different parts of a chart in the design window.*

## Formatting charts

As with tables, you have several options for formatting charts. Designer lets you format borders, backgrounds, or grid lines as needed. You can include and format labels for data points or legends to make the chart easier to understand. You can also define the way that color is used within the chart, such as whether labels, lines, bars, or wedges have specific color, relative color, or variable data-driven color. Certain types of charts can be presented in 3D. Additionally, different chart types have unique properties and formatting options that you can configure within the **Chart Properties** dialog box or within the chart area in the design window.

**Figure 6-2:**  
Pie-chart properties dialog



For more information about chart types and chart formatting options, see the Designing in Exstream guide.

## Chart types

Exstream offers a wide variety of chart types that you can use in designs. Many charts are similar in appearance but allow slightly different functionality. For example, several different types of bar charts are available, each with a slightly different appearance or set of functionality.

The following table provides an overview of each chart type that you can use in your designs:

Type	Symbol	Description
Area		Area charts illustrate changes in data values over time in relation to a whole. Use these charts to compare value changes.
Bar		Bar charts use bars to mark data amounts. Use these charts to compare more than one category of data and to show relationships between groups of data.

Type	Symbol	Description
Calendar		Calendar charts are driven by date variables. Use these charts to highlight and explode specific calendar dates for emphasis. For example, you might want to highlight a deadline.
Comparative Bar		Comparative bar charts use one bar to show a total amount and a second, segmented bar to show the data that makes up the parts of that total. Use these charts to compare complex combinations of customer data.
Comparative Line		Comparative line charts show two sets of data as a line chart and optionally shade the area between the two lines. Use these charts to show the difference between a current value and a potential net value.
Horizontal Bar		Horizontal bar charts use horizontal bars to mark data amounts. Use these charts just as you would bar charts.
Horizontal Stacked Bar		Horizontal stacked bar charts use stacked, horizontal bars to mark data amounts. Use these charts to compare different categories of data, showing some components as fractions or percentages of a whole.
Label		Label charts plot two groups of numbers as a single series of x and y coordinates using a symbol or a label when both axes show data. Use these charts for data that is in uneven intervals or clusters.
Line		Line charts illustrate changes in values over time. Use these charts for discrete or grouped continuous data.
Pie		Pie charts illustrate the relationship of a part to a whole. Each data value creates a part (or slice) of the chart. Use these charts to show a relative proportion of numbers that add up to a total.
Progress		Progress charts split a bar into sections to compare two data values. Use these charts to show a customer how financial planning goals are being reached.

Type	Symbol	Description
Radar		Radar charts plot an array of information in a line around a related center point. Use these charts when comparing several different factors that all relate to one item. This chart shows areas of relative strength, weakness, and overall performance.
Range		Range charts are bar charts that illustrate ranges of data. Use these charts when data does not need to be anchored to the x-axis. This chart is frequently used in financial documents.
Scattergram		Scattergram charts plot two groups of numbers as a single series of x and y coordinates when both axes show data that changes in value over time. Scattergram charts use a symbol or label to illustrate data points. Use these charts to show how two groups of information are related and can be compared.
Stacked Bar		Stacked bar charts use a stacked bar or multiple stacked bars to mark data amounts. Use these charts to show components as fractions or percentages of a whole.

## Setting up a design to accommodate objects that flow

Because Exstream lets you add unique variable data for each customer to personalize communications, it can be challenging to create a static design that will accommodate the data for every customer. For example, some customers might have only a few lines of data that require only a single page, while other customers have extensive data that require multiple pages. You can use the flow features in Exstream to accommodate text boxes or tables that need more space than is available in the design, so they can grow or move at engine run time. When you use flow, you create one base design and then use additional pages, called flow pages, to accommodate the data that does not fit into the original design.

By default, design objects are not set to flow. That is, if the content in the object grows beyond the designed space, then it is discarded at engine run time. To allow content to flow, you must design one or more flow pages and then set properties to allow them to receive overflow content. You must also configure properties on the design object to allow it to flow.

Flow frames are design objects that reserve space for content to flow. If you use multiple flow frames, you can customize the fill order. When you design flow pages, you place flow frames on pages to contain the following types of overflow content from other pages or frames:

- Text
- Messages
- Table rows
- Sections and paragraphs

You will set up a design to accommodate flowing content in the forthcoming exercise ‘Setting up the design for flowing content’.

For more information about setting up designs for flowing content, see the *Designing Customer Communications* guide.

## Setting up a design for delivery

As mentioned in Module 3, you must include at least one type of output in an application to deliver documents to your customers. Up to this point in the course, you have viewed output in the test environment using the Exstream Viewer.

In this module you will be viewing output in PDF delivery format.

In production, it is possible to set up your applications to deliver to multiple delivery channels from a single design simultaneously at engine run time.

The PDF output driver produces fully-composed PDF files that are searchable using the Adobe Acrobat Reader. The PDF output driver supports PDF security features, bookmarks, accessibility standards, binary compression, and base 14 or TrueType fonts. You can add accessibility tags to the designs that will be delivered as PDF files to control and optimize the way in which the document is read by a screen reader or text-to-speech converter.

To produce any type of output driver, including PDF, you must have the following objects configured in the Library and referenced within the application:

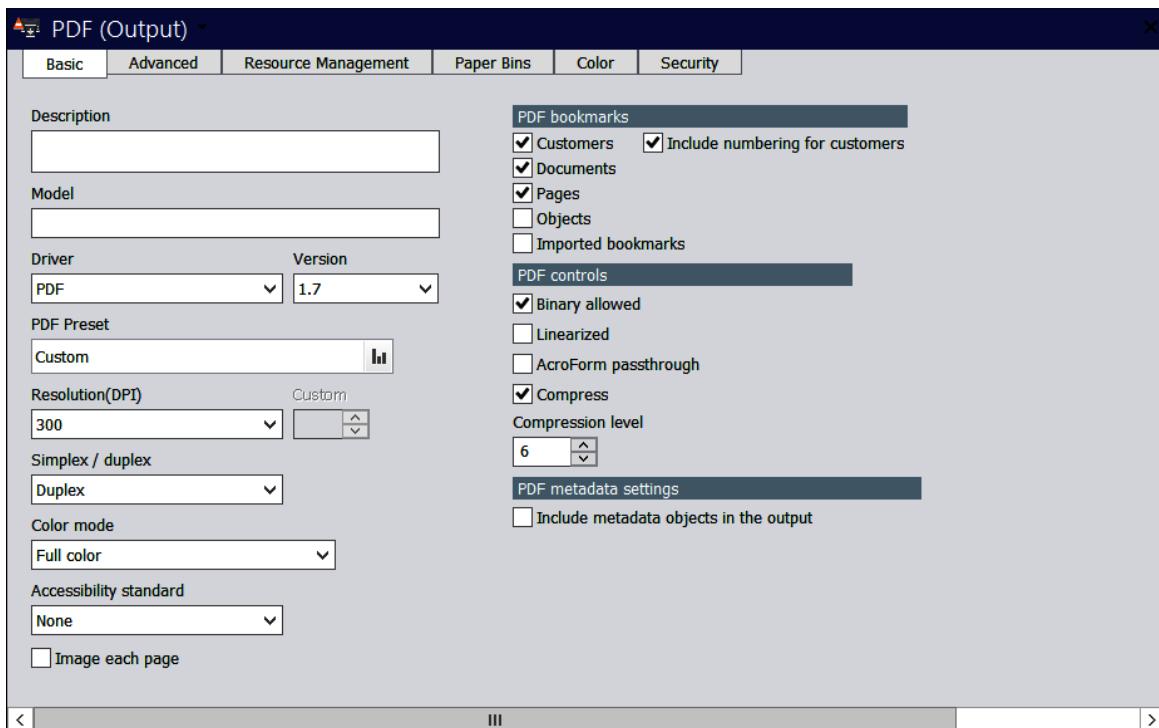
- **Output** – Output objects let you assign and configure the settings for a specific output driver. The output object settings control the print stream that is sent to a device for printed output or the viewing software for electronic output. For example, you can configure resolution, simplex or duplex options, paper selection, color settings, printable areas for page margins, and so on. Each output type has unique settings that you can set up. You must include one output object for each type of output used in an application.

- **Output queue** – Output queues are container objects for output objects and other objects that can be used for high-volume production. You can use output queues to control production for multiple types of output at the same time, including a mix of print and electronic output. You can also use an output queue to add a unique variable-driven name to each record in an output file (for example, a prefix that applies time and date stamp). An output queue must contain at least one output object.



#### **Exercise 6.1: View the properties of an output object**

1. In Design Manager, from the Library, expand the **Introduction > Environment > Delivery > Outputs** heading.
2. Open the **PDF output object** in the Property Panel.
3. Review the options that can be selected for the **PDF output object**, such as version, **PDF preset**, **resolution**, **simplex/duplex**, **bookmarks**, **compression**, and so on.



**Figure 6-3: PDF output properties dialog**

## Optimizing a design for accessibility tools

If you have licensed the PDF Output module, you can use the accessibility features in Exstream to control and optimize the way a PDF or PDF/A document is read by screen readers and text-to-speech converters. The accessibility features available in Exstream let you create and customize accessibility tags on all objects in a full document so that they provide the most relevant information to the customer. Accessibility tags let you configure how the screen reader or text-to-speech converter handles the design object. You have the following options:

- **Skip object** – The screen reader or text-to-speech converter does not read the object.
- **Read alternate text** – The screen reader or text-to-speech converter reads alternate text (static or variable).
- **Read object text** – The screen reader or text-to-speech converter reads the text within the object.

You can set the read options on the **Accessibility** tab of the object properties, which you access by highlighting the object in the design window and clicking .

Additionally, for all objects that are read, Designer assigns a read order. You can, however, customize the order in which the screen reader or text-to-speech converter reads the objects using the Accessibility Viewer.

Exstream also provides features for adding alternative text for both text and non-text objects, as well as keyboard navigation for user interface menus, panels, and trees without using a mouse.

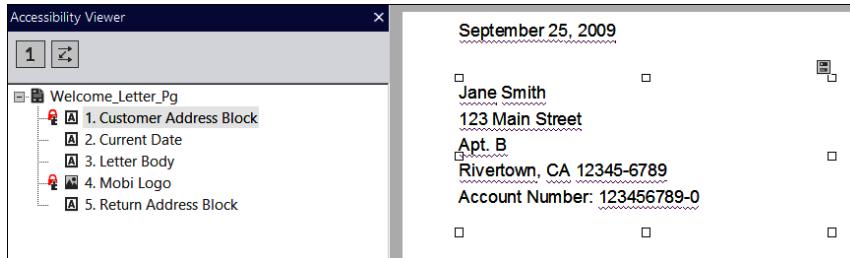


### **Exercise 6.2: View and compare the accessibility of design objects**

1. In Design Manager, expand the **Introduction > Customer Correspondence > Pages** heading.
2. Drag and drop the **Welcome\_Letter\_Pg** page object to the Edit Panel.  
The page object opens in Designer.
3. To review the accessibility settings for each of the following design objects on the page, one by one, click  and then click the **Accessibility** tab:
  - a. *Mobi Logo*
  - b. *Return Address Block*
  - c. *Current Date*
  - d. *Customer Address Block*
  - e. *Letter Body*
  - f. *John Thompson signature*

If the Accessibility Viewer is not visible, select **View > Accessibility Viewer** from the Menu bar.

**Figure 6-4:**  
**Accessibility viewer**



4. In the **Accessibility Viewer**, do the following:
  - a. Drag and drop the objects to change the read order.
  - b. Click **1** to view the order in which the accessibility tool will read the design objects.

Numbers that represent the read order appear in the design window.

- c. To automatically reset the read order of the design objects to be read left to right and top to bottom by the accessibility tool, click .

The order of the design objects changes in the Accessibility Viewer and in the design window.

5. Save and close the page object.

## Designing the Mobi customer account statement

As new service offerings have been added to their business, Mobi Communications has updated their customer account statements on an ad hoc basis. A recent survey undertaken by the customer relations department reported that more than 50 percent of customers responding to the survey indicated that the customer account statement was confusing. To follow up the survey, customer relations gathered call log data from customer service, which indicated that 35 percent of billing-related calls were related to confusion over charges on customer account statements. Customer relations decided that a redesign of the customer account statement could improve customer experience and possibly reduce statement-related calls to customer service.

As a designer for Mobi Communications, you have been tasked with creating the basic visual design in Exstream for the customer account statement update. The customer account statement must meet the following requirements:

- It must use variable data to personalize the correspondence for each customer, so that their personal information and account data are easy to identify.
- It must be designed using the Mobi Statement page templates, which were recently approved by the marketing department.
- It must include an at-a-glance summary of the previous and current billing information, including the amount due, which must be easily identifiable.
- It must include information on customer service plans and charges for those plans, in addition to charges for additional usage.
- It must include a visual indicator to show customer usage trends.
- It must be designed to accommodate customer data that spans multiple pages.
- It must be set up for electronic delivery in a PDF format that is optimized to be read by accessibility tools, such as screen readers and text-to-speech converters.

To design the Mobi Customer Account Statement, you must complete the following exercises:

- Creating the customer account statement design in designer
- Assembling the customer account statement application in design manager
- Packaging the application, running the engine, and viewing output

#### **Creating the customer account statement design in Designer**

To create the Mobi Customer Account Statement design, you must complete the following exercises:

- Creating a page using a page template
- Designing a simple table
- Designing a bar chart
- Designing a basic automated table
- Setting up the design for flowing content



Throughout the design process, you will be setting up the PDF accessibility tags as you set the properties on each design object.

---



### **Exercise 6.3: Create a page using a page template**

1. Open Designer.
2. From the Menu bar, select **File > New**.

The Create New Item dialog box opens.

3. From the **What to create** area, select **Page**.



In Designer, all of your new page designs are simplex by default and will be used for this exercise. Selecting the **Duplex** check box lets you design both sides of a duplex page design in the same design window.

4. In the **Name** box, enter **Acct\_Statement\_First\_Pg**.
5. In the **Description** box, enter **First page of customer account statement**.
6. Next to the **Folder** box, click

The Folders dialog box opens.

7. From the list, select **Customer Account Statement**.
8. Click **OK**.

The Folders dialog box closes.

9. Click **Next**.

10. Next to the **Page Template** box, click

The Select Page Template dialog box opens.

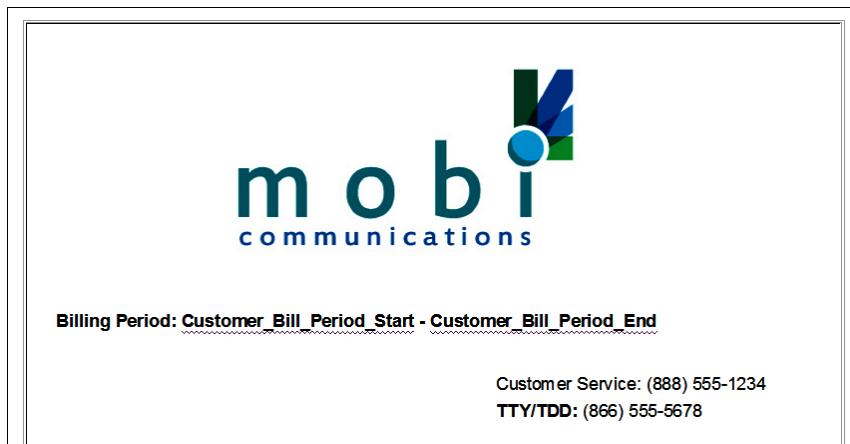
11. From the list, select **Mobi Statement Page 1**.
12. Click **OK**.

The Select Page Template dialog box closes.

13. Click **Finish**.

The page based on the template opens in the design window.

**Figure 6-5:**  
**New page based on Mobi Statement Page 1 template**



### Designing a simple table

For this exercise, you will design an automated table that contains the statement summary, including the customer account number, previous balance and payment information, and current total due. To design a simple table, you must complete the following exercises:

- Creating a simple table
- Formatting a simple table
- Inserting table text and variables



#### **Exercise 6.4: Create a simple table**

1. On the Drawing Objects toolbar, click .

The Table dialog box opens.

2. In the **Rows** box, enter 8.
3. In the **Columns** box, enter 2.
4. Click OK.

The Table dialog box closes and a table appears in the design window.

5. Click .

The Table Properties dialog box opens.

6. On the Placement tab, set the position and size of the table as follows:

Box	Enter
Horizontal position	0.25
Vertical position	2.75
Width	3.125



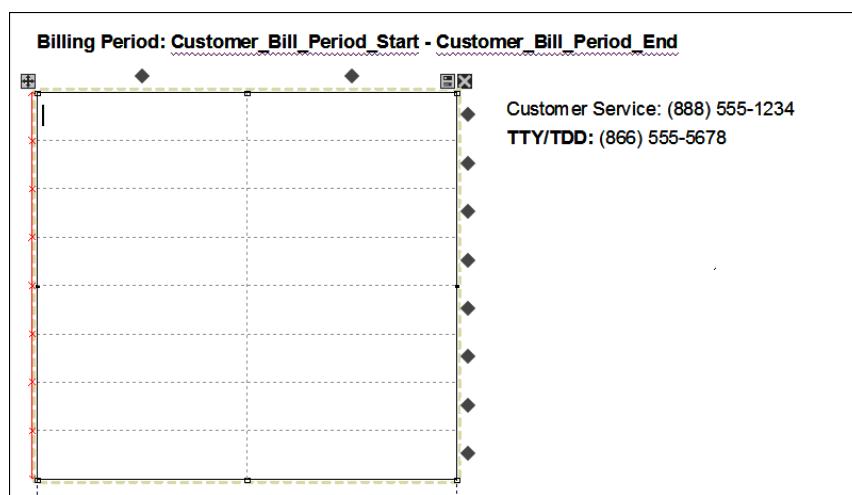
The **Height** box is disabled because the **Autosize height** check box is selected on the **Dynamic Size and Placement** tab. It is good practice to select this option for tables so that the height of the table can adjust at engine run time to accommodate the objects within the table.

7. Click the **Dynamic Size and Placement** tab.
8. In the **Reference** name box, enter *Statement Summary Table*.
9. Click the **Accessibility** tab.
10. From the **Accessibility tag options** area, make sure that **Read object text** is selected.
11. Click **OK**.

The Table Properties dialog box closes.

12. Save the page object.

**Figure 6-6:**  
Table inserted into page





### Exercise 6.5: Format a simple table

In Designer, you will format the simple table according to Mobi Communication style guidelines.

1. Select the table object.
2. Set the column widths by completing the following steps:
  - a. Above the first column, click  and select **Properties**.

The Table Column Properties dialog box opens.

- b. In the **Width** box, enter **1.375**.
- c. Click **OK**.

The Table Column Properties dialog box closes.

- d. Above the second column, click  and select **Properties**.

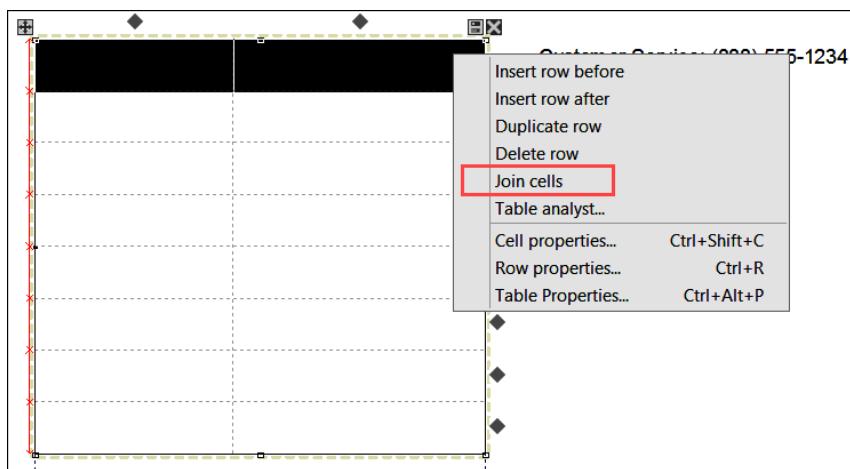
The Table Column Properties dialog box opens.

- e. In the **Width** box, enter **1.75**.
- f. Click **OK**.

The Table Column Properties dialog box closes.

3. To create a heading row that spans the full width of the table, highlight the first row in the table, right-click, and select **Join cells**.

**Figure 6-7:**  
Joining table cells



4. To create a total charges row, repeat step 3 for the last row in the table.

5. To add a background color to the heading row, complete the following steps:

- a. Right-click the row in the table and select **Cell properties**.

The Cell Properties dialog box opens.

- b. Select the **Background** check box and click the color well.

The Color dialog box opens.

- c. From the **Color model** list, select **Mobi Branded Colors**.

- d. From the **Color name** list, select **Mobi Blue**.

- e. Click **OK**.

The Color dialog box closes.

- f. Click **OK**.

The Cell Properties dialog box closes.

6. Repeat step 5 for the last row in the table.

7. Highlight the fourth row in the table and repeat step 5, but select the color name **Mobi Blue - 50%**.

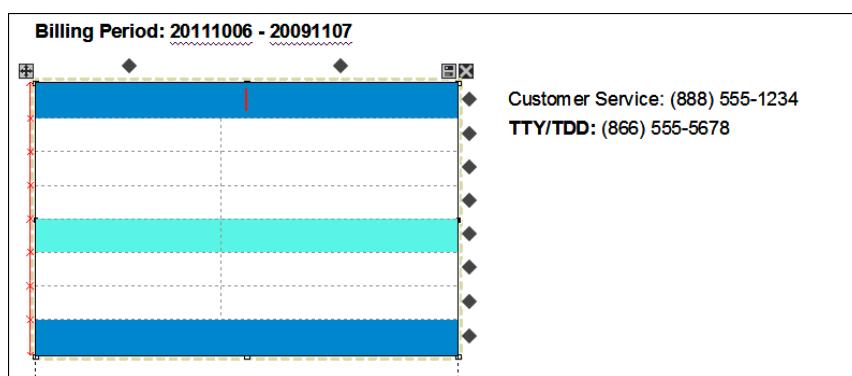
8. To format the table text using the Mobi approved fonts, complete the following steps:

- a. Apply the **Table Heading** paragraph style to the cells in the first and last rows.

- b. Apply the **Table Body** paragraph style to all of the remaining table body cells, one at a time, in the first column.

- c. Apply the **Table Body Right** paragraph style to all of the remaining table body cells, one at a time, in the second column.

**Figure 6-8:**  
**Formatted table object**



9. Save the page object.

**Exercise 6.6: Insert table text and variables**

1. If the Variable Palette is not visible, select **View > Variable Palette**.
2. Filter the variables shown in the variable list to show only the variables you need by completing the following steps:
  - a. Click .
  - b. From the list, select **Selected Folder**.

The Folders dialog box opens.

- c. Select the **Introduction** folder and click **OK**.

The Folders dialog box closes and the variables are filtered in the Variable Palette.

3. Enter the following text and variables in the table:

Row	Column	Enter
1	N/A	Account Number: <Customer_AccountNumber>
2	1	Previous Balance
2	2	<Customer_PastDue_Balance>
3	1	Payment Posted
3	2	<Customer_Posted_Payment>
4	1	Unpaid Balance
4	2	<Customer_Unpaid_Balance>
5	1	Statement Date
5	2	<Customer_Bill_Date>
6	1	Current Charges
6	2	<Customer_Current_Charges>
7	1	Due Date
7	2	<Customer_Bill_Due>
8	N/A	Total Amount Due: <Customer_Total_Due>

## 4. Save the page object.



Because it is sometimes hard to visualize how your design will appear after the variables have been populated, you can display sample text as you design. Sample data is a text representation of a variable, but not the actual value of the variable. For example, the sample data for the <CustomerName> variable might be 'George A. Smith.' To quickly switch between displaying the variable name and the sample variable text, click on the Properties toolbar.

The screenshot shows a table with a light blue header row and a light green footer row. The header row contains the text 'Account Number: Customer\_AccountNumber'. The body rows contain the following data:

Previous Balance	Customer_PastDue_Balance
Payment Posted	Customer_Posted_Payment
Unpaid Balance	Customer_Unpaid_Balance
Statement Date	Customer_Bill_Date
Current Charges	Customer_Current_Charges
Due Date	Customer_Bill_Due
Total Amount Due: Customer_Total_Due	

**Figure 6-9:**

**View of a finished simple table for the service summary and charges**

**Designing a bar chart**

For this exercise, you will design a bar chart that provides a visual display of usage trends over the past three months. To design a chart that shows usage trends, you must complete the following exercises:

- Inserting a bar chart
- Setting up the bar chart data
- Customizing chart colors
- Formatting the chart area

**Exercise 6.7: Insert a bar chart**

1. Click anywhere in the blank area of the page.

2. On the Drawing Objects toolbar, click .

The Chart Type dialog box opens.

3. Select **Traditional Chart** and click **OK**.

The cursor changes to .

4. Click and drag across the first page in design window to insert a chart.

By default, Designer inserts a pie chart.

5. Click .

The Chart Properties dialog box opens.

6. Click the **Chart Area** tab.
7. Click the **Chart type** icon.

The Chart Type dialog box opens.

8. Select **Bar**.
9. Click **OK**.

The Chart Type dialog box closes.

10. In the **Title** box, enter *90-Day Usage Summary*.
11. Clear the **Lines** check box.
12. Click the **Dynamic Size and Placement** tab.
13. Clear the **Autosize height** check box.
14. In the **Reference name** box, enter *90-Day Usage Summary Chart*.
15. Click the **Placement** tab and set the position and size of the chart as follows:

Box	Enter
<b>Horizontal position</b>	0.25
<b>Vertical position</b>	6
<b>Width</b>	6
<b>Height</b>	3

16. Click the **Accessibility** tab and set up the accessibility tags:
  - a. From the **Accessibility tag** options area, select **Read alternate text**.
  - b. In the **Alternate text** box, enter *90-day usage summary chart*.
17. Leave the **Chart Properties** dialog box open for the next exercise.

**Exercise 6.8: Set up the bar chart data**

1. Click the **Chart Area** tab.
2. Select the **Use arrays for multiple series** check box.
3. Select the following variables to use for the bar data:
  - a. **X** : <Customer\_Prior\_Month(n)>
  - b. **1** : <Customer\_Prior\_CallMinutes(n)>
  - c. **2** : <Customer\_Prior\_TextMessages(n)>
  - d. **3** : <Customer\_Prior\_DataKB(n)>
4. Clear the **4** check box.
5. To set up the variables for the bar labels, complete the following steps:
  - a. From the **Bar labels** list, select **Each in different variable**.
  - b. In the **Bar labels** area, select the following variables, in order:
    - <Customer\_Prior\_CallMinutes(n)>
    - <Customer\_Prior\_TextMessages(n)>
    - <Customer\_Prior\_DataKB(n)>
6. To add a legend to the chart, complete the following steps:
  - a. From the **Legend** list, select **Left**.
  - b. Click

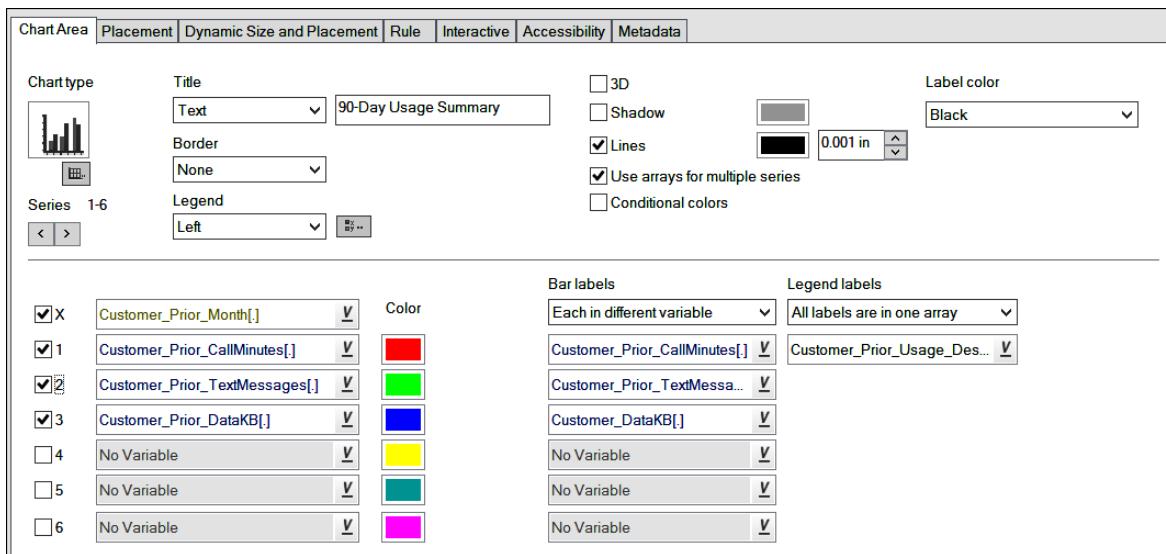
The Legend/Label Properties dialog box opens.

- c. From the **Contents** list, select **Label**.
- d. Click **OK**.

The Legend/Label Properties dialog box closes.

- e. From the **Bar labels** list, select **All labels are in one array**.
- f. In the **Legend labels** area, select the <Customer\_Prior\_TextMessages> variable.
- g. From the **Legend labels** list, select **All labels are in one array**.
- h. In the **Legend labels** area, select the <Customer\_Prior\_Usage\_Description> variable.
- i. Click **OK**.
- j. Click **OK** in the message window.

7. Save the page object.



**Figure 6-10: Bar chart properties**

8. Click to open the **Chart Properties** dialog box again.
9. Leave the **Chart Properties** dialog box open for the next exercise.



#### Exercise 6.9: Customize chart colors

In Designer, you will customize the chart colors using PANTONE® colors.

1. For the data points, click the color well next to the <Customer\_Prior\_CallMinutes(n)> variable.
- The Color dialog box opens.
2. From the **Color model** list, select **PANTONE®**.
  3. Using the slider control to scroll through the list of color names, select **PANTONE 293 C**.



To go directly to the color you want, enter the color name in the **Color** box instead of using the slider to scroll through the list of color names.

4. Click **OK**.

The Color dialog box closes.

5. Repeat step 1 through step 4 for the <Customer\_Prior\_TextMessages(n)> variable and select **PANTONE 7455 C**.
6. Repeat step 1 through step 4 for the <Customer\_Prior\_DataKB(n)> variable and select **PANTONE 2995 C**.

Leave the Chart Properties dialog box open for the next exercise.



#### **Exercise 6.10: Format the chart area**

In Designer, you will format the chart area to conform to the Mobi Communications style guidelines.

1. In the **Chart type** area, click .

The Chart Format dialog box opens.

2. Format the X-axis by completing the following steps:
  - a. Click the **X-axis** tab.
  - b. Select the **Show axis** check box.
  - c. From the **Title type** list, select **None**.
3. Format the Y-axis by completing the following steps:
  - a. Click the **Y-axis** tab.
  - b. Select the **Show axis** check box.
  - c. From the **Title type** list, select **None**.
  - d. Select the **Show labels on y-axis** check box.
4. Format the data labels by completing the following steps:
  - a. Click the **Data labels** tab.
  - b. From the **Placement** list, click **Above all bars**.
  - c. From the **Keep labels inside plot area** method area, select the **Increase range** radio button.
5. Click **OK**.

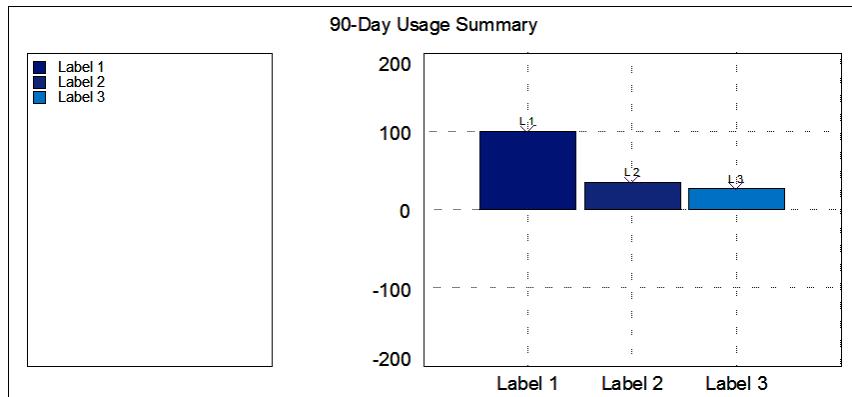
The Chart Format dialog box closes.

6. Click **OK**.

The Chart Properties dialog box closes and the chart appears in the design window.

7. In the design window, drag the black slider bar below the chart to adjust the width of the bars to about 95 percent of the maximum width, allowing for a space between each set of bars.
8. To format the chart text, click each of the following parts of the chart to select them and apply the following formatting:
  - a. **Chart title** : Arial 10-point, bold
  - b. **X-axis** : Arial 10-point
  - c. **Y-axis** : Arial 10-point
  - d. **Legend** : Arial 8-point
  - e. **Bar labels** : Arial 6-point
9. Save and close the page object.

**Figure 6-11:**  
View of finished bar chart  
for the 90-day usage  
summary



### Designing a basic automated table

For this exercise, you will design a basic automated table that contains a summary of the customer rate plans, charges, and credits. To design a basic automated table, you must complete the following exercises:

- Inserting a basic automated table
- Setting up the basic automated table properties
- Inserting table text and variables
- Formatting a basic automated table



#### Exercise 6.11: Insert a basic automated table

1. Open Design Manager.
2. Expand the **Introduction > Customer Account Statement > Pages** heading.
3. Drag the **Acct\_Statement\_Summary\_Pg** page object to the Edit Panel.

The page object opens in Designer.

4. On the Drawing Objects toolbar, click .

The Table dialog box opens.

5. Click the **Table type** icon.

The Table Type dialog box opens.

6. Select **Basic Automated Table**.

7. Click **OK**.

The Table Type dialog box closes.

8. In the **Rows** box, enter 3.

9. In the **Columns** box, enter 2.

10. Click **OK**.

The Table dialog box closes and a table appears in the design window.

11. Click .

The Table Properties dialog box opens.

12. Click the **Dynamic Size and Placement** tab.

13. In the **Reference** name box, enter *Charges & Credits*.

14. Select the **Can split and flow** check box.

15. In the **Minimum flow size** box, enter 1.

16. Select the **Autosize height** check box.

17. Click the **Placement** tab and set the position and size of the table as follows:

Box	Enter
<b>Horizontal position</b>	0.5
<b>Vertical position</b>	0.5
<b>Width</b>	5.5



The **Height** box is disabled because the **Autosize height** check box is selected on the **Dynamic Size and Placement** tab. It is good practice to select this option for tables so that the height of the table can adjust at engine run time to accommodate the objects within the table.

18. Click the **Table** tab.

19. Select the **Remove empty rows** check box.

20. Click the **Accessibility** tab.

21. From the **Accessibility tag options** area, make sure that **Read object text** is selected.

22. Click **OK**.

The Table Properties dialog box closes.

23. Save the page object and leave it open for the next exercise.



#### **Exercise 6.12: Set the basic automated table properties**

1. To set up a repeating header, complete the following steps:

a. Select a cell in the table.

b. Next to the first row, click and select **Properties**.

The Row Properties dialog box opens.

c. Click the **Automated Row Properties** tab.

d. From the **Row type** list, select **Repeating header (H+)**.

e. Click **OK**.

The Row Properties dialog box closes.

2. To set up a row that repeats based on customer variable data, complete the following steps:

a. Next to the second row, click and select **Properties**.

b. The **Row Properties** dialog box opens.

c. Click the **Automated Row Properties** tab.

d. From the **Row type** list, select **Automated row - Repeating on defined criteria (R)**.

e. From the **Repeat method** list, select **Number of elements in array**.

f. Next to the **Repeat** variable box, click .

The Select Variable dialog box opens.

g. From the list of variables, select `<Customer_ChargeCredit(n)>`.

h. Click **OK**.

The Select Variable dialog box closes.

i. Click **OK**.

The Row Properties dialog box closes.

3. Save the page object and leave it open for the next exercise.



### **Exercise 6.13: Format the basic automated table**

In Designer, you will format the basic automated table according to Mobi Communication style guidelines.

1. *Select the table object.*
2. *To set the column widths, complete the following steps:*
  - a. *Above the first column, click  and select **Properties**.*

The Table Column Properties dialog box opens.

- b. *In the **Width** box, enter 3.25.*
- c. *Click **OK**.*

The Table Column Properties dialog box closes.

- d. *Above the second column, click  and select **Properties**.*

The Table Column Properties dialog box opens.

- e. *In the **Width** box, enter 2.25.*
- f. *Click **OK**.*

The Table Column Properties dialog box closes.

3. *To create a heading row that spans the full width of the table, highlight the first row in the table, right-click, and select **Join cells**.*
4. *To add a background color to the heading row, complete the following steps:*
  - a. *Highlight the row in the table, right-click, and select **Cell properties**.*

The Cell Properties dialog box opens.

- b. *Select the **Background** check box and click the color well.*

The Color dialog box opens.

- c. *From the **Color model** list, select **Mobi Branded Colors**.*
- d. *From the **Color name** list, select **Mobi Blue**.*
- e. *Click **OK**.*

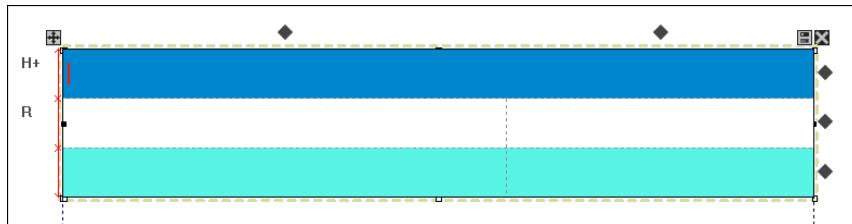
The Color dialog box closes.

- f. *Click **OK**.*

The Cell Properties dialog box closes.

5. Repeat step 4 for the last row, but select **Mobi Blue - 50%**.

**Figure 6-12:**  
Formatted automated table



6. Save the page object and leave it open for the next exercise.



#### Exercise 6.14: Insert text and variables

In Designer, you will insert text and variables into the basic automated table for the service summary and charges.

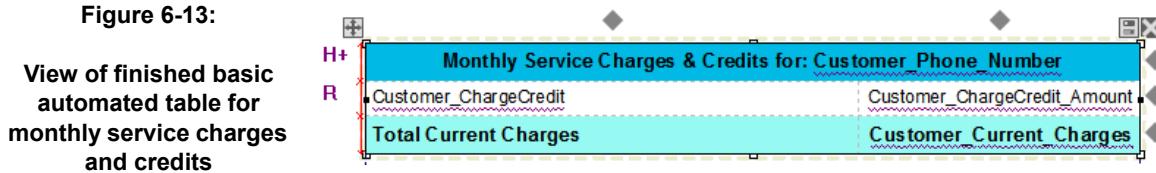
In this exercise, the text you enter is represented by text with special formatting (for example, *sample text*). The variables you enter using the Variable Palette are set off with angle brackets.

1. Enter the following text and variables in the table.

Row	Column	Enter
1	N/A	Monthly Service Charges & Credits for <Customer_Phone_Number>
2	1	<Customer_ChargeCredit(n)>
2	2	<Customer_ChargeCredit_Amount(n)>
3	1	Total Current Charges
3	2	<Customer_Current_Charges>

2. Format the table text using the Mobi approved fonts by completing the following steps:
- In the first row, apply the **Table Heading** paragraph style to the cell.
  - In the first column, apply the **Table Body** paragraph style to the remaining cells, one cell at a time.
  - In the second column, apply the **Table Body Right** paragraph style to remaining cells, one cell at a time.

3. In the last row, apply the **Emphasis** text style, one cell at a time, to the text *Total Current Charges* and the <Customer\_Current\_Charges> variable.



4. Save and close the page object.

#### Setting up the design for flowing content

To set up the design for flowing content, you must complete the following exercises:

- Assembling the document
- Setting up a flow page
- Adding a flow frame to the flow page
- Setting up the design to flow



#### Exercise 6.15: Assemble the document

In Design Manager, you will add references for the page objects to assemble the document so that it can be set up for flowing content.

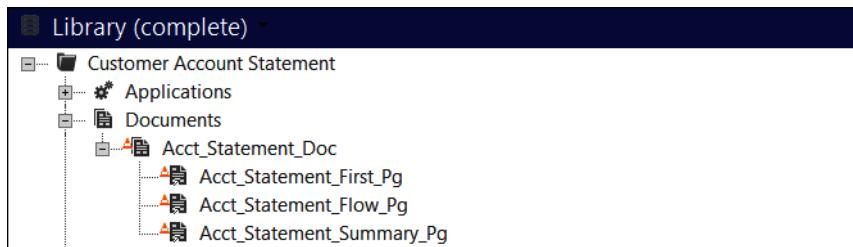
1. In Design Manager, expand the **Introduction > Customer Account Statement > Documents** heading.
2. Expand the **Introduction > Customer Account Statement > Pages** heading.
3. Drag-and-drop the following page objects to the **Acct\_Statement\_Doc** document object, so that they appear in the following order:
  - **Acct\_Statement\_First\_Pg**
  - **Acct\_Statement\_Flow\_Pg**
  - **Acct\_Statement\_Summary\_Pg**



The flow page object does not have to be added to the document object. Since it was added in this exercise, you must also define it as a flow page in the document properties or the output might contain extra blank pages. You will set up the properties for the flow page in the next exercise.

References for the page objects are added to the document object.

**Figure 6-14:**  
Page references added to account statement document



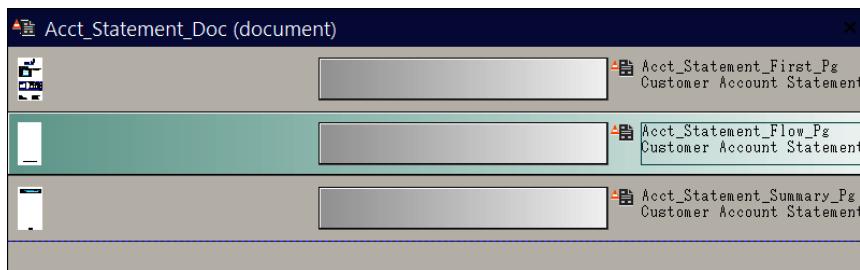
#### Exercise 6.16: Set up a flow page

In Design Manager, you will set up the flow page in the document properties.

1. Drag the **Acct\_Statement\_Doc** document object to the Edit Panel.

A graphical representation of the document object appears in the Edit Panel.

**Figure 6-15:**  
Document object in the Edit Panel



2. In the right column of the Edit Panel, double-click the **Acct\_Statement\_Flow\_Pg** page name.

The Document Page Properties dialog box opens.

3. From the **Position of page in document** list, select **Flow Page**.
4. Click **OK**.

The Document Page Properties dialog box closes.

5. Save and close the document object.
6. From the Library, open the **Acct\_Statement\_Flow\_Pg** page object in the Property Panel.
7. Click the **Flow** tab.
8. From the **Destination of overflow from the page** list, select **Copy this page**.
9. Save the page object.

**Exercise 6.17: Add a flow frame to the flow page**

In Designer, you will add a flow frame to the flow page.

1. In the Library, drag and drop the **Acct\_Statement\_Flow\_Pg** page object to the Edit Panel.

The page object opens in Designer.

2. On the Drawing Objects toolbar, click .

The New Frame dialog box opens.

3. From the **Type of frame to create** area, select the **Content flow area** radio button.

4. Click **OK**.

The New Frame dialog box closes and the Insert Frame dialog box opens.

5. Click **OK**.

The Insert Frame dialog box closes and the frame appears in the design window.

6. Set the size and position of the frame by completing the following steps:

- a. Click .

The Frame Properties dialog box opens.

- b. Next to the **Flow name** box, click .

The Select Flow Target dialog box opens.

- c. From the list, select **Acct\_Statement\_Target**.

- d. Click **OK**.

The Select Flow Target dialog box closes.

- e. Click the **Placement** tab and set the size and position of the frame:

Box	Enter
<b>Horizontal position</b>	0.5
<b>Vertical position</b>	0.5
<b>Width</b>	5.5
<b>Height</b>	9.75

- f. Click **OK**.

The Frame Properties dialog box closes.

7. Save the page object and close Designer.

**Exercise 6.18: Set up the design to flow**

In Design Manager, you will set up the main design pages to flow to the flow page.

1. Open Design Manager.
2. From the Library, open the **Acct\_Statement\_First\_Pg** page object in the Property Panel.
3. Click the **Flow** tab.
4. From the **Destination of overflow from the page list**, select **Flow to specified page**.
5. Next to the **Page** box, click .

The Select Page dialog box opens.

6. Next to the **Look in** box, click .

The Folders dialog box opens.

7. From the list, select **Customer Account Statement**.
8. Click **OK**.

The Folders dialog box closes.

9. From the list, select **Acct\_Statement\_FlowPg**.
10. Click **OK**.
11. Save the page object.
12. Repeat step 2 through step 11 for the **Acct\_Statement\_Summary\_Pg** page object.
13. Save and close the page object.

**Assembling the application in Design Manager**

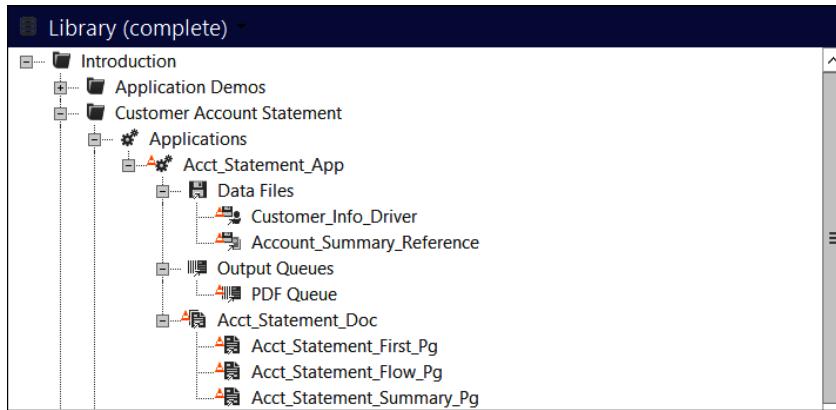
In Design Manager, you will assemble the objects needed to produce the customer account statement in PDF format.

**Exercise 6.19: Assemble the account statement application**

1. In the Library, expand the **Introduction > Customer Account Statement > Applications** heading.
2. Add references to the **Acct\_Statement\_App** application object for the following data file objects, and rearrange them if necessary so that they appear in order:
  - a. **Customer\_Info\_Driver**
  - b. **Account\_Summary\_Reference**
3. Add a reference to the **Acct\_Statement\_App** application object for the **Acct\_Statement\_Doc** document object.

4. Add a reference to the **Acct\_Statement\_App** application object for the **PDF Queue** output queue object (**Environment > Delivery > Output Queues**).

**Figure 6-16:**  
**Account statement application**



#### Packaging the application and running the engine

In Design Manager, you will now create the package file and run the engine to produce output and view the sample output in Adobe Acrobat.



#### **Exercise 6.20: Package the application and run the engine**

1. Right-click the **Acct\_Statement\_App** application object and select **Package**.

The Build Package dialog box opens.

2. Select the save directory for the package file by completing the following steps:

a. In the **Package file** area, click .

The Open dialog box opens.

b. Go to the following directory:

*C:\Training\Introduction\Pub Files.*

c. Select **AccountStatement.pub**.

d. Click **Open**.

The Open dialog box closes.

3. In the **Package file** area, specify the output by selecting the **Create for output queue device(s)** option.

4. Select the **Run Engine when complete** check box.

5. Click .

The Run the Engine dialog box opens.

6. Select the **Package file** check box.

The box that is adjacent to the Package file check box automatically populates with the path that you entered in step 2.

7. Click **OK**.

The Run the Engine dialog box closes.

8. Click **OK**.

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

9. Click **Yes**.

The System Report dialog box opens.

10. Scroll through the messages to review a summary of the engine run.

11. Click **OK**.

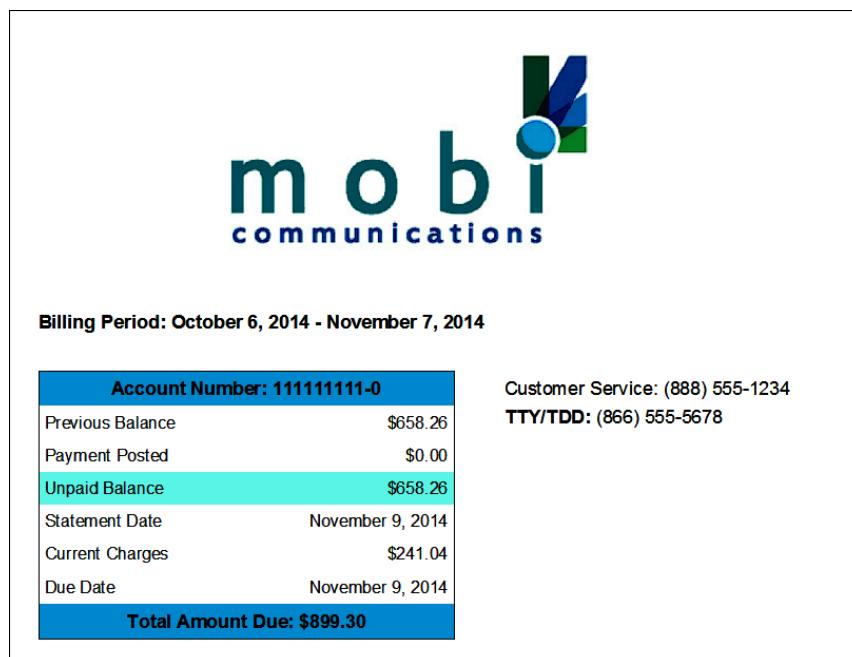
12. After the engine has completed the run, click **Close**.

13. Go to *C:\Training\Introduction\Output Files* and double-click **MobiStatementOutput.pdf**.

The file opens in Adobe Acrobat.

14. Use the bookmarks or scroll bar to navigate through the customers to see how the account statement was personalized for each.

**Figure 6-17:**  
**Account statement output**



## Viewing a complex customer account statement

For the exercises in this section, you used a basic automated table, but for more complex account statements, you can use tables with additional features, such as automated tables with sections. Automated tables with sections are a table type that contain sections that are controlled by customer data. The data can control which sections of the table are included and in what order. For example, in the case of the Mobi Communications customer account statement, you can use an automated table with sections to include detailed call, text message, and data usage logs. An example of this type of table has been provided in the class database for demonstration purposes, so that you can see how flow pages can work in multi-page customer communications. However, instructions for designing an automated table with sections are not covered in this course.



### **Exercise 6.21: Package the application and run the engine**

In Design Manager, you will add the page object that contains the automated table with sections and repackage to view the output.

1. *In the Library, add a reference to the **Acct\_Statement\_App** application object for the **Usage\_Details\_Reference** data file object.*
2. *Add a reference to the **Acct\_Statement\_Doc** document object for the **Acct\_Statement\_Details\_Pg** page object.*
3. *Make sure that both of the newly-referenced objects appear at the bottom of the **Data Files** and **Acct\_Statement\_Doc** headings within the **Acct\_Statement\_App** application object in the Library.*
4. *Package the application and run the engine.*
5. *Go to **C:\Training\Introduction\Output Files** and double-click **MobiStatementOutput.pdf**.*

The file opens in Adobe Acrobat.

The screenshot shows the 'Composed Customer List' interface. On the left, there is a tree view of customer statements. Under 'Customers', two entries are visible: '1-161977532-8' and '2-116118241-5'. The second entry has several sub-items under it, including 'Acct\_Statement\_First\_Pg', 'Acct\_Statement\_Summary\_Pg', 'Acct\_Statement\_Details\_Pg', and others. A red box highlights the 'Acct\_Statement\_Details\_Pg' item. On the right, a large table titled 'Mobile Calls' is displayed, showing a list of calls with columns for Item, Date (te), Phone Number, Minutes, and In/Out status. The table contains 25 rows of data, with the last row showing totals: 14,04,44, 1640, 142, 2125, 45:46, and IN.

Mobile Calls				
Item	te	Phone Number	Minutes	In/Out
1	10-06-11	(510) 657-2158	56:27	IN
2	10-07-11	(212) 597-8852	5:42	OUT
3	10-07-11	(510) 442-6785	3:21	OUT
4	10-07-11	(510) 657-2158	13:45	IN
5	10-09-11	(404) 225-7984	9:56	IN
6	10-09-11	(404) 225-7984	20:22	OUT
7	10-10-11	(510) 226-9958	36:22	OUT
8	10-10-11	(510) 657-2158	12:23	OUT
9	10-10-11	(510) 442-3125	15:23	IN
10	10-11-11	(510) 552-9988	2:42	OUT
11	10-12-11	(510) 552-9988	3:46	OUT
12	10-12-11	(510) 657-2158	12:56	IN
13	10-12-11	(510) 442-3125	30:12	OUT
14	10-15-11	(510) 657-2158	72:14	IN
15	10-15-11	(510) 498-7272	3:12	OUT
16	10-17-11	(404) 225-7984	30:18	OUT
17	10-18-11	(404) 225-7984	12:16	IN
18	10-18-11	(212) 597-8852	16:27	OUT
19	10-18-11	(404) 225-7984	42:58	OUT
20	10-18-11	(510) 697-2158	17:22	IN
21	11-01-11	(510) 657-2158	22:56	OUT
22	11-01-11	(212) 597-8852	2:13	OUT
23	11-01-11	(212) 597-8852	13:44	IN
24	11-01-11	(510) 498-7272	3:34	OUT
25	14,04,44	1640, 142, 2125	45:46	IN

**Figure 6-18: Account statement usage detail using flow pages**

6. Use the bookmarks or scroll bar to navigate through the customers to see how the customer usage details were added to the customer account statement and personalized for each customer.



## 7. Targeting legal content for specific customers

### Objectives

After completing this module, you should be able to:

- Explain how effectivity and jurisdictions can be used to target content based on a range of dates or customer location.
- Explain how paragraphs and sections can be used to organize complex or highly-structured information.
- Organize content into paragraph and section objects.
- Add rules to design objects to produce a document that contains targeted content for specific customers.

### Important terms

The following terms are used in this module:

- **Effectivity** – A feature that lets you target specific content based on a range of dates.
- **Jurisdiction** – A feature that lets you target specific content based on customer locations.
- **Paragraph** – A Library object that contains a block of communication. A paragraph object might contain one or more text paragraphs.
- **Rule** – A set of conditions used to control the inclusion or exclusion of a design object in the output to personalize documents for each customer.
- **Section** – A Library object that contains paragraphs and other sections.

## Legal content

Legal notices are a necessary part of many types of customer communications. Sometimes legal content is included for compliance with organizational policies or standards, and other times it is included for compliance with federal or state laws and regulations, or for adherence to the International Standards Organization (ISO) standards. For organizations that operate in multiple states or countries, managing compliance controls can be challenging.

In this module, you will learn how to use Exstream to target legal content for specific customers by exploring the following topics:

- **Enforcing regulatory compliance** – Exstream lets you enforce compliance in your design by providing features that control the content that is distributed to customers. You can use location or a range of dates to control how and when content is included in customer communications.
- **Designing for complex content using paragraphs and sections** – Exstream lets you organize complex content into reusable design objects called paragraphs, which can then be grouped together in other reusable design objects called sections. This is useful for legal content because you can use paragraph and section objects to include, exclude, or reorganize information based on customer data.
- **Targeting content for customers using rules** – Exstream lets you use different types of logic to set conditions that control whether objects are included in the final output and in what order.
- **Adding targeted legal content to the mobi account statement** – you will complete a set of exercises to design a section object with multiple paragraph objects to contain legal information. You will also add an inclusion rule to a section object so that it is included for a set of customers. Finally, you will add the new objects to the application and produce output.

In addition to the base configuration of Exstream, the functionality associated with the following modules are required for the exercises within this module:

- Compliance support
- Publication support
- XML input

## Enforcing regulatory compliance

Some applications require you to include content that is time- or location-specific. For example, you might create a policy booklet in which specific paragraphs apply to only certain geographic areas based on state or local laws or regulations. Similarly, you might design a product offering mailing that applies only for a specific time period.

If your organization has licensed the Compliance Support module, Exstream lets you use the following features to ensure that your communications are compliant with business requirements, changing legal regulations, or applicability periods:

- **Effectivity** – This feature lets you control the content that is included or excluded from documents based on a range of dates. For example, you can use effectivity in a customer account statement to include content based on federal regulations that take effect on a specific date.
- **Jurisdictions** – This feature lets you control the content that is included or excluded from documents based on customer locations. For example, you can use jurisdictions in a customer account statement to include legal notices that apply only to certain areas in which the business operates.

In addition to the Compliance Support module, Exstream provides an SEC Filing module, which provides functionality that supports compliance with federal securities laws enforced by the U.S. Securities and Exchange Commission. The functionality associated with the SEC Filing module will not be covered in this course.

For more information about using the SEC Filing module, see the *Welcome to Exstream Design and Production* guide.

### Effectivity

Effectivity is a feature that lets you send time-sensitive content to customers based on date ranges. When you use effectivity, you specify a range of dates for which a version of a design object is eligible to be included at engine run time. Effectivity is most useful for messages that are valid for a specific time period or regulated material that becomes effective or expires on a specific date. You can use effectivity to include multiple effective dates within the same application.

For example, suppose you want to send out a document with a page that contains information that is different for customers based on the year in which they started an account. You can create different pages for the customers who started accounts in 2000 and those who started accounts in 2010. You can use effective dates to include the correct version of the page based on customer data.

Effectivity can be used on the following objects:

- Documents
- Messages
- Pages
- Paragraphs
- Sections

For more information about using effectivity, see the *Designing Customer Communications* guide.

## Jurisdictions

Jurisdictions let you target specific locations with personalized information. For example, suppose that California state laws require your organization to include a specific notice about sales tax information based on the county in which a customer resides. You can create a page object for each version of the sales tax information, and then assign a jurisdiction to each version so that the correct pages go to the correct customers. In this case, you can create a jurisdiction for each county. If multiple counties require the same sales tax information, then you can group those counties into a group jurisdiction.

When you use jurisdictions, you assign an identifier within each customer's data. If you are creating jurisdictions for the counties in California, you can create identifiers such as 'LA' for Los Angeles County or 'OC' for Orange County. After you have created all of the jurisdictions and assigned them identifiers, you can assign jurisdictions to the page objects that are associated with each jurisdiction or group of jurisdictions.

Jurisdictions do not have to be geographical locations. They can also be virtual locations. For example, suppose you want to encourage customers who receive paper statements to go paperless. You can create a jurisdiction for customers based on their selected delivery method, such as 'EM' for email and 'PM' for postal mail.

For more information about using jurisdictions, see the *Designing Customer Communications* guide.



### Instructor demonstration

1. *Watch the instructor-led demonstration of how effectivity and jurisdictions are set up for the Smart Phone Offer message object in the Property Panel.*

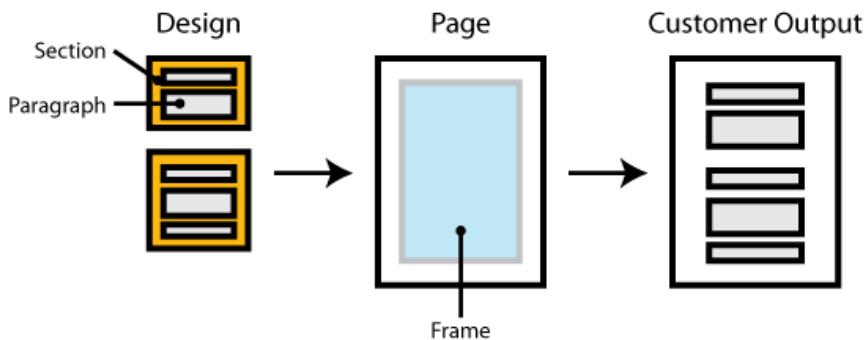
## Designing for complex content using section and paragraph objects

Because legal content is often complex and hierarchical, paragraph and section objects are ideal features to use to organize this type of content. Paragraphs objects in Exstream are reusable Library objects that you arrange in container objects, called sections, to build complex documents. A paragraph object might consist of one or more text paragraphs. As with page and message objects, paragraph objects contain content and the text can be composed and formatted in Designer. You can also set object-specific properties for paragraph objects in the Property Panel in Design Manager. In contrast, text paragraphs are simply areas of text that exist within a page object, message object, or paragraph object.

Section objects let you group together and order paragraph objects to form groups of related information. For example, suppose you are organizing information for insurance policies. You can create one section object that contains all of the paragraph objects needed to create a life insurance policy and another section object that contains all of the paragraph objects needed to create a homeowner's policy. Sections, like paragraphs, are reusable and allow you to repeat whole groups of paragraph content without having to write the information multiple times. You can also add sections to other sections to build a hierarchy of information.

Section and paragraph objects are slightly different from pages because they are not stand-alone content containers. That is, you add content to paragraph objects, but then you place those paragraph objects on a page. You set up placeholders, called frames, on the pages where the paragraphs and sections will be placed in the final customer output. Frames give you the flexibility to make sure that flowing content is placed appropriately on pages and white space is used efficiently in the design. You can also control the placement of the section or paragraph objects by using flow targets with the frames.

**Figure 7-1:**  
How paragraphs and  
sections create complex  
documents



When you create complex documents that are mainly composed of text, section and paragraph objects can help you customize documents based on conditions you set using jurisdictions or logic. For example, suppose you have the following structure:

- Section A
  - Paragraph A
  - Paragraph B
  - Section B
    - Paragraph C
    - Paragraph D

Based on business rules or regulations, only customers in California must receive Section B. In Designer, you can place a jurisdiction or a rule on the Section B section object to include it only for customers that are identified with a location of 'CA'. In this scenario, the documents for customers in California will contain all of the sections and paragraphs. However, documents for customers in all other locations will exclude Section B, and have the following structure:

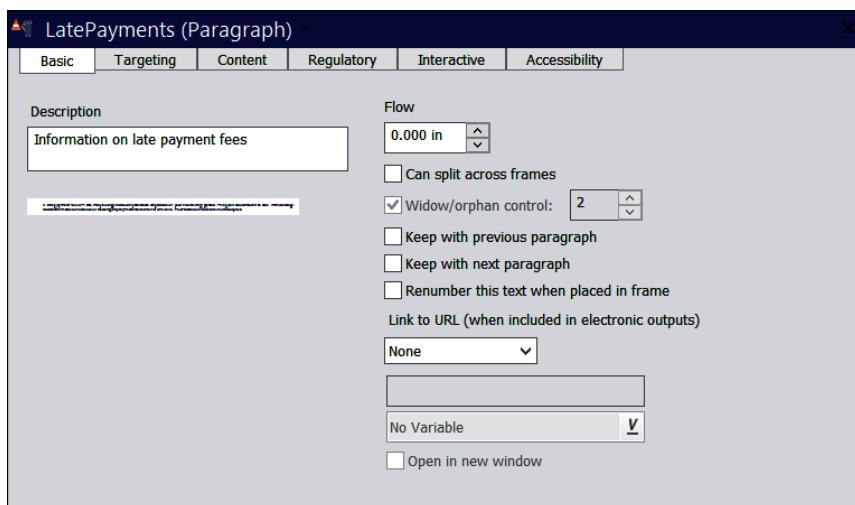
- Section A
  - Paragraph A
  - Paragraph B



#### **Exercise 7.1: View the properties of a section and paragraph object**

1. Open Design Manager.
2. In the Library, expand the **Introduction > Customer Account Statement > Paragraphs** heading.
3. Open the **LatePayments** paragraph object in the Property Panel and view the settings on the following tabs:
  - a. **Basic** – These properties let you define the layout of the paragraph.
  - b. **Targeting** – These properties let you apply rules to the paragraph.
  - c. **Content** – These properties let you apply languages to the paragraph, change the text, and define a design area.
  - d. **Regulatory** – These properties let you apply jurisdictions and effectiveness to the paragraph.
  - e. **Interactive** – These properties let you supply hover tips and help descriptions.
  - f. **Accessibility** – These properties let you select the read options for accessibility tools.

**Figure 7-2:**  
**Paragraph object properties**



4. On the **Basic** tab, double-click the thumbnail to open the paragraph object in Designer.
5. Close the paragraph object.
6. In the Library, expand the **Introduction > Customer Account Statement > Sections** heading.
7. In the Library, drag and drop the **PaymentInformation** section object to the Edit Panel to open the section object in Designer.
8. In the Outline Viewer, review the hierarchy and organization of the section object.
9. Close the section object.

## Targeting content for customers using rules

Rules are a type of logic in Exstream that you can define for objects so that they can be included in or excluded from a document based on customer data. For example, suppose your organization has a new service offering that is available only in New York. You can create a message that you place in the design and place a rule on the message to include the message if the value of the <Customer\_State> variable is 'NY'. Similarly, if your organization has a service offering that is available in all the states in which you operate except Florida, you can place a rule on the message to exclude the message if the value of the <Customer\_State> variable is 'FL'.

You can create multiple rules on a design object if the conditions for including or excluding the object are complex. If the rule is something that you can apply to multiple objects or within multiple applications, you can save the rule as a reusable object in the Library.

You will add an inclusion rule to a design object in the exercise 'Adding an Inclusion Rule to a Section Object'.



#### Instructor demonstration

1. *Watch the instructor-led demonstration of how the 'Include for CA' and 'Exclude for FL' Library rules are set up in the Property Panel and Rule dialog box.*

### Adding targeted legal content to the Mobi customer account statement

Mobi Communications has already made the decision to implement paragraph and section objects as a design solution for account information included on customer account statements. For example, they have created paragraph objects for payment-related information. Placing information about returned check fees in a paragraph object makes it easier for Mobi to update the information when the fee changes. They have also organized all of the payment-related paragraph objects into a section. Additionally, Mobi has decided to use paragraphs and sections to organize all legal information required for customer communications.

As a designer for Mobi Communications, you have been tasked with updating the customer account statement in Exstream so that it meets the following business requirements:

- Due to changes in state law, new FCC information is required for mobile phone customers residing in California. This information must appear on the second page of the customer account statement. Because it is legal information, the content must be designed using paragraph and section objects.
- The payment information appears on the second page of the customer account statement, or directly following the FCC information for customers who receive that information.
- To prepare for the possibility that the content might be changed or amended, each topic within the FCC information must be inserted into a separate paragraph object.
- The FCC information must appear on the customer account statement for only those customers who reside in California.

To add targeted legal content to the Mobi Customer Account Statement, you must complete the following exercises:

- Designing the legal content in designer
- Adding the legal content to the application in design manager
- Packaging the application, running the engine, and viewing output

**Designing the legal content in Designer**

To design the legal content in Designer, you must complete the following exercises.

- Creating a paragraph object
- Formatting a paragraph object
- Adding paragraph objects to a section object
- Adding an inclusion rule to a section object

**Exercise 7.2: Create a paragraph object**

In Designer, you will create a paragraph object for each topic included in the FCC information.

1. *Open Designer.*
2. *From the Menu bar, select File > New.*

The Create New Item dialog box opens.

3. *From the What to create area, select Paragraph.*
4. *In the Name box, enter About CAN-SPAM.*
5. *In the Description box, enter Information about the CAN-SPAM Act.*
6. *Select the Customer Account Statement folder and click OK.*
7. *Click Finish.*

The paragraph opens in Designer.

8. *To import the legal text from an external text file, complete the following steps:*
  - a. *From the Menu bar, select Insert > Import > Text File.*
  - b. *Go to C:\Training\Introduction\Text Files, select AboutCAN-SPAM.txt, and click Open.*
9. *Save and close the paragraph object.*
10. *Repeat step 2 through step 9 to create paragraph objects that meet the following requirements:*
  - a. *Paragraph 1*
    - **Paragraph object:** ExpressPriorAuthorization
    - **Description:** Description of CAN-SPAM rule about consumers' rights to opt in and opt out of receiving messages.
    - **Text file to import:** C:\Training\Introduction\Text Files\ExpressPriorAuthorization.txt

**b. Paragraph 2**

- **Paragraph object:** ReportingSPAM
- **Description:** Directions on how to report violations of CAN-SPAM to the FCC
- **Text file to import:** C:\Training\Introduction\Text Files\ReportingSPAM.txt

**11. Add static hyperlinks to the following text strings:**

Paragraph object	URL
AboutCAN-SPAM	<a href="http://www.fcc.gov/guides/unwanted-telephone-marketing-calls">www.fcc.gov/guides/unwanted-telephone-marketing-calls</a>
ReportingSPAM	<a href="http://www.fcc.gov/complaints">www.fcc.gov/complaints</a>

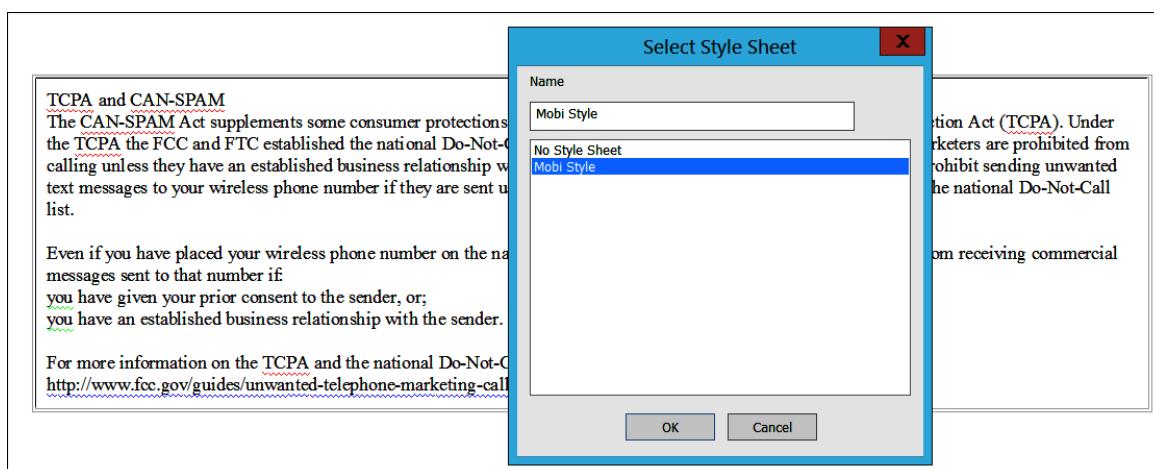
**12. Save each of the paragraph objects.****Exercise 7.3: Format a paragraph object**

In Designer, you will apply formatting to the text in the paragraph objects that contain the FCC information.

1. **Apply the Mobi Style style sheet to the AboutCAN-SPAM paragraph object by completing the following steps:**
  - a. **Open the AboutCAN-SPAM paragraph object.**
  - b. **From the Menu bar, select Format > Style > Select Style Sheet.**

The Select Style Sheet dialog box opens.

- c. **Select Mobi Style and click OK.**



**Figure 7-3: Selecting the Mobi style sheet for the paragraph object**

The Select Style Sheet dialog box closes.

2. *Apply the following styles to the text in the paragraph object:*

To the text	Apply this style
All	<b>Body</b> paragraph style
<i>TCPA and CAN-SPAM</i>	<b>Minor Heading</b> paragraph style
you have given your prior consent to the sender, or; you have an established business relationship with the sender.	<b>Bulleted List</b> paragraph style
<a href="http://www.fcc.gov/guides/unwanted-telephone-marketing-calls">http://www.fcc.gov/guides/unwanted-telephone-marketing-calls</a>	<b>Hyperlink</b> text style

3. *Save and close the paragraph object.*

**TCPA and CAN-SPAM**

The CAN-SPAM Act supplements some consumer protections already put into place by the Telephone Consumer Protection Act (TCPA). Under the TCPA the FCC and FTC established the national Do-Not-Call list. This list contains telephone numbers that telemarketers are prohibited from calling unless they have an established business relationship with the called party or are otherwise exempt. FCC rules prohibit sending unwanted text messages to your wireless phone number if they are sent using an autodialer, or if you have placed that number on the national Do-Not-Call list.

Even if you have placed your wireless phone number on the national Do-Not-Call list, the TCPA does not protect you from receiving commercial messages sent to that number if:

- you have given your prior consent to the sender, or;
- you have an established business relationship with the sender.

For more information on the TCPA and the national Do-Not-Call list, see our consumer guide at:  
<http://www.fcc.gov/guides/unwanted-telephone-marketing-calls>.

**Figure 7-4: Formatted CAN-SPAM paragraph**

4. *Repeat step 1 through step 3 to format the **ExpressPriorAuthorization** paragraph object so that it includes the following styles:*

To the text	Apply this style
All	<b>Body</b> paragraph style
Express Prior Authorization (heading)	<b>Minor Heading</b> paragraph style
express prior authorization (body)	<b>Emphasis</b> text style

5. *Repeat step 1 through step 3 to format the ReportingSPAM paragraph object so that it includes the following styles:*

To the text	Apply this style
All	<b>Body</b> paragraph style
What to Do If You Receive an Unwanted Commercial Message on Your Wireless Device	<b>Minor Heading</b> paragraph style
an unwanted commercial message sent to a wireless device; or  a telephone solicitation made to a wireless device for which the phone number is registered on the national Do-Not-Call list; or  any autodialed text message on your wireless device, or an unwanted commercial message to a non-wireless device from a telecommunications company or advertising a telecommunications company's products or services.	<b>Bulleted list</b> paragraph style
<a href="http://www.fcc.gov/complaints">http://www.fcc.gov/complaints</a>	<b>Hyperlink</b> text style
Federal Communications Commission Consumer & Governmental Affairs Bureau Consumer Inquiries and Complaints Division 445 12th Street, SW Washington, DC 20554	<b>Single Space</b> paragraph style



#### **Exercise 7.4: Add paragraph objects to a section object**

In Design Manager, you will create a section object and add the paragraph objects that you created to the section object.

1. *In the Library, expand the **Introduction > Customer Account Statement** heading.*
2. *Right-click the **Sections** heading and select **New Section**.*

The New Section dialog box opens.

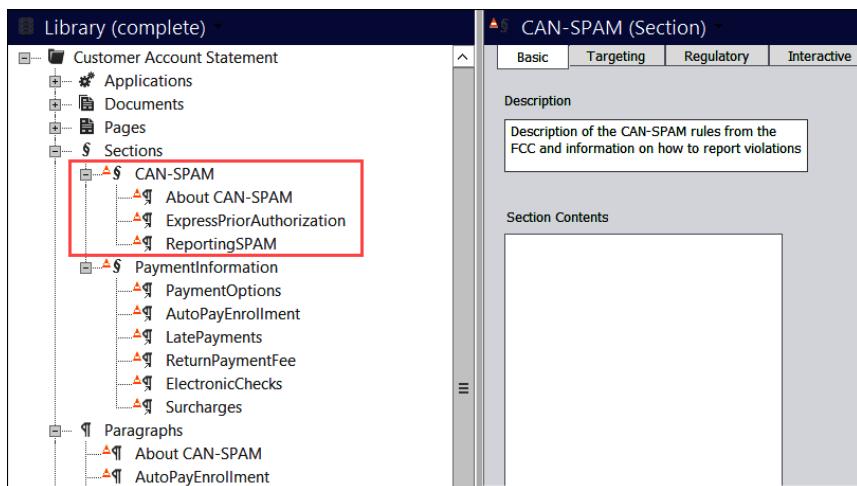
3. *In the **Name** box, enter **CAN-SPAM**.*
4. *In the **Description** box, enter **Description of the CAN-SPAM rules from the FCC and information on how to report violations.***
5. *Click **Finish**.*

The section object opens in the Property Panel.

6. Click the **Basic** tab.
7. In the Library, expand the **Introduction > Customer Account Statement > Paragraphs** heading.
8. Drag the following paragraph objects, in order, from the Library to the **Section Contents** area on the **Basic** tab of the CAN-SPAM section object properties:
  - a. **AboutCAN-SPAM**
  - b. **ExpressPriorAuthorization**
  - c. **ReportingSPAM**

References for the paragraph objects are added to the section object.

**Figure 7-5:**  
**Paragraphs added to CAN Spam section object**



9. Save the section object and leave it open in the Property Panel for the next exercise.



#### **Exercise 7.5: Add an inclusion rule to a section object**

In Design Manager, you will add an inclusion rule to the CAN-SPAM section object.

1. Click the **Targeting** tab.
2. Click in the **Rule** box.

The Rule dialog box opens.

3. Next to the **Variable** box, click .

The Select Variable dialog box opens.

4. From the list, select **Customer\_State**.

If the variable is not visible, make sure that **Introduction** is the selected folder.

5. Click **OK**.

The Select Variable dialog box closes.

6. In the **Value** box, enter **CA**.

7. Click **OK**.

The Rule dialog box closes.

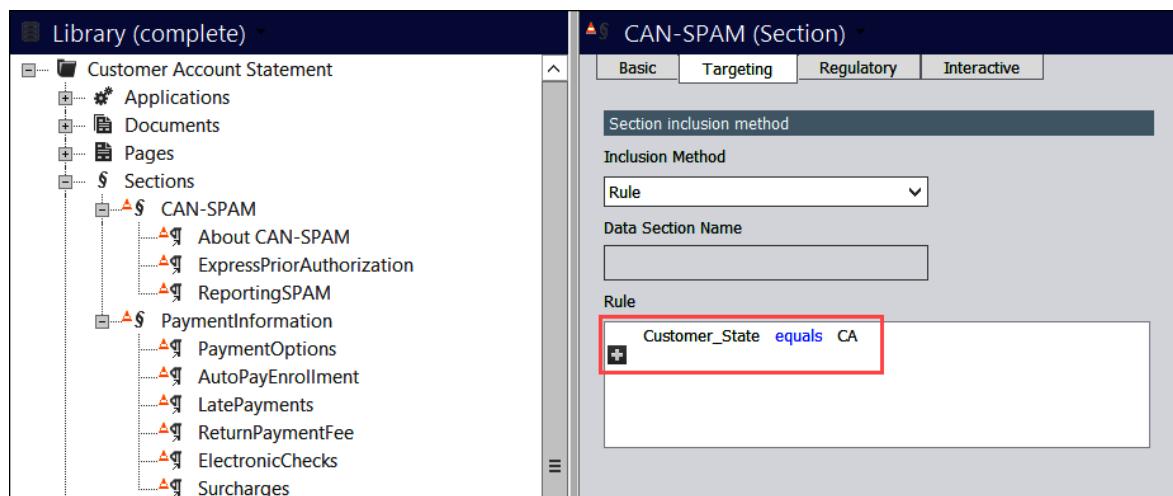


Figure 7-6: Customer state targeting rule for CAN-Spam section

8. Save the section object and leave it open in the Property Panel for the next exercise.

#### Adding a section object to a page object

To add a section object to a page object, you must complete the following exercises:

- Specifying the design page and target frame
- Adding a content frame to the page



#### Exercise 7.6: Specify the design page and target frame

In Design Manager, you will specify the page object on which to place the section object, as well as a flow target. (The flow target that you will use in this exercise has already been created.)

1. Click the **Basic** tab.
2. Next to the **Design Page** box, click .

The Select Page dialog box opens.

3. In the **Look in** area, select the **Customer Account Statement** folder.
4. From the list, select **Acct\_Statement\_Second\_Pg**.
5. Click **OK**.

The Select Page dialog box closes.

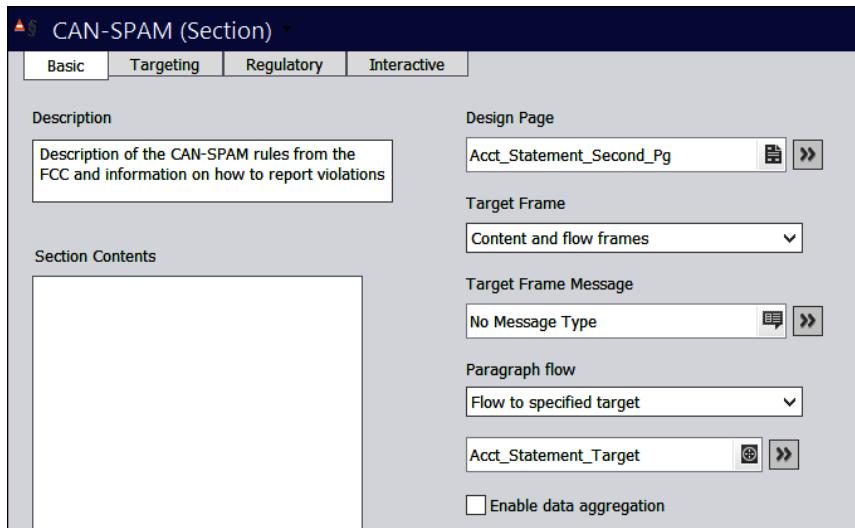
6. From the **Target Frame** list, select **Content and flow frames**.
7. From the **Paragraph flow** list, select **Flow to specified target**.
8. In the **Paragraph flow** area, click .

The Select Flow Target dialog box opens.

9. From the list, select **Acct\_Statement\_Target**.
10. Click **OK**.

The Select Flow Target dialog box closes.

**Figure 7-7:**  
Design page and target frame



11. Save and close the section object.



#### Exercise 7.7: Add a content frame to the page

In Designer, you will add a content frame to the page to hold the section and paragraph object content.

1. Open the **Acct\_Statement\_Second\_Pg** page object in Designer.
2. On the **Drawing Objects** toolbar, click .

The New Frame dialog box opens.

3. From the **Type of frame to create** area, select **Content flow area**.
4. Click **OK**.

The New Frame dialog box closes and the Insert Frame dialog box opens.

5. Click **OK**.

The Insert Frame dialog box closes and the frame appears in the design window.

6. Click .

The Frame Properties dialog box opens.

7. On the **Flow Frame Properties** tab, click .

The Select Flow Target dialog box opens.

8. From the list, select **Acct\_Statement\_Target**.
9. Click **OK**.

The Select Flow Target dialog box closes.

10. Click the **Placement** tab and set the position and size of the frame as follows:

Box	Enter
<b>Horizontal position</b>	0.5
<b>Vertical position</b>	0.5
<b>Width</b>	5.5
<b>Height</b>	9.5

11. Click **OK**.

The Frame Properties dialog box closes.

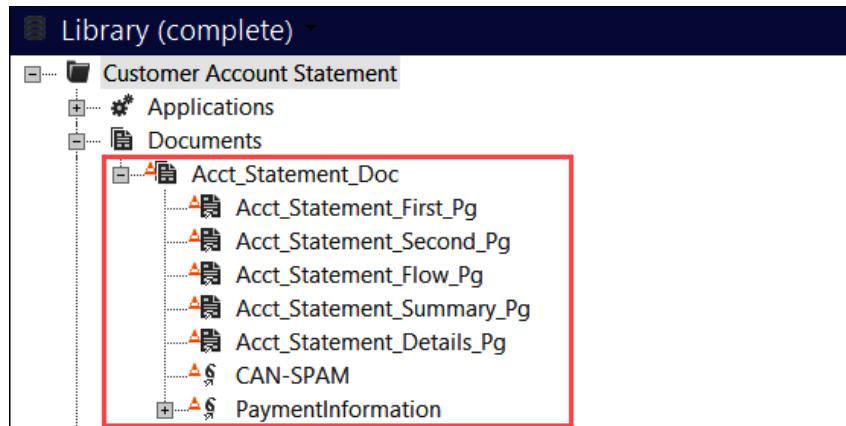
12. Save and close the page object.

**Adding the legal content to the application in Design Manager**

In Design Manager, you will add the objects with legal content to the customer account statement application object.

**Exercise 7.8: Add legal content to the application object**

1. Open Design Manager.
2. In the Library, expand the **Introduction > Customer Account Statement** heading.
3. Add a reference to the **Acct\_Statement\_Doc** document object for the **Acct\_Statement\_Second\_Pg** page object so that it appears after the **Acct\_Statement\_First\_Pg** page object.
4. Add references to the **Acct\_Statement\_Doc** document object for the following section objects, in order:
  - a. **CAN-SPAM**
  - b. **PaymentInformation**

**Figure 7-8:**

Account statement document object

**Set up the application to allow targeted flow** In Design Manager, you will set up the application to allow for targeted flow in the design.



**Exercise 7.9: Set up the application to allow targeted flow**

1. Open the **Acct\_Statement\_App** application object in the Property Panel.
2. Click the **Documents** tab.
3. Select the **Enable flow frame targeting** check box.

The screenshot shows the 'Acct\_Statement\_App (Application)' properties window. The 'Documents' tab is active. On the left, there are sections for Duplex page counting method (set to 'Normal, fronts and backs'), Banner page counting method (set to 'Exclude banner pages from page counts'), List of documents to send to customer (set to 'No Variable'), Document reordering variable (set to 'No Variable'), Document ID for output (set to 'No Variable'), Tag set (set to 'No Tag Set'), and two checkboxes at the bottom: 'End tags revert attributes back to the current style' (unchecked) and 'Enable flow frame targeting' (checked and highlighted with a red border). On the right, there are sections for Footnote text (font A), Postage breaks (control by 'None'), Weight units ('Ounces'), and several fields for Footnote body font (size 10, bold, italic), Footnote identifiers font (size 10, bold, italic), Footnote text references font (size 10, bold, italic), and Postage breaks (all set to 0). There are also checkboxes for 'Number footnotes by document' and 'Allow duplicate footnotes'.

**Figure 7-9: Enable flow frame targeting**

4. Save and close the application object.

**Packaging the application and running the engine**

In Design Manager, you will create the package file and run the engine to produce output and view the sample output in Adobe Acrobat.



**Exercise 7.10: Package the application and running the engine**

1. Right-click the **Acct\_Statement\_App** application object and select **Package**.

The Build Package dialog box opens.

2. Click **OK**.

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

3. Click **Yes**.

The System Report dialog box opens. Scroll through the messages to review a summary of the engine run.

4. Click **OK**.
5. After the engine has completed the run, click **Close**.
6. Go to *C:\Training\Introduction\Output Files* and double-click **MobiStatementOutput.pdf**.

The file opens in Adobe Acrobat.

7. Use the bookmarks or scroll bar to navigate through the customers to see how the account statement was personalized for each.

You should see that statements generated for residents of California include the CAN-SPAM content on the second page, whereas those for residents of other states do not.

**Figure 7-10:**  
**Targeted content for CA residents**

Jean Depau 253 Garth Road Villa 22 San Fernando, CA 91345-1152 Account Number: 444444444-9	<b>Please mail check payable to:</b>  <b>Mobi Communications</b> 123456 Palisades Drive Rivertown, CA 91100-9999
<b>-*- Demonstration Powered by OpenText Exstream 03/06/2018, Version 16.3.0 64-bit -*</b>	
<b>TCPA and CAN-SPAM</b> The CAN-SPAM Act supplements some consumer protections already put into place by the Telephone Consumer Protection Act (TCPA). Under the TCPA the FCC and FTC established the national Do-Not-Call list. This list contains telephone numbers that telemarketers are prohibited from calling unless they have an established business relationship with the called party or are otherwise exempt. FCC rules prohibit sending unwanted text messages to your wireless phone number if they are sent using an autodialer, or if you have placed that number on the national Do-Not-Call list.	

## 8. Targeting marketing content for specific customers

### Objectives

After completing this module, you should be able to:

- Explain how message objects can be used to design informational or marketing messages.
- Create a priority variable.
- Create a campaign and specify its properties.
- Create a frame for the campaign messages and specify its properties.
- Add an inclusion rule at campaign level.
- Create a content frame.
- Explain how to use language layers, languages, and locales to create one design that can be used to deliver documents in multiple languages from a single design.
- Design a targeted marketing message with language layers to produce a document that contains targeted language content for specific customers.

### Important terms

The following terms are used in this module:

- **Formula** – Logic that you can create in a formula variable to calculate new values based on available customer data.
- **Language layer** – A virtual layer that lets you create content for multiple languages within a single message, page, or paragraph object. The engine determines which layer to include in the output for each customer based on customer variable data and logic.
- **Locale** – A Library object that contains the language dictionary and data and currency formats for a geographic location. Locales are used for formatting localized content when designs include content for multiple languages.
- **Message** – A Library object that contains all the design, setup, and targeting controls for an informational or marketing message intended for placement in a larger customer communication.

## Targeted marketing

In Exstream, marketing and informational messages can be designed to be distributed to all customers, customers in a particular region, customers that subscribe to a specific service, or any customer that has enough white space on their communication to contain the message. These marketing and informational messages are used in many types of customer communications. You can target customers with specific marketing messages by basing the message received on the customer's language.

In this module, you will learn about how to use Exstream to target marketing content for specific customers based on their preferred language by exploring the following topics:

- **Using messages to create marketing content** – In Exstream, you can design and manage all of the marketing and informational messages that you want to integrate into customer communications as separate objects.
- **Using frames to contain marketing messages** – In Exstream, messages are dynamically placed on pages with the use of frames. Messages are chosen by priority and targeting for the page, and the range of message combinations can be infinite.
- **Designing for multiple languages** – Exstream lets you create a single design for multiple languages by using a design feature called language layers. You can use a variable to control which language layer is included in the output.
- **Targeting content for customers using formulas** – Exstream lets you use different types of logic to set conditions that control which objects are included in the final output. Formula logic is stored in a formula variable.
- **Adding targeted marketing content to the Mobi customer account statement** – You will complete a set of exercises to design a marketing message with multiple language layers. You will add a formula to a system variable to determine which language to use in the output based on customer data. Finally, you will add the new objects to the application and produce output.
- **Localizing the customer account statement** – This optional exercise provides additional hands-on practice with targeting content based on language. You can complete a series of exercises to add language layers to the paragraph objects used in Module 5 and set up the application to use locales for currency and date formats.

In addition to the base configuration of Exstream, the functionality associated with the following modules are required for the exercises within this module:

- Publication support
- XML input

## Using messages to create marketing content

Message objects are reusable Library objects that you can use to design and customize marketing or informational messages for customer communications. Messages are useful for including communications (such as legal notices, coupons, news articles, current specials, and so on) into larger customer communications.

Because message objects are design objects maintained separately from pages in the Library, you can customize the setup of and targeting for the object in Design Manager. You can use message objects to control important customer information that must be distributed to all customers, or to control optional customer information that fills the extra white space in a customer document. Exstream provides extensive white space management options so that you can ensure no messages are placed in areas on the page where it would create a regulatory offense.

Like section and paragraph objects, message objects are not stand-alone content containers. You must use frames on the pages to designate the placement of messages in the final customer output.

Exstream lets you create two different types of messages, but only the following types will be used in this course:

- **Text messages** – These message objects typically contain only text, but other design objects, such as tables and variables, can be added using Designer. Though you can use one, you are not required to use a template or a planned layout to create text messages. This versatility allows text messages to fill excess space on the page.
- **Graphic messages** – These message objects contain a mixture of text and graphics. Graphic messages require a set template or layout that defines the amount of space used by the message.

You will create a new text message object in the exercise ‘Creating a text message object’ below.



### Instructor demonstration

1. *Watch the instructor-led demonstration of how the Smart Phone Offer graphic message object and the Special Offers message template object are set up in the Property Panel.*

For more information about using message objects in a design, see the *Managing Marketing Messages* guide.

**Campaign messages** You can use messages in Exstream to add important customer information that must be distributed to all customers, or to add optional nice-to-know information that fills the extra white space in a customer document.

Document messages have the following characteristics:

- Can be personalized with variable data
- Can contain any mix of text, drawings, charts, and images
- Can include a rule that identifies which customers should receive the message

If your organization has the Campaign Management module installed, you can also create campaign messages. Campaigns let you group messages into a campaign object in the Library for additional control over their distribution to customers. With campaigns, you can set advanced controls over customer targeting or prioritize groups of messages based on their importance in the final customer output.

Campaign messages have the following additional characteristics:

- Provide a way to manage messages, especially time-sensitive material.
- Reduce the number of rules in an application.
- Support more complex targeting and prioritization options than rules.
  - Support a time frame (usage period) for inclusion or exclusion.
  - Group similar messages together, such as all messages that go to a particular state.
  - Offer ‘as space permits’ and ‘must-go’ options.
- Can include preprinted messages that are added with an inserter.

When you create a document for the customer using campaign messages, the highest priority messages for the customer are selected, personalized, and placed on the pages.

**Placement of campaign messages in the library** Campaigns are useful when you want to group similar messages. The campaign can be targeted to a specific group, with the messages within it being targeted to a select group within it. Campaigns also let you track responses to a particular message or group of messages.

- **Document messages** – Located in the Library under the **Messages** heading and are objects that are individually referenced in a document object for an application
- **Campaign messages** – Located in the Library under the **Campaigns** heading. You then reference an entire campaign instead of referencing individual campaign messages.

The same campaign can be used in more than one application. For example, you can create a campaign containing different coupons. These coupons can be added to a newsletter, a credit card statement, and so on. This saves you the time of creating messages over and over again, keeping them all in a central location for later use.

**Composing campaign messages** The engine will place both document messages and campaign messages into message frames, but at the following different compose times:

- Document messages will be processed before campaign messages.
- Campaign messages will begin processing based on when you choose to qualify them. You can qualify them either after initial customer data has been read, or after all customer data has been read.

This ‘as space permits’ approach to placing campaign messages into applications suits the goals of most campaigns. However, if there happens to be mandatory campaigns, Exstream offers you a way to force the Exstream engine to publish marketing material.

To process a campaign on a ‘must-go’ basis, complete the following steps:

- Drag the campaign to the Property Panel. On the **Targeting** tab, from the **Campaign-driven pages** list, select **Up to maximum marketing pages**. Select this option to add more pages to accommodate all the messages in the campaign.
- Drag the application to the Property Panel. On the **Marketing** tab, from the **When to add marketing** area, select the **Allow required campaigns to force marketing pages** check box.

**Setting the campaign priority**

Campaigns work under the assumption that all of the messages are for marketing purposes. In other words, none of these messages are legally required or essential for the viability of your publication. Campaigns also assume that there will not be room for all possible messages, so choices must be made about the importance of each message in relation to another.

Since customers can qualify for more campaigns or messages than can fit in the customer output, it is important to set priorities designating which campaigns are more important than others to deliver to a customer. Campaigns with a lower priority can be removed from the customer output if there is not enough space.

The most basic way to establish priority is by the order you have different campaigns (and the order of messages under each campaign) appear in an application in the Library. The campaigns will be processed in the order in which they are listed in the Library.

Campaigns offer other priority options, discussed next, that override the order of objects in the Library and make the control of campaign messages more specific.

**Priority and targeting rules at the campaign level** You can use inclusion rules at the campaign or message level. Exstream lets you use a combination of factors to specify whether a marketing message should be sent to a customer or not. You have virtually unlimited targeting capabilities, because they are limited only by the data that you have or can create for a customer. Targeting can include customer preferences, eligibility dates, club memberships, credit history, age, region, income, and so on.



If you specify priority settings in the campaign properties, make sure that you also enable campaigns on the **Marketing** tab in the application properties by selecting the **Allow required campaigns to force marketing pages** check box.

**Basic tab** After you target the campaign toward customers that might be interested in the product or service, you can specify the priority for the campaign as a whole against as many as three priority variables that get their values directly from the campaign. A system administrator creates these variable categories under **Exstream > Environment > System > System Settings**.

If used, these variables will also be shown on the **Basic** tab. Exstream will weigh these values in the selection of campaign order for processing.

**Priority tab** The **Method for specifying priority of this campaign compared to other campaigns** list offers the following two options:

- **Priority is the same for all customers** – if you select this option, you can enter or select a number in the **Priority** box, from 1 to 100, to establish the relative priority for each campaign.
- **Priority is set by a rule for each customer** – if you select this option, you can base the priority of the campaign on a rule that you create in the Priority rule box. Clicking inside the **Priority rule** box opens the **Rule** dialog box, where you create a rule in the same way you do with other Exstream objects.

**Campaign priority at the application level** If you have more than one campaign in an application, you can establish the order that campaigns will be processed on the **Marketing** tab of the application properties.

This tab lets you do the following:

- Limit the number of marketing pages sent to a customer.
- Specify up to three successive priority keys to define how campaigns are sorted into the needed priority order.

Ultimately, application settings take precedence over campaign and message settings, since an application is the highest object in the hierarchy of objects.

**Managing a campaign** For the lab exercises in this chapter, you will need to use content in the **Documents** folder.

This content relates to marketing content targeted at new insurance policy holders.



### Exercise 8.1: Create a priority variable

One of the ways designers can set relative importance to several campaigns is by using priority variables. The system administrator sets up the number of variables (up to three), category names, type (numeric or string), and default values. In this exercise, you will add a priority variable to your design database.

1. *In Design Manager, under the Library, expand the **Introduction > Environment > System** heading.*
2. *Drag **System Settings** to the Property Panel.*
3. *Click the **Marketing** tab.*

Note that the **Custom campaign properties** area has two priority variables already defined.

4. *From the bottom **Type** list, select **Number**.*
5. *In the bottom **Name** box, enter **Referrals**.*

This will add a third user-defined campaign variable that will appear on the **Priority** tab of a campaign.

6. *In the bottom **Default Value** box, enter a zero (0).*
7. *Save and close the **Property Panel**.*

Type	Name	Default value
Number	Claims	0
String	Policy	A12345
Number	Referrals	0

Maximum copies of same message to send in one document  
5

Figure 8-1: Adding a new priority variable

Your priority variable has now been added to existing campaigns and will appear on all campaigns created in the future.

## Using frames to contain marketing messages

Messages are dynamically placed on pages with the use of frames. This means the messages change placement as the frames in which they are placed move. Messages are chosen by priority and targeting for the page. The range of message combinations can be infinite.

Frames are divided into two types (whitespace and content) to enhance campaign development. Each type of frame has a different compose time.

Whitespace frames have the following characteristics:

- They are used to fill white space on a page.
- They are filled at the end of processing for document messages.
- They are filled based on what is chosen in the campaign object properties for campaign messages.
- They are included on a page based on space and order.

Content frames have the following characteristics:

- They are embedded in text boxes and table cells.
- They are composed early.
- They operate as “must-go” placeholders.

This section and its exercises focuses on whitespace frames. Content frames are discussed in the following section.

Frames have variable compose times. Their contents are used to fill white space. When you place a frame on a page, you must specify one of five different types. The type of frame you use determines the content that might go into that space.

The following five types of whitespace frames are available:

- **Messages** – This type of frame contains a text and/or graphic message.
- **Content flow area** – This type of frame contains table rows or text that overflow from a previous page.
- **Table of contents and index** – This type of frame contains the table of contents and indexes.
- **Footnotes** – This type of frame contains footnotes.
- **Placeholder** – This type of frame contains placeholder documents.

There are also multiple-up frames. These frames hold entire pages for multiple-up printing. Multiple-up frames are not used in campaigns and therefore are not discussed in this module.

### Message frames

Message frames accept messages. The type of message that can be placed inside a message frame is determined by the frame properties.

After you select **Messages** as the frame type, the **Insert Frame** dialog box opens. From there, you must select a type of message to insert in the frame.

Here you specify whether the frame can accept text and/or graphic messages. You can also narrow the accepted messages further by specifying the allowed message type for text messages and the primary template for graphic messages.

After you have selected the type of messages that you want to allow in the frame, the frame appears on the page.

Selections made in the **Insert Frame** dialog box can be changed in the frame properties. Right-click the frame and select **Frame Properties**.



### Exercise 8.2: Create a campaign

1. In Design Manager, expand the **Documents > Class Exercises** folder, and right-click the **Campaigns** heading.
2. Select **New Campaign**.

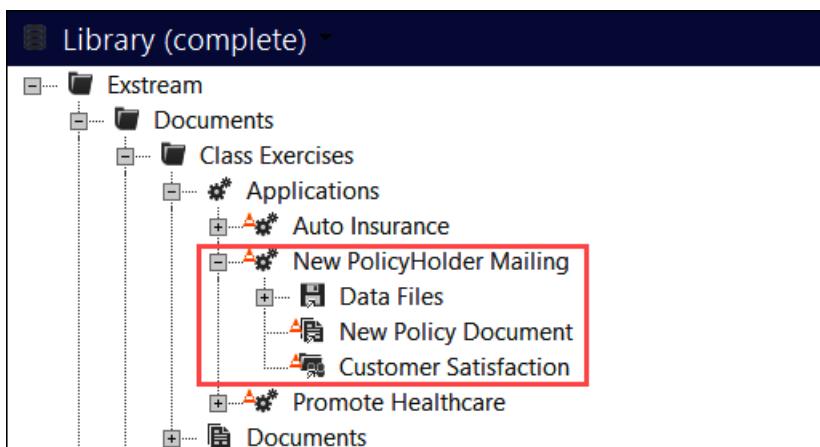
The New Campaign dialog box opens.

3. In the **Name** text box, enter *Customer Satisfaction*.
4. From the **Create first message** list, select **No, will add messages later**.
5. Click **Next**.

The campaign appears in the Property Panel.

6. Expand the **Applications** heading in the **Class Exercises** folder and add a reference to the **Customer Satisfaction** campaign in the **New PolicyHolder Mailing** application.

Figure 8-2:  
Campaign reference in  
New PolicyHolder  
Mailing application



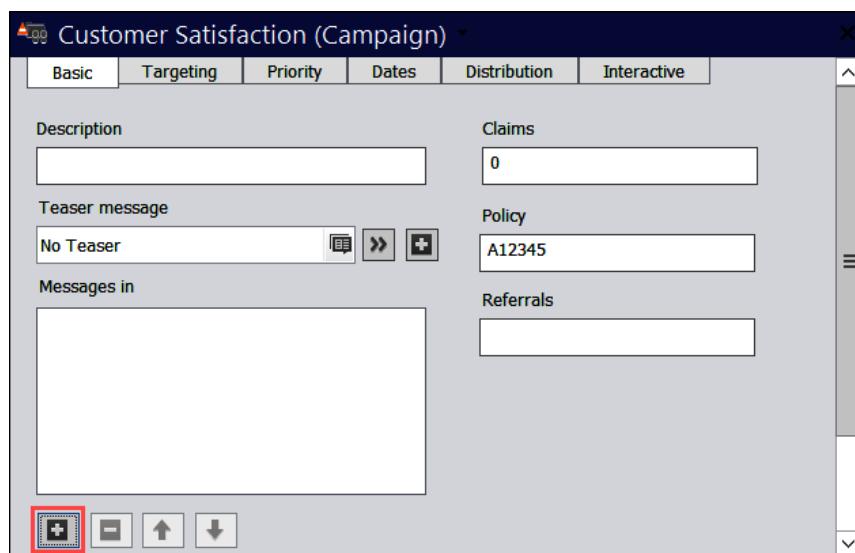


### Exercise 8.3: Set campaign properties

With the **Customer Satisfaction** campaign in the Property Panel, you specify properties on the **Basic**, **Targeting**, **Priority**, **Dates**, and **Distribution** tabs.

1. On the **Basic** tab, complete the following steps:
  - a. Click to add a message to this campaign (NOT the icon next to Teaser Message).

Figure 8-3:  
Select message icon



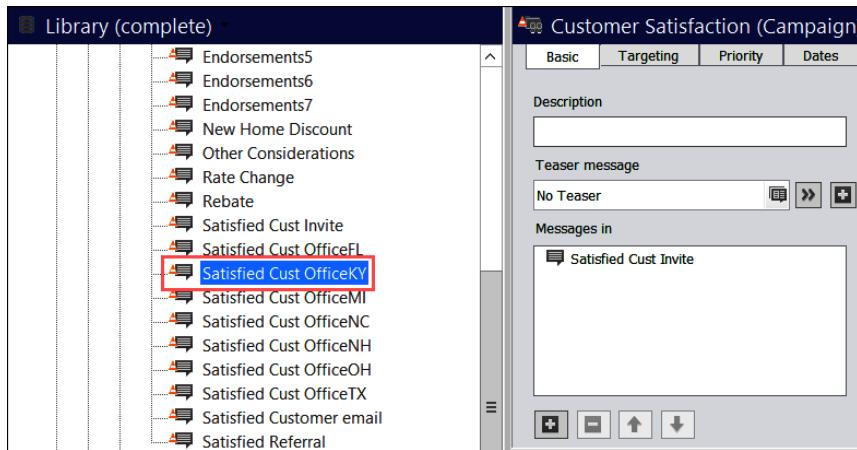
The Select Message dialog box opens.

- b. Select **Satisfied Cust Invite** in the list box.
- c. If this message does not appear on the list, click to select the **Class Exercises** folder from the **Folder** dialog box.
- d. Click **OK**.

This message appears in the **Messages in** box.



Another way to add messages is to drag them from the Library to the **Messages in** box.



**Figure 8-4:**

**Dragging the message object to the text box**

- e. Expand the **Messages** heading in the **Class Exercises** folder.
- f. Drag the **Satisfied Cust OfficeKY** message into the **Messages In** box.

The **Satisfied Cust OfficeKY** message appears in the **Messages in campaign** box.

- g. In the **Library**, select all the following message objects and drag them to the **Messages in Campaign** box in the **Property Panel**.
  - **Satisfied Cust OfficeFL**
  - **Satisfied Cust OfficeMI**
  - **Satisfied Cust OfficeNC**
  - **Satisfied Cust OfficeNH**
  - **Satisfied Cust OfficeOH**
  - **Satisfied Cust OfficeTX**
  - **Satisfied Customer email**
  - **Satisfied Referral**

2. On the **Targeting** tab, in the **Campaign-driven pages** list, make sure that **Up to maximum marketing pages** is selected.

This option instructs Exstream to place messages when there is room.

3. On the **Priority** tab, make sure that **Priority is the same for all customers** and **1** are selected. This is the highest priority option.
4. On the **Dates** tab, in the **Active dates** list, leave the selection at the default **Use always, no restrictions** setting.

The other list options would be selected if you wanted to limit when this campaign can be used.

5. Save and close the campaign properties.



#### **Exercise 8.4: Create a message frame for the campaign**

1. In the Library, drag the **17 Marketing Page** page object to the Edit Panel.

The page opens in Designer.

2. On the Drawing toolbar, click .

A New Frame dialog box opens.

3. Select the **Messages** option and click **OK**.

The Insert Frame dialog box opens.

4. In the **Insert Frame** dialog box, complete the following steps:

- a. Select **No Maximum** from the **Maximum number of messages allowed in frame** list.
- b. Select the **Text messages** check box.
- c. From the **Allowed message type** list, select **Customer Satisfaction**.

The properties of this frame control how messages are placed. By selecting **No Maximum** for the number of messages in a frame, you can place more than one message if there is room for more than one. Because you specified the **CustomerSatisfaction** message type, Exstream places only the messages created as that type.

5. Click **OK**.

The frame appears on the page.

6. Right-click the new frame and select **Frame Properties**.

The **Frame Properties** dialog box opens.

7. On the **Placement** tab, enter the following values:

Box	Enter
Horizontal position	1.23
Vertical position	1.75
Width	5.9
Height	7.9

8. Click **OK**.

The frame adjusts to the properties you set.

**Figure 8-5:**  
**Message frame**



9. Save and close Designer.



#### Exercise 8.5: Reference the objects

1. In the Library, create a reference to the **17 MarketingPage** in the **New Policy Document** document object.
2. Repeat Step 1 for the **01 Policy Intro Front** page.
3. Reorder the pages if necessary so that they are listed in numerical order.



#### Exercise 8.6: Package the application and view the output

1. Right-click the **New PolicyHolder Mailing** application object and select **Package**.

The Build Package dialog box opens.

2. To specify the output, complete the following steps:

- a. In the **Package file** text box, enter  
*C:\Training\Introduction\Pub Files\NewPolicyHolderMailing.pub.*
- b. In the **Package file** area, select the **Specify output** option.
- c. Click .

The Select Output dialog box opens.

- d. Select **Exstream Viewer**.
- e. Click **OK**.

The Select Output dialog box closes.

3. Select the **Run Engine when complete** check box.

4. Click .

The Run the Engine dialog box opens.

5. Make sure that the **Package file** check box is selected.

The box adjacent to the Package file check box should automatically display the path that you entered in step 2.

6. Click **OK**.

The Run the Engine dialog box closes.

7. Click **OK**.

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

8. Click **Yes**.

The System Report dialog box opens. Scroll through the messages to review a summary of the engine run.

9. Click **OK**.

The System Report dialog box closes. After the engine has completed the run, the Exstream Viewer opens to show a preview of the output.

10. As you view the output, note the following on the **Marketing Page**:

- a. Rules on the seven state campaign messages let policyholders read only the address of the customer service center closest to where each customer lives.
- b. With campaign messages in a frame, the message information can be replaced at any time with minimal effort.

**Content frames**

Content frames are embedded frames that can be used to place context-sensitive sections and paragraphs within an object in Designer. This functionality is useful if you must place specific content, such as notes or warnings, either on specific pages or with specific design objects, such as tables or text boxes.

Messages are dynamically placed in frames. With dynamic placement, messages change placement according to the frames they are placed in, selected by priority and targeting settings.

In the following table, note how campaign messages in content frames contrast with those in whitespace frames.

	<b>Content Frame</b>	<b>Whitespace Frame</b>
<b>Where placed</b>	In a text box or a table	On the page
<b>When composed</b>	Early compose time, when the page is processed	Based on the <b>When to run rule</b> option that you select
<b>When included</b>	Always	Based on the priorities that you set and available space in the document

**Types of content frames**

**Inline content frame** – When you create an inline content frame, the engine adds the content messages directly into the text box at the point where you place the content frame. In the composed output, the text box grows to accept the content messages.

An inline content frame will grow in size and can contain more than one message if you specify this in its properties. Therefore, if you use this kind of frame you should plan for the frame to grow. Frame growth might cause the text box or table in which the content frame is inserted to grow as well, and could cause it to grow off the page. If you provide an overflow frame, you can have an inline content frame inside a text box split and flow.

A content frame will not split and flow if it is placed inside a table cell.

**Linked content frame** – In a linked content frame, the linked frame grows to accept messages when the engine runs. These types of frames are often used for messages that must appear adjacent to a text box or table content. In Designer, a thin red line shows which text box or table on the page provides the link for the content frame. The point where the line ends in the text box is the anchor point.

A linked content frame will grow while maintaining the relationship to the anchor point. A growing linked content frame will not cause the original object (text box or table) to grow. The linked content frame itself will not split and flow to a different page. It will stay with the anchor point and will follow to whatever page contains the anchor.

**Content flow area frames** – Accept overflow from growing objects on another page. Content flow area frames are placed on overflow pages.

## Placing frames

When you select the options for a frame, the options are displayed at the top of the frame. The frame fill sequence is initially assigned by the order in which you create the frame. You can change the order later. The fill sequence is shown on the frame in the center. The frames are color-coded according to the options you have chosen.

Once you insert a frame on a page, you can open the **Frame Properties** dialog box.

Frames are positioned on a page in the same way that other objects are positioned on a page in Designer. You can drag them on the page to position them or use the **Placement** tab of the **Frame Properties** dialog box to specify an exact location and size.

You will now create a new campaign and add a message to a content frame

Michigan law permits insurance companies to refuse coverage for a broader set of insured party activities than previously allowed. In this exercise, you will add a ‘must-go’ message about the broader provision in a content frame for policyholders residing in Michigan.



### Exercise 8.7: Create a new campaign

1. In Design Manager, right-click the **Campaign** heading in the **Class Exercises** folder.
2. Select **New Campaign**.

The New Campaign dialog box opens.

3. In the **Name** box, enter *Must Go*.
4. From the **Create first message** list, select **Yes, and start Designer now**.

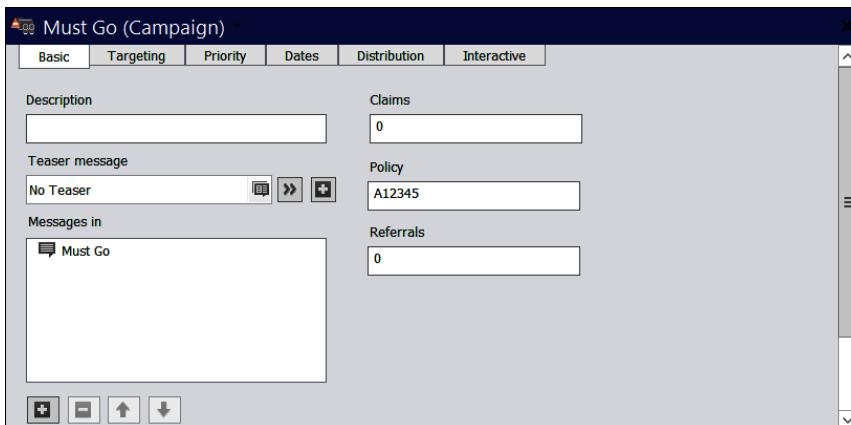
By choosing this option, Designer automatically launches and you can begin creating a message.

5. Click **Next**.
6. From the **Type of Message** list, select **Text**.
7. In the **Message type** box, click .
8. Select **Must Go** from the **Select Message Type** list box.
9. Click **OK**.

The **Must Go** campaign is displayed in the **Message type** box.

10. Click **Finish**.

**Figure 8-6:**  
New campaign object properties



A new window opens in Designer, ready for you to create the first message. By default, Exstream gives your first message the same name as the name of the campaign. You can change this later.

11. In Designer, enter the following:

*In Michigan, this includes having threatened, harassed, or assaulted a FirstHaven employee.*

12. Highlight all the text and change the formatting to **Times New Roman, 11 points**.

13. Save and close Designer.



#### Exercise 8.8: Specify campaign properties

In the previous campaign, rules were already set on individual messages. In this exercise, you add an inclusion rule at the campaign level.

1. In Design Manager, the **Must Go** campaign object should already be in the Property Panel. If not, drag it back to the Property Panel.
2. On the Targeting tab, click anywhere in the **Targeting rule** box.

The Rule dialog box opens.

3. To create the rule:

a. Click .

The Rule dialog box changes from simple selection to rule mode.

b. Click .

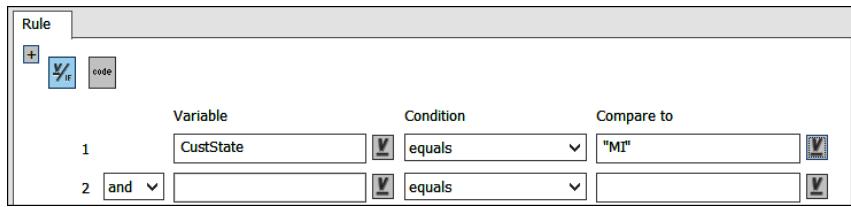
The Select Variable dialog box opens.

c. Select **CustState** from the list box and click **OK**.

You may need to select **All Folders** to view this variable.

- d. From the **Condition** list, select **equals**.
- e. In the **Compare to** text box, enter "MI" (the quotation marks are required to denote a direct string comparison).
- f. Click **OK**.

**Figure 8-7:**  
**Targeting rule**



Your rule appears in the Targeting rule area.

4. Click the **Priority** tab.
5. In the **Method for specifying priority of this campaign compared to other campaigns** list, select **Priority is the same for all customers**.

This elevates the campaign's message to a "must-go" priority.

6. Save and close the **Property Panel**.



#### **Exercise 8.9: Create a content frame**

As you will see in the following steps, when you click  with your cursor inside a text box or table, the result differs compared to when you begin with your cursor in a blank area of a page.

1. In the Library, drag the **16 Conditions3** page object to the Edit Panel.
- The page opens in Designer.
2. At the bottom of the first column, click the text box, place your cursor after the period following the words '**any loss or damage**', and press **ENTER**.
3. Click  on the Drawing toolbar.

The Insert Frame dialog box opens.



This is the only time you can insert a contents frame. If you click in an empty area of a page, you will get the dialog box for a whitespace frame.

4. In the **Maximum number of messages in frame** box, make sure that **1** is selected.
5. In the **Allowed message type** list, select **Must Go**.
6. Click **OK**.

The Embed Properties dialog box opens.

7. In the **Embed Method** list, make sure that **Inline (within text)** is selected.
8. Click **OK**.

You return to the page in Designer with an Inline embedded frame added. Do not be concerned about frame size since the frame is just a placeholder.

9. Save and close Designer.



#### **Exercise 8.10: Create a reference for the campaign**

1. Create a reference for the **16 Conditions** page in the **New Policy Document** in the Library.
2. Order the pages by number in the Document object.
3. In the Library, drag the **Must Go** campaign object to the **New PolicyHolder Mailing** application object.
4. As is true with pages, the order of campaigns dictates the order messages are placed in the document.



#### **Exercise 8.11: Package the application and view the output**

1. Right-click the **New PolicyHolder Mailing** application object and select **Package**.

The Build Package dialog box opens.

2. To specify the output, complete the following steps:
  - a. In the **Package file** text box, enter  
`C:\Training\Introduction\Pub Files\NewPolicyHolderMailing.pub`.
  - b. In the **Package file** area, select the **Specify output** option.
  - c. Click .

The Select Output dialog box opens.

- d. Select **Exstream Viewer**.
- e. Click **OK**.

The Select Output dialog box closes.

3. Select the **Run Engine when complete** check box.

4. Click .

The Run the Engine dialog box opens.

5. Make sure that the **Package file** check box is selected.

The box adjacent to the Package file check box should automatically display the path that you entered in step 2.

6. Click **OK**.

The Run the Engine dialog box closes.

7. Click **OK**.

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

8. Click **Yes**.

The System Report dialog box opens. Scroll through the messages to review a summary of the engine run.

9. Click **OK**.

The System Report dialog box closes. After the engine has completed the run, the Exstream Viewer opens to show a preview of the output.

10. As you view the output, note that although you added a content frame to the 16 Conditions3 page, the text will appear only for Lisa Blackburn since she is the only customer residing in Michigan.

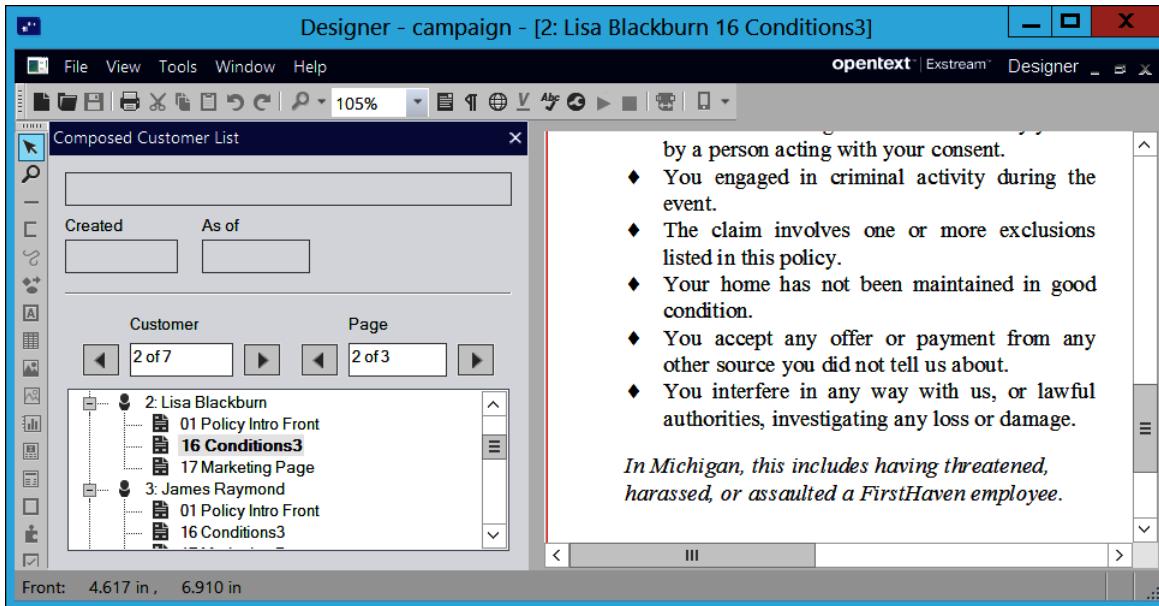


Figure 8-8: Content frame output for Michigan resident

## Designing for multiple languages

For some organizations, producing documents, or at least specific information within a document, in a customer's native or preferred language is a legal requirement. For other organizations, it is a key part of providing good customer service. Exstream lets you create one design that contains all of the necessary content and deliver it in multiple languages simultaneously. Using logic and customer data, you can send communications to customers in their preferred languages.

Exstream lets you use the following features to create designs for multiple languages:

- **Language layers** – Language layers are features in Designer that let you add content for multiple languages within a single design.
- **Languages** – Languages are Environment objects in Design Manager that let you define dictionaries and formatting for numbers, months of the year, and days of the week for each language. You set up a language object for each language that you support, and link each one to a locale.
- **Locales** – Locales are environment objects in Design Manager that let you define currency and date formats for a geographical region.

### Language layers

If you are designing a communication that will be sent to customers throughout the world, or to areas that use more than one language or dialect, you can use language layers to reuse the same design while still providing information in each customer's language. Language layers let you create different layers to accommodate different languages and reduce the number of objects needed in the Library for multi-lingual applications. You can use a variable to select the language layer to use for each customer based on customer data.

For example, suppose you have a design that is English-only, but you want to make it available for Spanish-speaking customers as well. In this situation, you could place any graphics for this design on the default language layer (automatically created when you create the design), and then add a Spanish language layer and an English language layer to contain the text. When you package this design, English-speaking customers will receive an English version and Spanish-speaking customers will receive a Spanish version.

For more information about using design layers, see the *Designing Customer Communications* guide.

You will add language layers to a design in the exercise 'Adding the language layers and language text' below.

**Languages**

In Exstream, languages are environment objects that let you specify spelling dictionaries, days of the week, months of the year, case exceptions for words, and formatting for numeric values. To use multiple languages in a design, you must have a language environment object set up in the Library for each language you will use. In the design, you must create a language layer for each locale.

***Instructor demonstration***

1. *Watch the instructor-led demonstration of how the Smart Phone Offer graphic message object and the Special Offers message template object are set up in the Property Panel.*

For more information about setting up languages, see the *Exstream System Administration* guide.

**Locales**

In Exstream, locales are environment objects that let you specify language, currency, and date formats for a specific group of customers. Locale objects are used in conjunction with language objects to control the default output formatting for the variable values. For example, suppose you create account statements for customers in the United States and in France. You will have the following differences in locale properties:

Attribute	United States	France
Language	English (American)	French
Currency Symbol	\$ (Dollars)	\$ (Euros)
Decimal Separator	. (period)	, (comma)
Thousands Separator	, (comma)	(N/A)
Positive Currency	\$1,000.00	1 000,00\$
Negative Currency	(\$1,000.00)	-1 000,00\$
Date Format	12/30/2011 (mm/dd/yyyy)	30/12/2011 (dd/mm/yyyy)

Locales do not have to be language-dependent. They can also be set up for people who speak the same language but have differences due to geography. For example, people in both the United States and England speak English, but there are a number of differences in how words in the language are spelled and how currency and dates are represented::

Attribute	United States	U.K.
Language	English (American)	English (U.K.)
Currency Symbol	\$ (Dollars)	£ (Pounds)
Decimal Separator	. (period)	. (period)
Thousands Separator	, (comma)	, (comma)
Positive Currency	\$1,000.00	£1,000.00
Negative Currency	(\$1,000.00)	-£1,000.00
Date Format	12/30/2011 (mm/dd/yyyy)	30/12/2011 (dd/mm/yyyy)

You must have language objects set up to use locales.



### Instructor demonstration

1. *Watch the instructor-led demonstration of how different locales are set up in the Property Panel.*

For more information about setting up locales, see the Exstream System Administration guide.

### Including or excluding content for customers using formulas

Formulas are a type of logic in Exstream that you can define for objects so that they can be included or excluded from a document based on customer data. For example, suppose that your business is offering different customer specials for customers in New York and Florida. You can create two messages, one for customers in New York and one for customers in Florida. For each message, you add logic to target it to the correct customers based on their data. For the New York message, you can add the following formula:

```
IF Customer_State = "NY"  
    THEN INCLUDE  
    ELSE EXCLUDE  
ENDIF
```

If you use language layers in your design, you can use formulas to target the content that your customers receive. To determine which language layer is included in the output, you can add a formula to the `<SYS_LanguageCustomer>` system variable.

You will add a formula to the `<SYS_LanguageCustomer>` variable in the exercise 'Adding a formula to target the customer language' below.

## Adding targeted marketing content to the customer account statement

Mobi Communications currently operates only within the United States, and has not yet delivered documents in multiple languages. Recently, the customer relations and marketing departments collaborated on a market research project to test the theory that sending messaging to customers in their preferred languages would increase response rates. For the project, Mobi selected a sample population of Spanish speakers in Los Angeles, California. They sent a customer satisfaction survey to 200 households that had called into the customer service department in the previous six months and requested assistance in Spanish. The findings showed that 55 percent of households who received surveys in Spanish responded, but only 20 percent of households who received surveys in English responded. Based on these results, Mobi has decided to test the effectiveness of sending a marketing message to customers in their preferred language.

As a designer for Mobi Communications, you have been tasked with updating the customer account statement in Exstream so that it meets the following business requirements:

- A marketing message encouraging customers to add a phone line must appear on the first page of the customer account statement for all customers.
- The marketing message must be designed so that it has language layers for English, French, and Spanish.
- The marketing message must be distributed in the correct language to the correct customers based on customer data.

To add targeted marketing content to the Mobi Customer Account Statement, you must complete the following exercises:

- Designing the marketing content in designer
- Adding a formula to target the customer language
- Adding the marketing content to the application in design manager
- Packaging the application, running the engine, and viewing output

**Designing the marketing content in designer**

To design the marketing content, complete the following tasks:

- Creating a text message
- Adding the language layers and language text
- Creating a message frame



**Exercise 8.12: Create a test message object**

1. In the Library, expand the **Introduction > Customer Account Statement** heading.
2. Right-click the **Messages** heading and select **New Message**.

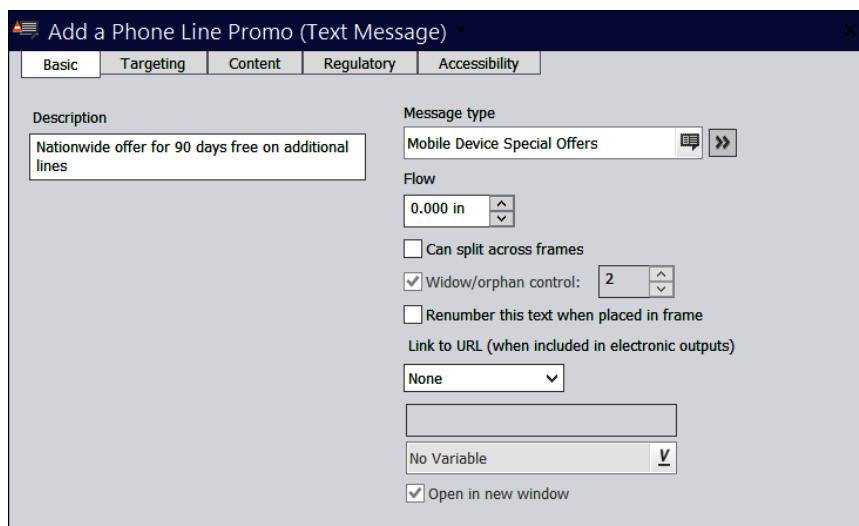
The New Message dialog box opens.

3. In the **Name** box, enter **Add a Phone Line Promo**.
4. In the **Description** box, enter **Nationwide offer for 90 days free on additional lines**.
5. Click **Next**.
6. From the **Type of message** list, select **Text**.
7. Next to the **Message type** box, click

The Select Message Type dialog box opens.

8. From the **Name** area, select **Mobile Device Special Offers**.
9. Click **OK**.
10. Click **Finish**.

**Figure 8-9:  
Message object**



The message object opens in the Property Panel. Leave it open for the next exercise.

**Exercise 8.13: Add the language layers and language text**

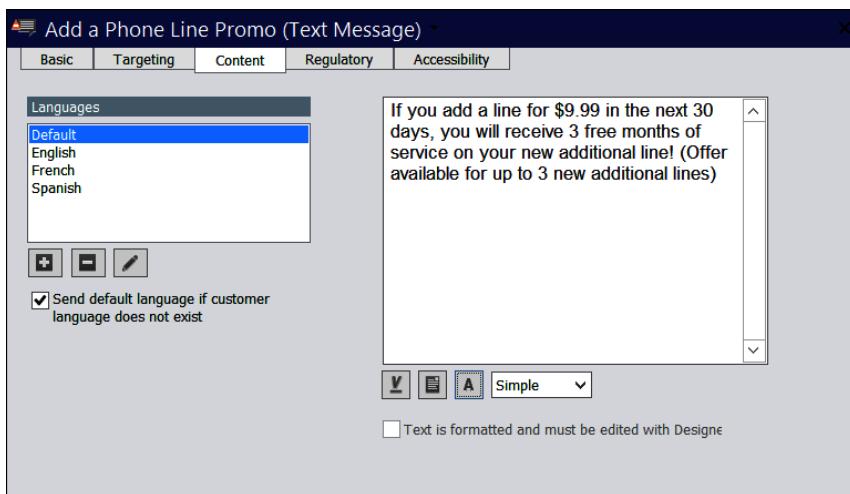
1. Click the **Content** tab.
2. Add the language layers by completing the following steps:
  - a. Click .

The Select the new language dialog box opens.

- b. From the list, select **English**.
- c. Click **OK**.

The Select the new language dialog box closes.

- d. To add the **French** language layer, repeat step a through step c.
- e. To add the **Spanish** language layer, repeat step a through step c.
3. Select **Default** and click  to import the following file:  
*C:\Training\Introduction\Text Files\AddLine\_Promo\_English.txt*
4. Click  and format the text with **Arial 10-point font**.



**Figure 8-10:**  
Adding language layers  
and text

5. Repeat step 3 through step 4 for the following language layers, using the files located in the *C:\Training\Introduction\Text Files* directory:

Language Layer	Text file
English	AddLine_Promo_English.txt
French	AddLine_Promo_French.txt
Spanish	AddLine_Promo_Spanish.txt

6. Click the **Accessibility** tab.
7. From the **Accessibility tag options** area, make sure that **Read object text** is selected.
8. Save and close the message object.



#### **Exercise 8.14: Create a message frame**

In Designer, you will add a message frame to the design page to hold the text message content.

1. In the Library, expand the **Introduction > Customer Account Statement > Pages** heading.
  2. From the Library, drag and drop the **Acct\_Statement\_First\_Pg** page object to the Edit Panel.
  3. On the Drawing Objects toolbar, click .
- The New Frame dialog box opens.
4. From the **Type of frame to create** area, make sure that the **Messages** option is selected and click **OK**.

The New Frame dialog box closes and the Insert Frame dialog box opens.

5. Select the **Text messages** check box.
6. From the **Allowed message type** list, select **Mobile Device Special Offers**.
7. Click **OK**.

The Insert Frame dialog box closes and the frame appears in the design window.

8. Click .

The Frame Properties dialog box opens.

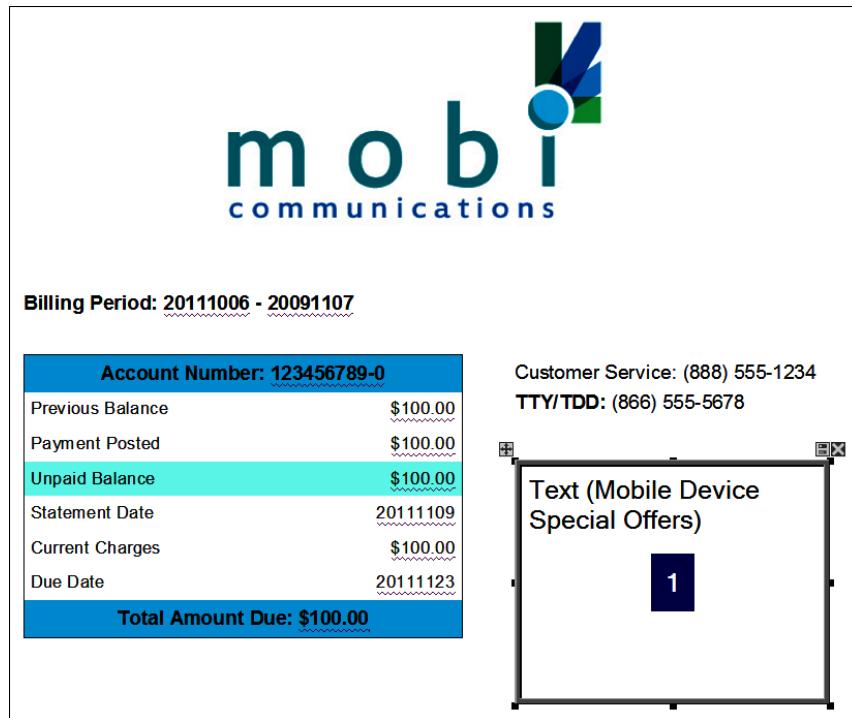
9. On the **Placement** tab, set the position and size of the frame as follows:

Box	Enter
<b>Horizontal position</b>	3.75
<b>Vertical position</b>	3.5
<b>Width</b>	2.25
<b>Height</b>	1.75

10. Click **OK**.

The **Frame Properties** dialog box closes.

**Figure 8-11:**  
New message frame



11. Save and close the page object.

#### Adding a formula to target the customer language

In Design Manager, you will add a formula to the <SYS\_LanguageCustomer> variable in the Property Panel.



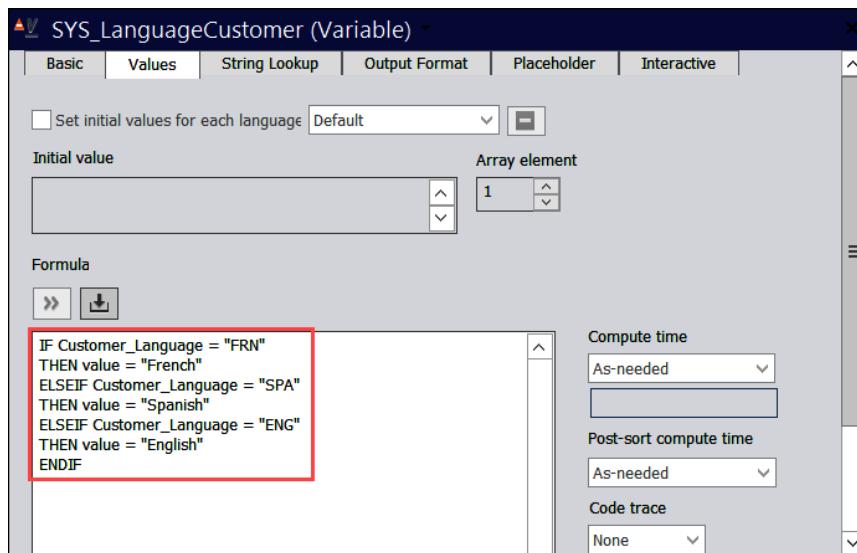
#### Exercise 8.15: Add a formula to the LanguageCustomer variable

1. Open Design Manager.
2. In the Library, expand the **Introduction > Data Dictionary** heading.
3. Open the <SYS\_LanguageCustomer> variable object in the Property Panel.
4. Click the **Values** tab.
5. In the **Formula** area, enter the following formula (replacing any existing text):

```
IF Customer_Language = "FRN"
    THEN value = "French"
ELSEIF Customer_Language = "SPA"
    THEN value = "Spanish"
ELSEIF Customer_Language = "ENG"
    THEN value = "English"
ENDIF
```

6. Save and close the variable object.

**Figure 8-12:**  
**Adding a formula to the LanguageCustomer variable**



The formula in step 5 shows how you can use a formula to calculate the value of a system variable. The <Customer\_Language> variable is one of the system variables that can be modified. This formula uses data areas mapped to a user variable in the **Customer\_Info\_Driver** data file object to select which locale object is associated with each language layer.

**Adding the marketing content to the application**

In Design Manager, you will add the objects with marketing content to the customer account statement application object.

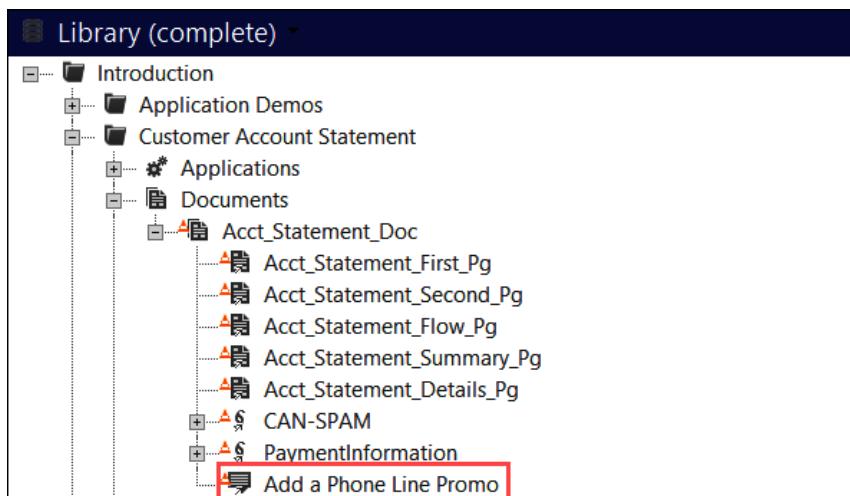


**Exercise 8.16: Add the marketing content to the application**

1. Open Design Manager.
2. In the Library, expand the **Introduction > Customer Account Statement** heading.

3. Add a reference to the **Acct\_Statement\_Doc** document object for the **Add a Phone Line Promo** message object.

**Figure 8-13:**  
**Marketing content added to application**



#### **Exercise 8.17: Package the application and run the engine**

In Design Manager, you will create the package file and run the engine to produce output and view the sample output in the Exstream Viewer.

1. Right-click the **Acct\_Statement\_App** application object and select **Package**.

The Build Package dialog box opens.

2. To specify the output, complete the following steps:

- a. In the **Package file** text box, enter  
C:\Training\Introduction\Pub  
Files\AccountStatement.pub.
- b. In the **Package file** area, select the **Specify output** option.
- c. Click .

The Select Output dialog box opens.

- d. Select **Exstream Viewer**.
- e. Click **OK**.

The Select Output dialog box closes.

3. Select the **Run Engine when complete** check box.

4. Click .

The Run the Engine dialog box opens.

5. Make sure that the **Package file** check box is selected.

The box adjacent to the Package file check box should automatically display the path that you entered in step 2.

6. Click **OK**.

The Run the Engine dialog box closes.

7. Click **OK**.

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

8. Click **Yes**.

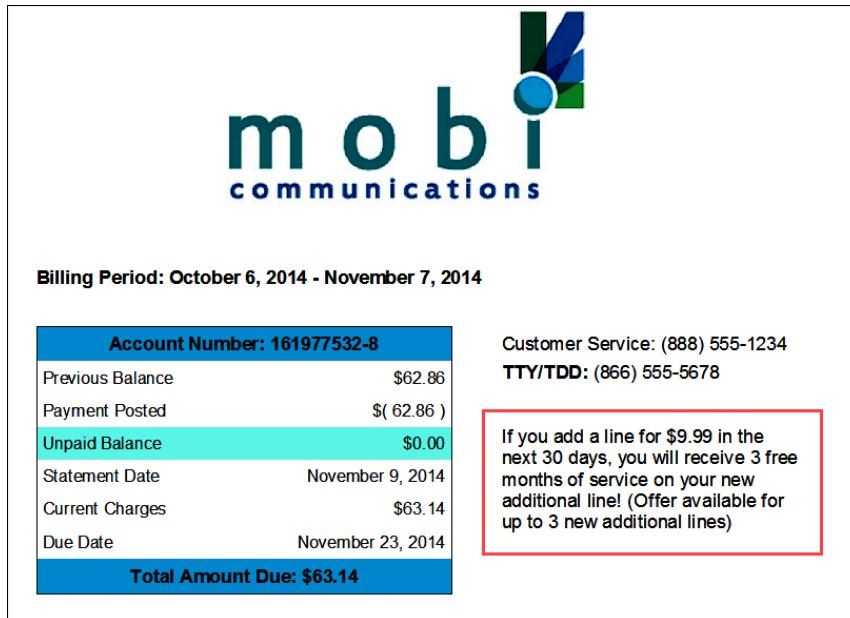
The System Report dialog box opens. Scroll through the messages to review a summary of the engine run.

9. Click **OK**.

The System Report dialog box closes. After the engine has completed the run, the Exstream Viewer opens to show a preview of the output.

10. As you view the output, note the following on the first page of the statement:
- You should see that the new marketing message has now been inserted on the first page of the statement.
  - You should also see that the messages for Jean Depau and Rafael Mendez are in French and Spanish, respectively, based on the <Sys\_LanguageCustomer> variable.

**Figure 8-14:**  
Marketing message added to account statement output



## Localizing the customer account statement

In this module, you have learned how you can use Exstream to create content in multiple languages from a single design. Using locales and language layers, you placed a marketing message on the first page of the Mobi Communications customer account statement that appeared in English, French, or Spanish, depending on customer data.

You can localize the customer account statement by applying locale settings to the other variables used in the design and by adding language layers to the section and paragraph objects. Using the Translation view, you can translate content directly in Designer and easily reference existing content during translation. For example, suppose that a page was designed in English. If you want to add a Spanish language layer, but do not have Spanish content available, you can open the English language layer in the Translation view. Then, you can create the Spanish content while referencing the English language layer as a source.

You can complete the following optional exercises to localize the content of the full account statement:

- Using the locale specifications for date and currency variables
- Adding the language layers to the paragraph objects
- Adding and formatting the text for the language layers
- Adding and formatting the text for the payment information
- Packaging the application, running the engine, and viewing output



#### **Exercise 8.18: Use the locale specifications for date and currency**

In Design Manager, you will update the settings in the Property Panel for date and currency variables to use the locale specification in the output.

1. In the Library, expand the **Introduction > Data Dictionary** heading.
2. Open the **<Customer\_Bill\_Date>** variable in the Property Panel.
3. Click the **Output Format** tab.
4. From the **Output format** list, select **Use Locale Specification**.
5. Save and close the variable object.
6. Repeat step 2 through step 5 for the following date variables:
  - a. **<Customer\_Bill\_Period\_End>**
  - b. **<Customer\_Bill\_Period\_Start>**
7. Repeat step 2 through step 5 for the following currency variables:
  - a. **<Customer\_ChargeCredit\_Amount>**
  - b. **<Customer\_Current\_Charges>**
  - c. **<Customer\_PastDue\_Balance>**
  - d. **<Customer\_Posted\_Payment>**
  - e. **<Customer\_Unpaid\_Balance>**



#### **Exercise 8.19: Add the language layers to the paragraph object**

In Design Manager, you will need to add the all the necessary language layers for English, French, and Spanish to all the paragraph objects used in the Customer Account Statement application.

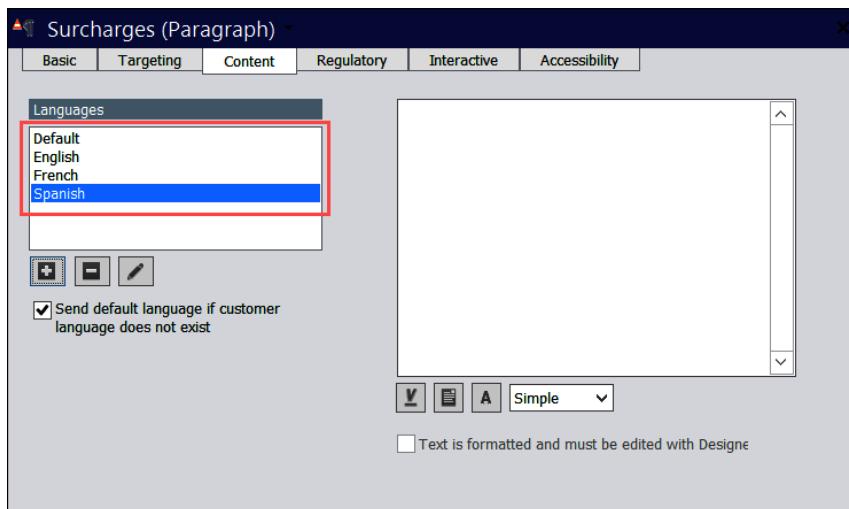
1. In the Library, expand the **Introduction > Customer Account Statement > Paragraphs** heading.
2. Open the **AboutCAN-SPAM** paragraph object in the Property Panel.
3. Click the **Content** tab.
4. In the **Languages** area, add the language layers by completing the following steps:
  - a. Click .

The Select the new language dialog box opens.

- b. From the list, select **English**.
- c. Click **OK**.

The Select the new language dialog box closes.

5. To add the **French** language layer, repeat step a through step c.
6. To add the **Spanish** language layer, repeat step a through step c.
7. Save and close the paragraph object.
8. Repeat step 1 through step 4 for the following paragraph objects:
  - a. **AutoPayEnrollment**
  - b. **ElectronicChecks**
  - c. **ExpressPriorAuthorization**
  - d. **LatePayments**
  - e. **PaymentOptions**
  - f. **ReportingSPAM**
  - g. **ReturnPaymentFee**
  - h. **Surcharges**



**Exercise 8.20: Add and format the text for the language layers**

In Designer, you will add the text and apply the specified formatting for all the language layers for the CAN-SPAM section object used in the Customer Account Statement application.

1. *From the Library, drag and drop the **CAN-SPAM** section object to the Edit Panel.*

The section object opens in Designer.

2. *To add text for the English language layer for the **CAN-SPAM** section object, complete the following steps:*
  - a. *From the Outline Viewer, double-click the **AboutCAN-SPAM** heading.*
  - b. *From the Menu, select **View > Language Layer**.*

The Select the language to edit dialog box opens.

- c. *From the list, select **English**.*
- d. *Click **OK**.*

The Select the language to edit dialog box closes and the language layer opens in the design window.

- e. *From the Menu, select **Insert > Import > Text File**.*
- f. *Go to **C:\Training\Introduction\Text Files\** and select **AboutCAN-SPAM\_English.rtf**.*
- g. *From the Outline Viewer, double-click the next heading (**ExpressPriorAuthorization**).*
- h. *Repeat step e through step g for the remaining paragraph objects, using the files located in the **C:\Training\Introduction\Text Files\** directory:*

Paragraph object	English text file
ExpressPriorAuthorization	ExpressPriorAuthorization_English.rtf
ReportingSPAM	ReportingSPAM_English.rtf



Importing text from RTF files lets you save time by including additional text formatting that is not available in TXT files. In cases where the imported text style does not match the style sheet that is in use, you must select the text in Designer and apply the appropriate style.

3. Apply the **Bulleted List** paragraph style to the bullet lists that were imported into the following paragraph objects:
  - a. **AboutCAN-SPAM**
  - b. **ReportingSPAM**
4. Save the page object.
5. Repeat step 2 for the French language layer, using the files located in the C:\Training\Introduction\Text Files\ directory:

Paragraph object	French text file
AboutCAN-SPAM	AboutCAN-SPAM_French.rtf
ExpressPriorAuthorization	ExpressPriorAuthorization_French.rtf
ReportingSPAM	ReportingSPAM_French.rtf

6. Apply the **Bulleted List** paragraph style to the bullet lists that were imported into the following paragraph objects:
  - a. **AboutCAN-SPAM**
  - b. **ReportingSPAM**
7. Save the page object.
8. Repeat step 2 for the Spanish language layer, using the files located in the C:\Training\Introduction\Text Files\ directory:

Paragraph object	Spanish text file
AboutCAN-SPAM	AboutCAN-SPAM_Spanish.rtf
ExpressPriorAuthorization	ExpressPriorAuthorization_Spanish.rtf
ReportingSPAM	ReportingSPAM_Spanish.rtf

9. Apply the **Bulleted List** paragraph style to the bullet lists that were imported into the following paragraph objects:
  - a. **AboutCAN-SPAM**
  - b. **ReportingSPAM**

**Qué hacer si recibe un mensaje comercial no deseado en su dispositivo inalámbrico**

Usted puede presentar una queja ante la FCC si recibe:

- Un mensaje comercial no deseado enviado a un dispositivo inalámbrico, o
- Una solicitud telefónica hecha a un dispositivo móvil para las que se ha registrado el número de teléfono en el registro nacional No Llamar, o
- Cualquier mensaje de texto enviado por marcación automática en su dispositivo inalámbrico, o un mensaje comercial no deseado a un dispositivo que no sea inalámbrica de una empresa de telecomunicaciones o la publicidad de los productos de una empresa de telecomunicaciones o servicios.

No hay ningún cargo por presentar una queja. Usted puede presentar su queja usando el formulario de queja en línea encuentra en <http://www.fcc.gov/complaints>. También puede presentar su queja con el Centro del Consumidor de la FCC llamando al 1-888-CALL-FCC (1-888-225-5322) voz o 1-888-TELL-FCC (1-888-835-5322) TTY, fax 1-866-418-0232, o escribiendo a:

Federal Communications Commission  
Consumer & Governmental Affairs Bureau  
Consumer Inquiries and Complaints Division  
445 12th Street, SW  
Washington, DC 20554

Figure 8-16: Spanish language layer for Reporting Spam object

10. Save and close the section object.



#### **Exercise 8.21: Add and format the text for payment information**

In Designer, you will add the text and apply the specified formatting for all the language layers for the **PaymentInformation** section object used in the **Customer Account Statement** application.

1. From the Library, drag and drop the **PaymentInformation** section object to the Edit Panel.

The section object opens in Designer.

2. To add text for the English language layer for the **PaymentInformation** section object, complete the following steps:
  - a. From the Outline Viewer, select the **Payment Options** heading.
  - b. From the menu, select **View > Language Layer**.

The Select the language to edit dialog box opens.

- c. From the list, select **English**.
- d. Click **OK**.

The Select the language to edit dialog box closes and the language layer opens in the design window.

- e. From the Menu bar, select **Insert > Import > Text File**.
- f. Go to C:\Training\Introduction\Text Files and select PaymentOptions\_English.rtf.
- g. Place the cursor within the next paragraph object.
- h. Repeat step e through step g for the following paragraph objects, using the files located in the C:\Training\Introduction\Text Files\ directory:

Paragraph object	English text file
AutoPayEnrollment	AutoPayEnrollment_English.rtf
LatePayments	LatePayments_English.rtf
ReturnPaymentFee	ReturnPaymentFee_English.rtf
ElectronicChecks	ElectronicChecks_English.rtf
Surcharges	Surcharges_English.rtf

3. Apply the **Bulleted List** paragraph style to the bullet lists imported into the **PaymentOptions** paragraph object.
4. Save the page object.
5. Repeat step 2 through step 4 for the **French** language layer, using the following files located in the C:\Training\Introduction\Text Files\ directory:

Paragraph object	French text file
AutoPayEnrollment	AutoPayEnrollment_French.rtf
LatePayments	LatePayments_French.rtf
ReturnPaymentFee	ReturnPaymentFee_French.rtf
ElectronicChecks	ElectronicChecks_French.rtf
Surcharges	Surcharges_French.rtf

6. Save the page object.

7. Repeat step 2 through step 4 for the **Spanish** language layer, using the following files located in the C:\Training\Introduction\Text Files\ directory:

Paragraph object	Spanish text file
AutoPayEnrollment	AutoPayEnrollment_Spanish.rtf
LatePayments	LatePayments_Spanish.rtf
ReturnPaymentFee	ReturnPaymentFee_Spanish.rtf
ElectronicChecks	ElectronicChecks_Spanish.rtf
Surcharges	Surcharges_Spanish.rtf

8. Save and close the section object.



#### **Exercise 8.22: Package the application and run the engine**

1. Right-click the **Acct\_Statement\_App** application object and select **Package**.

The Build Package dialog box opens.

2. To specify the output, complete the following steps:

- a. In the **Package file** text box, enter  
*C:\Training\Introduction\Pub Files\AccountStatement.pub*.
- b. In the **Package file** area, select the **Specify output** option.

- c. Click .

The Select Output dialog box opens.

- d. Select **Exstream Viewer**.
- e. Click **OK**.

The Select Output dialog box closes.

3. Select the **Run Engine when complete** check box.

4. Click .

The Run the Engine dialog box opens.

5. Make sure that the **Package file** check box is selected.

The box adjacent to the Package file check box should automatically display the path that you entered in step 2.

6. Click **OK**.

The Run the Engine dialog box closes.

7. *Click OK.*

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

8. *Click Yes.*

The System Report dialog box opens. Scroll through the messages to review a summary of the engine run.

9. *Click OK.*

The System Report dialog box closes. After the engine has completed the run, the Exstream Viewer opens to show a preview of the output.

10. *As you view the output, note that on the second page of the statement:*

- a. *The Payment Information section for Jean Depau (444444444-9) is presented in French.*
- b. *The Payment Information section for Rafael Mendez (555555555-1) is presented in Spanish.*

**Figure 8-17:**  
The payment information  
section for Rafael  
Mendez (555555555-1) is  
presented in Spanish

<p><b>Opciones de pago</b></p> <p>Todas las siguientes opciones de pago pueden ser pagados a través de su cuenta bancaria, tarjeta de débito o tarjeta de crédito.</p> <ul style="list-style-type: none"> <li>• Pague con su dispositivo móvil de forma gratuita. Marcar * PAY (* 729) y pulse enviar.</li> <li>• Pague en línea. De inicio de sesión a <a href="http://mobi-communications.com">http://mobi-communications.com</a>. Los nuevos usuarios deben registrarse.</li> <li>• Pague por correo utilizando el talón de remesas y un cheque o giro postal. Los pagos pueden tardar hasta 7-10 días para publicar.</li> <li>• Pague por teléfono. Llame a Servicio al Cliente al (888) 555-1234. Cargo extra puede aplicar.</li> <li>• Pague con AutoPay. Usted debe inscribirse en AutoPay utilizando el formulario de firma.</li> </ul> <p><b>AutoPay inscripción</b></p> <p>Al firmar abajo, yo autorizo Mobi Communications para pagar mi factura mensual por vía electrónica a deducir el dinero de mi banco cuenta. Los fondos serán deducidos de manera que el pago es recibido por Mobi Communications en o antes de la fecha de vencimiento. Puedo cancelar autorización de pago automático mediante la notificación de Comunicaciones Mobi en <a href="http://www.mobi-communications.com">http://www.mobi-communications.com</a>, (888) 555-1234, o al 711 de mi dispositivo móvil. Si mi banco rechaza el pago, estoy de acuerdo en pagar una cuota de devolución de hasta \$ 30.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Número de ruta bancaria:</td> <td style="width: 50%;">Número de cuenta:</td> </tr> <tr> <td><hr/></td> <td><hr/></td> </tr> </table>		Número de ruta bancaria:	Número de cuenta:	<hr/>	<hr/>
Número de ruta bancaria:	Número de cuenta:				
<hr/>	<hr/>				



## 9. Adding organizational features to documents

### Objectives

After completing this module, you should be able to:

- Add a table of contents
- Add index entries
- Add footnotes
- Add cross-references

### Important terms

The following important terms are used in this module:

- **Cross-references** – Point where readers can find information that is outside of the current topic or logical flow of a document.
- **Footnote** – Appears at the bottom of a design, and a marker appears in the main text indicating that more information is available in the footnote.
- **Index** – A section that appears at the end of a document to let customers quickly find where information is located.
- **Overflow frame** – A frame to receive the overflow if the table of contents or index grows larger than the placeholder.
- **Placeholder** – In the context of this module, a placeholder is a drawing object used to reserve a place for the engine to begin constructing your table of contents.
- **Tags** – Are inserted into the document to mark a document, chapter, section, or subject.

## Tables of contents

A table of contents (TOC) makes it easy for customers to see, at a glance, the content contained in a document and the page number where the content they could be looking for is located. When you create a table of contents, you specify the text that you want to appear for each table of contents entry. A table of contents typically includes major headings, sub-headings, and sometimes the titles of tables or graphics. Designer gives you the flexibility to include any text that you want in the table of contents.

In Designer, the table of contents is actually a table that can split and flow. The table of contents is inserted on the first page using a table of contents placeholder. If the TOC flows beyond the area where it begins, you must also set up an overflow frame. Designer lets you compose a table of contents in one of the following ways:

- By customer, including all the documents that go to that customer
- By document, restarting the TOC for each document

You can insert a table of contents on a page anywhere in a document. In a formal publication, this table typically will appear after a cover page and other preliminary pages. Informal publications might not have a cover page and might not start with a table of contents. A booklet might even place this table in the back.

### Creating a table of contents

The following table summarizes the steps required to create a table of contents using both the Designer and Design Manager applications:

In Designer	In Design Manager
Add TOC tags to the text.	Restart page numbering/folio numbering.
Create a TOC placeholder on any page: <ul style="list-style-type: none"><li>● Format the text for each level.</li><li>● Specify the placeholder properties.</li></ul>	Specify the page number format.
If the TOC is expected to grow beyond the placeholder, then you must provide a frame to accept the overflow.	

### Adding TOC tags

Exstream builds a table of contents from the TOC tags in the document. You manually insert these tags to mark a document, chapter, section, or subject. These tags can be placed within text boxes, tables, or messages.

In Designer, you highlight the text you want to appear as an entry and right-click to display the shortcut menu.

When you select **Paragraph > Mark TOC Entry**, a TOC dialog box opens. You use this dialog box to enter tags for table of contents entries.

The properties are:

- **Entry** – Select the level for the entry, from Level 1 to Level 6. The default is Level 1. Selecting **Exclude** will remove an entry that is currently defined.
- **Text source** – Select **Use variable** to supply a variable that provides text for the TOC, **Use paragraph** to use the current paragraph text for the TOC, or **Specify text** to enter the text into the box that you want used. The default is **Specify text**.

TOC tags have the following characteristics:

- A purple T identifies a TOC entry in Designer.
  - The T appears when an object is active and in text edit mode.
  - The tagged text will be copied into the TOC when the engine runs.
- There is no system limit to how many TOC entries you can create in the document.
- The engine uses the level you specified for each entry for placement and text formatting in the TOC table.

#### **Creating a TOC placeholder**

You add a Designer drawing object called an index placeholder to reserve a place for the engine to begin constructing your table of contents. If the table is expected to grow beyond the size of this placeholder, then you must also provide frame(s) to accept the overflow.

#### **Specifying the TOC placeholder properties**

Like other objects in Exstream, you can specify properties that define how the table of contents looks and operates. To open the TOC Properties dialog box, right-click the TOC placeholder and select **Table of Contents Properties**.

The **Placement**, **Dynamic Size** and **Placement**, **Rule**, and **Live** tabs operate as they do with other objects in Designer. The **Table of Contents** tab offers the following unique properties:

- **Type** – Select one of the following options to specify how the TOC will be used:
  - **Complete customer** – Runs this table of contents for all documents for each customer.
  - **Sub document** – Runs this table of contents for a particular document for each customer.
- **Levels to include** – Specify how deep you want the TOC. Each subordinate level is of lesser importance and is offset to the right in the list. The default is 4. If you select **Auto**, the TOC includes all hierarchical levels that are marked in your document.
- **Tab size** – Enter the space to skip for each tab. The default is 0.25 inches.
- **Wrap text** – Select this check box if you want text to wrap at each level.
- **Hyperlink** – Select the **Hyperlink** check box to create linked sections within a PDF. This works only if your output is in PDF format.

- **Page number position** – Select one of the following to specify where the page numbers will be in relation to the text entries:
  - **None** – Eliminates page numbers. This formatting works for very short booklets when the only purpose is to let the customer know what is included inside the booklet.
  - **Right column** – Places page numbers in a separate column to the right of the text. This default setting activates the remaining properties on this tab.
  - **Adjacent to text** – Inserts the page numbers following the text and keep the format to one column
- **Column width** – Enter the width of the second column that contains the page numbers. The first column auto-adjusts to the proper size to accommodate the second column.
- **Justification** – Select the placement of the page numbers in the column by **Right**, **Left**, or **Center** alignment.
- **Leader string** – Select the check box if you want to use characters to fill in the space that leads from the text to your page numbers. Select the character to use from the list.
- **Levels to include** – Specify how deep you want the TOC. Each subordinate level is of lesser importance and is offset to the right in the list. The default is 4. If you select **Auto**, the TOC includes all hierarchical levels that are marked in your document.
- **Column width** – Enter the width of the second column that contains the page numbers. The first column auto-adjusts to the proper size to accommodate the second column.

You format each level of the TOC as you would any text in Designer. You can specify color, font, font size, and other formatting properties on each individual level.



Most text formatting options will be inactive if you assign a style sheet to the TOC.

---

Click anywhere on a level to make it active. Designer highlights the line. Any formatting change you make affects the entire level – you cannot assign different formatting to specific sections within the same level.

When you double-click a level, the **Text Properties** dialog box opens. In the box, specify the space you want Exstream to allocate above each entry level at run time.

**Setting the TOC properties in Design Manager**

Until now, we have discussed using Designer to create a TOC. You can set other properties in Design Manager at the document level.

In the Library, drag the document to the Property Panel. The **Composition** tab controls page numbering and formatting options for TOC and index page references. Select options from up to three lists in the **Table of contents** area to build a numbering scheme. The **Sample** box at the bottom of the dialog box shows a design sample of your selections.

Select the **Restart page numbers** check box to restart the page numbering for this document.

Select the **Restart document (chapter) count** check box to use a numbering system that counts each document like a chapter in a single book in the tables of contents and indexes.

For example, if this document were the third document in the application, page references can be numbered 3-1, 3-2, 3-3 and so on. You specify the numbering system from the following options:

- **Document** – The **Document** list creates a numbering system that spans documents. The first document for a customer begins with a “1” (or “A”, depending on your choice of numbering system). The second document begins with a “2” (or “B”) and so on. If you do not want documents to be numbered in this way in the TOC for this document, select **None**. If you select **None**, the **Separator** list becomes inactive. If you select **Use prefix**, you can use a static prefix for TOC entries. The prefix replaces the document numbers generated in the TOC.
- **Separator** – To use cross-document numbering, select the character that will be used to separate a document number from a page number in the TOC/index from the **Separator** list. Options include the hyphen (-), dot (.) and space ( ).
- **Page** – Select a numbering system from the available options for individual pages.

The properties on the **Composition** tab instruct Exstream how to reference page numbers in TOCs and indexes. To use a folio numbering scheme on composed page numbers throughout a document, perform one of the following in a text box on each page:

- Enter, as static text, what you want as **Document** and **Separator** characters. Then place a page-numbering variable, such as <SYS\_PagePrintedValue>.
- Place a document numbering variable, such as the <SYS\_DocPrintedValue> system variable. Enter what you want as a **Separator** character. End with a page-numbering variable, such as <SYS\_PagePrintedValue>.

Then, after you have completed one of the above tasks, complete the following steps:

1. Right-click the first variable and select **Variable Properties**.

The Variable Properties dialog box opens.

2. Select the **Special formatting** check box.

3. From the list, select the format to number the documents.

Exstream automatically increments this setting with each new customer document in the application.

The page numbering scheme used on the TOC table should be the same page numbering scheme designed on your pages.

#### Adding a table of contents to a document

In these exercises, you will create a table of contents for the **New Policy Document** you have been creating during this course.



#### Exercise 9.1: Specify a level 1 tag

1. In Design Manager, expand the **Documents > Class Exercises > Pages** folder and drag the **08 Personal Prov** page object from the Library to the Edit Panel.

The page opens in Designer.

2. Click in the **SECTION 2: PERSONAL PROPERTY COVERAGE** text box.
3. Highlight and right-click the text.
4. Select **Paragraph > Mark TOC Entry**.

The TOC Entry Properties dialog box opens.

5. From the **Entry** list, select **Level 1**.
6. Click **OK**.

The text box now has a gray T outside the left edge, visible in text edit mode.

7. Save the page and close Designer.



#### Exercise 9.2: Specify a level 2 tag

1. In the Library, drag the **11 Endorsements** page object to the Edit Panel.

The page opens in Designer.

2. Click in the **SCHEDULE OF ENDORSEMENTS** text box
3. Highlight and right-click the text.
4. Select **Paragraph > Mark TOC Entry**.

The TOC Entry Properties dialog box opens.

5. From the **Entry** list, select **Level 2**.
6. Click **OK**.

The text box now has a purple T outside its left edge, visible in text edit mode.

7. Save the page and close Designer.



### Exercise 9.3: Create a TOC placeholder

1. In the Library, drag the **02 Policy Intro Back** page object to the Edit Panel.

The page opens in Designer.

2. On the **Drawing Objects** toolbar, click the TOC icon .
3. Click in the area under the *What is Inside this Policy* heading.

The TOC Properties dialog box opens.

4. From the **Levels to include** list on the **Table of Contents** tab, select **2**.
5. Click **OK**.
6. Right-click the TOC box on the page and select **Table of Contents Properties**.

The TOC Properties dialog box opens again with additional tabs.

7. On the **Placement** tab, enter the following values:

Box	Enter
Horizontal position	4.25
Vertical position	3.35
Width	3.4
Height	6.2

8. Click **OK**.

The TOC box changes according to your property settings.

What is Inside this Policy	
PAYMENT METHODS	Level 1 - Sample TOC Entry .....1
You have the option of paying your FirstHaven insurance agent directly. However, you can elect to take advantage of one of our simple and convenient payment plans:	Level 2 - Sample TOC Entry .....12
Installment Plan - Pay your yearly insurance premium in four easy payments, by credit card, computer banking, or check/money order.	

Figure 9-1: Table of contents

9. Save the page and close Designer.



#### Exercise 9.4: Reference the objects

To prevent repetition, a few other pages already have TOC tags placed in them. To reference these additional pages in preparation for packaging, complete the following steps:

1. In the Library, drag the following page objects to the **New Policy Document** document object that is located under the **New PolicyHolder Mailing** application object so that they appear in numerical order:
  - a. **02 Policy Intro Back**
  - b. **08 Personal Prov**
  - c. **11 Endorsements**
  - d. **13 Addtnl Living**
2. Drag the seven message objects, named **Endorsement1** through **Endorsement7**, to the **New Policy Document** document object.



Hold down the **CTRL** key as you click the messages. Then you can use the Design Manager's multiple drag and drop feature to speed the completion of this step.



#### Exercise 9.5: Package the application and viewing the output

In Design Manager, you need to create the package file and run the engine to produce output and view the sample output in the Exstream Viewer.

1. Right-click the **New PolicyHolder Mailing** application object and select **Package**.

The Build Package dialog box opens.

2. To specify the output, complete the following steps:
  - a. In the **Package file** text box, enter  
*C:\Training\Introduction\Pub Files\NewPolicyHolderMailing.pub.*
  - b. In the **Package file** area, select the **Specify output** option.
  - c. Click .

The Select Output dialog box opens.

- d. Select **Exstream Viewer**.
- e. Click **OK**.

The Select Output dialog box closes.

3. Select the **Run Engine when complete** check box.

4. Click .

The Run the Engine dialog box opens.

5. Make sure that the **Package file** check box is selected.

The box adjacent to the Package file check box should automatically display the path that you entered in step 2.

6. Click **OK**.

The Run the Engine dialog box closes.

7. Click **OK**.

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

8. Click **Yes**.

The System Report dialog box opens. Scroll through the messages to review a summary of the engine run.

9. Click **OK**.

10. As you view the output, note the following:

- a. The table of contents on **02 Policy Intro Back** (page 2) of each customer document, which will grow as you add pages.
- b. The **Schedule of Endorsements, 11 Endorsements**, (page 4) changes for each customer.

Now that customer documents have grown to six pages each, you might find using the **Composed Customer List** tool helpful. The panel shows a hierarchical list of the customer documents.

11. If the **Composed Customer List** panel is not visible in the Exstream Viewer, go to the **View** menu and select **Composed Customer List**.
12. To quickly view different pages for different customers, you can do any of the following:
  - a. Double-click a page displayed in the list box.
  - b. Click the navigation buttons in the panel.

Figure 9-2:  
Navigation buttons



- c. Click the navigation buttons in the Compose File toolbar.

Figure 9-3:  
Compose File toolbar



## Indexes

Indexes often appear at the end of a document and let customers quickly find where information is located in the document. Indexes typically include keywords or topics found in the document, as well as alternate terms users might search for.

Designer lets you do the following:

- Make any text an index entry.
- Create an index for all the customer documents, or an index that is specific to one document.
- Create a single level or multi-level index layout.
- Format how the text appears at each level.

The steps to create an index are very similar to the steps you used to create a table of contents.

In Designer	In Design Manager
Manually add index tags to text.	Restart page numbering/folio numbering.
Create an index placeholder on any page. Format the text for each level and specify placeholder properties.	Specify the page number format.
If the index is expected to grow beyond the placeholder, then you must provide a frame to accept the overflow.	

**Adding index tags**

Exstream builds an index from index tags in the document. You manually insert these tags wherever you want to mark an important area to include in the index. These tags can be placed within text boxes, tables, messages, or anywhere that text appears.

In Designer, you highlight the text you want to appear as an entry and right-click to display the shortcut menu. When you select **Paragraph > Mark Index Entries**, the **Index Entry Properties** dialog box opens.

You can have an index tag and a TOC tag in the same paragraph or cell. Although you can have only one index tag per paragraph or table cell, Exstream lets you enter as many as three different index entries at the point in the document where you highlighted text, each with up to three inclusion levels. You do not have to fill all text boxes, but at least Level 1 needs to have text. Some indexes have only one level.

When the object is active in Designer you will see a purple ‘i’ displayed in the left margin.

- A purple ‘i’ identifies an index entry in Designer, which appears when object is active and in text edit mode.
- Although you can place only one index tag in any one paragraph or cell, you can specify as many as three index entries in each index tag.
- The engine uses the level you specify for each entry for placement and text formatting in the index table.
  - In a single-level index, all entries are equal. There are no indents in the final output.
  - In a multi-level index, Level 1 is the broadest level; Level 3 is the most specific level. In the following example, used car policies will be indented under automobile insurance, which will be indented under insurance portfolio.

**Creating an index placeholder**

You add a Designer drawing object called an index placeholder to reserve a place for the engine to begin constructing your index. If the table is expected to grow beyond the size of this placeholder, then you must also provide frame(s) to accept the overflow.

You use the **Index Properties** dialog box to specify how your index will appear. To start, you click anywhere on the index placeholder and select **Index Properties**.

The **Placement**, **Dynamic Size** and **Placement, Rule**, and **Live** tabs operate as they do with other objects in Designer. The first tab, **Index**, offers the following unique properties:

- Entries**
- **Levels to include** – Choose how many different levels an index will have. Each succeeding level is more specific and is offset to the right in the list. The options are **1**, **2**, **3**, and **Auto**. Select **Auto** if you want Exstream to specify the levels in the index based on the levels you define within the application.
  - **Level indent** – Specifies the size of the indent between levels. You change this size by entering the measurement in the box.

- **Entry order** – specifies the order you want entries to appear under each heading. The index is still arranged by heading (either alphabetically or custom). You can choose to order the entries alphabetically, by page, or by the current locale settings.
- **Wrap entry text** – Select if you want the text to wrap at each level.

- Headings**
- **Use special heading for non-alpha entries** – Select this check box to place the non-alpha index entries at the beginning, before the entries for the letter A. Clearing this check box places the non-alpha entries at the end, after the entries for the letter Z. Some organizations prefer to put symbol and number entries at the end of an index. Other organizations prefer to place these at the start.
  - **Heading text** – Specify what you want the heading for the non-alpha index entries to say, no matter where you place them (at the start or at the end).



If you do have non-alpha entries before alpha entries, you could use this text box to serve as the title for the entire index. For example, using the word Index in the text box serves as the title for the entire table.

---

- Page numbers**
- **Position** – Select one of the following:
    - **Append to text** – Inserts the page numbers following the text and keeps the format to one column.
    - **Right columns** – Inserts page numbers in a separate column to the right of the index. If selected, the column options become active. This is the default setting.

Each level of the index can be formatted as easily as you did the table of contents levels. You can specify a different color, font, font size, and other formatting properties on each individual level.

---



Most text formatting options will be inactive if a style sheet is applied.

---

Click anywhere on a level to make it active. Designer highlights the line in a solid box. Any formatting change you make affects the entire level. You cannot assign different formats to specific sections within the same level.

If you double-click a level, the **Text Properties** dialog box opens. In the box, enter or select the spacing for Exstream to place above each entry at this level.

<b>Creating the overflow frame</b>	If the contents will grow larger than the placeholder, make sure that you provide a frame to receive the overflow. There are no differences between creating an overflow frame for an index and a frame for a table of contents.
------------------------------------	--



If you do not get an index after you compose your application, make sure that there is room for the index and that the index does not overlap any other objects. If you get a partial index, make sure that the overflow frame is wide enough to accommodate the index.

<b>Setting the index properties in Design Manager</b>	The document properties you set in Design Manager for a TOC also affect the numbering scheme used in an index.
---	--

In the document properties, the **Composition** tab controls page numbering options in the **Restart page numbers** and **Restart document (chapter) count** check boxes in the first column.

The **Composition** tab also controls the numbering scheme used between documents.

<b>Adding an Index to a document</b>	In this exercise, you will create a two-level index on page 4 of the customer documents. This index grows as you add more pages to the document.
--------------------------------------	--



### Exercise 9.6: Add index tags

There are two clauses on the **13 Addtnl Living** page about different kinds of losses. In an index, you could list these two provisions at the same level, but, for clarity, you will create second-level tags for them.

1. *In the Library, drag the **13 Addtnl Living** page object to the Edit Panel.*

The page opens in Designer.

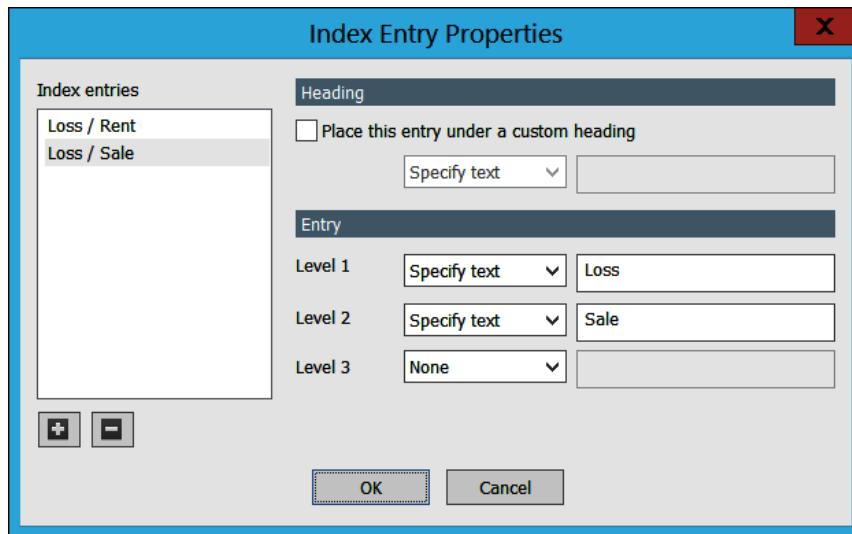
2. *In the second paragraph under EXCLUSIONS, highlight the words LOSS OF RENT.*
3. *Right-click and select **Paragraph > Mark Index Entries**.*

The Index Entry Properties dialog box opens.

4. *In the **Level 1** box, replace the existing text with *Loss*.*
5. *For **Level 2**, select **Specify text** and enter *Rent*.*
6. *Click  and select the second entry in the **Index entries** box.*

7. For **Level 2**, change the text from *Rent* to *Sale* and notice how the index entries change.

Figure 9-4:  
Index entry properties dialog



8. Click **OK**.

Note the gray letter 'i' outside the left edge of the text box that is visible in text edit mode.

9. Save and close the page.



#### Exercise 9.7: Create an index placeholder

1. In the Library, expand **Documents > Class Exercises > Pages** and drag the **05 Definitions2** page object to the Edit Panel.

The page opens in Designer.

2. On the Drawing Objects toolbar., click

Your pointer changes to

3. Click anywhere in the area below the top level index heading.

The Index Properties dialog box opens.

4. Click **OK**.

5. Right-click on the index box and select **Index Properties**.

6. Click the **Index** tab, and enter or select the following values:
  - a. In the **Entries** area, from the **Levels to include** list, select **2**.
  - b. In the **Page numbers** area, from the **Position** list, select **Right column**.
  - c. From the **Leader** list, select **'.'** (period).
7. On the **Placement** tab, enter the following values:

Box	Enter
<b>Horizontal position</b>	4.5
<b>Vertical position</b>	1.7
<b>Width</b>	2.35
<b>Height</b>	7.5

8. Click **OK**.

The screenshot shows a Microsoft Word document with a header featuring the FirstHaven logo and the text "FirstHaven Limited ~ Property Insurance Division ~ www.firsthaven.com/prop.htm". Below the header, there is a section titled "PERIOD OF INSURANCE" which defines the period of coverage. Another section titled "PERSONAL PROPERTY" describes the types of items covered. To the right, a large red-bordered box labeled "TOP-LEVEL INDEX" contains the word "Custom" and several sample index entries at different levels.

Level	Entry
Level 1 - Sample Index Entry	Custom
Level 2 - Sample Index Entry	Level 1 - Sample Index Entry
#	Level 2 - Sample Index Entry
Level 1 - Sample Index Entry	Level 2 - Sample Index Entry

Figure 9-5: Index placeholder

The index placeholder resizes to the properties you specified.



#### Exercise 9.8: Format the index levels

1. In the index placeholder, click the first word, **Custom**.  
Designer highlights the top line that contains the headings.
2. Change the text format to **Arial, 12 points**.
3. Click the **Level 1 Sample Index Entry**.

Designer highlights all the level 1 index lines.

4. Select **Arial** as the font and keep the existing **10 point** font size.
5. Click the **Level 2 Sample** Index Entry.

Designer highlights all the level 2 index lines.

6. Select **Arial** as the font and keep the existing **10 point** font size.
7. Save the page and close Designer.



### **Exercise 9.9: Reference objects**

In the following steps, you will reference additional objects in the Library in preparation for packaging. To conserve class time, a few other pages already have index tags embedded in them.

1. Drag the following two page objects to the **New Policy Document** document object under the **New PolicyHolder Mailing** application object:
  - a. **04 Definitions1**
  - b. **05 Definitions2**
2. Make sure that the pages are all in numerical order.



### **Exercise 9.10: Package the application and view the output**

In Design Manager, you need to create the package file and run the engine to produce output and view the sample output in the Exstream Viewer.

1. Right-click the **New PolicyHolder Mailing** application object and select **Package**.

The Build Package dialog box opens.

2. To specify the output, complete the following steps:

- a. In the **Package file** text box, enter  
*C:\Training\Introduction\Pub Files\NewPolicyHolderMailing.pub.*
- b. In the **Package file** area, select the **Specify output** option.
- c. Click .

The Select Output dialog box opens.

- d. Select **Exstream Viewer**.
- e. Click **OK**.

The Select Output dialog box closes.

3. Select the **Run Engine when complete** check box.
4. Click .

The Run the Engine dialog box opens.

5. Make sure that the **Package file** check box is selected.

The box adjacent to the Package file check box should automatically display the path that you entered in step 2.

6. Click **OK**.

The Run the Engine dialog box closes.

7. Click **OK**.

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

8. Click **Yes**.

The System Report dialog box opens. Scroll through the messages to review a summary of the engine run.

9. Click **OK**.



FirstHaven Limited ~ *Property Insurance Division* ~ [www.firsthaven.com/prop.htm](http://www.firsthaven.com/prop.htm)

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<p><b>PERIOD OF INSURANCE</b> The period shown on your policy that we have agreed to cover you and your household. Generally, this period extends out twelve months from the receipt of your premium.</p> <p><b>PERSONAL PROPERTY</b> Store-bought goods, clothing, home furnishings, personal items, and creative projects that you and your family possess, created, or have legal responsibility over.</p> <p><b>POLICY</b> This document in its entirety, including a schedule of endorsements.</p>	<p style="text-align: center;"><b>TOP-LEVEL INDEX</b></p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: right; vertical-align: bottom;">A</td> <td style="width: 90%;"></td> </tr> <tr> <td style="text-align: right; vertical-align: bottom;">Agent .....</td> <td style="vertical-align: bottom;">1</td> </tr> <tr> <td style="text-align: right; vertical-align: bottom;">Anywhere coverage .....</td> <td style="vertical-align: bottom;">5</td> </tr> <tr> <td colspan="2" style="height: 10px;"></td> </tr> <tr> <td style="text-align: right; vertical-align: bottom;">C</td> <td style="vertical-align: bottom;"></td> </tr> <tr> <td style="text-align: right; vertical-align: bottom;">Claim .....</td> <td style="vertical-align: bottom;">8</td> </tr> <tr> <td style="text-align: right; vertical-align: bottom;">Dispute .....</td> <td style="vertical-align: bottom;">8</td> </tr> <tr> <td style="text-align: right; vertical-align: bottom;">Refusal .....</td> <td style="vertical-align: bottom;">8</td> </tr> <tr> <td colspan="2" style="height: 10px;"></td> </tr> <tr> <td style="text-align: right; vertical-align: bottom;">L</td> <td style="vertical-align: bottom;"></td> </tr> <tr> <td style="text-align: right; vertical-align: bottom;">Loss .....</td> <td style="vertical-align: bottom;">5</td> </tr> <tr> <td style="text-align: right; vertical-align: bottom;">Home .....</td> <td style="vertical-align: bottom;">5</td> </tr> <tr> <td style="text-align: right; vertical-align: bottom;">Rent .....</td> <td style="vertical-align: bottom;">7</td> </tr> <tr> <td style="text-align: right; vertical-align: bottom;">Sale .....</td> <td style="vertical-align: bottom;">7</td> </tr> </table>	A		Agent .....	1	Anywhere coverage .....	5			C		Claim .....	8	Dispute .....	8	Refusal .....	8			L		Loss .....	5	Home .....	5	Rent .....	7	Sale .....	7
A																													
Agent .....	1																												
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C																													
Claim .....	8																												
Dispute .....	8																												
Refusal .....	8																												
L																													
Loss .....	5																												
Home .....	5																												
Rent .....	7																												
Sale .....	7																												

Figure 9-6: Document index

As you view the output, note the following:

1. The index you created is on the **05 Definitions2** (page 4) in the customer documents.
2. Exstream lists the two kinds of losses you tagged (Loss of Rent and Loss of Sale) on the **13 Addtnl Living** page (current page 7). The Rent and Sale entries are second-level entries under the first level entry of Loss.
3. Like the table of contents, the index grows as you add more pages to this document.

## Footnotes

When you work with documents in Designer, you might find that your text becomes broken up by comments, historical notes, technical information, or references to legal requirements. This can make your text appear cluttered and difficult to understand, and when you should consider adding footnotes to your document. You can add footnotes to a design to include any additional information that is complementary but not necessary to the content.

The benefits of using footnotes include the following:

- Footnotes help keep your document flowing and easy to read.
- Footnotes can be included at the page, document, or application level.
- Footnotes can also be included on same page as the text it references or where space is available.
- You can use fixed text, variables, or text messages for footnotes.
- You choose whether to automatically number footnotes or not.

Footnotes often appear at the bottom of a design, and a marker appears in the main text indicating that more information is available in the footnote. You can place only one footnote per paragraph or table cell. You can add footnotes to pages, paragraphs, and text messages either while you work on the text or after the pages are finished.

### Creating a footnote

Creating a footnote is similar to creating a TOC or index. You manually add tags to mark places in the text that will have footnotes. Exstream creates the actual footnote output in a footnote frame that you create.

In Designer, position the cursor where the text requires a footnote and right-click to display the shortcut menu. When you select **Paragraph > Add Footnote**, the **Footnote Properties** dialog box opens, which you use to specify how your footnote will be displayed.

In the Footnote Properties dialog box you can set the following options:

- **Content source**

From the **Content** list, you specify the source of the footnote's content. The choice you make from the following options affects what appears in the middle of the dialog box:

- **Constant text** – The text you enter in the box will be used to provide the footnote content. The text provided must not contain a carriage return or tab. Also, your text will be lost if you decide to switch to a different option.
- **Variable** – The variable you select provides the footnote content. You can select any variable from the list, including tagged text variables.
- **Text message** – When you select this option, a list containing all the text messages in the database is displayed. The text message you select provides the footnote content.

- **Numbering method**

Select one of the following from the Numbering method list to show how footnotes will be identified:

- **Automatic integer** – The footnotes are numbered automatically in sequence when Exstream composes the page.  
Example: 1 Not everyone agrees with...
- **Specific text** – Supply the text in the Identifier text box.  
Example: Note 1 Not everyone agrees with...
- **Specific text, collapse** – The text you enter in the Identifier text box will appear as abbreviated text while you design the page and expand when Exstream composes the footnote.  
Example: Footnote 1 Not everyone agrees with...

- **Identifier and identifier location**

Enter the characters or words you want to use as the identifier to alert the reader to the presence of the footnote. If you selected **Automatic integer** as the numbering method, the **Identifier** text box will be inactive.

Select where the identifier should appear relative to the text requiring a footnote from the **Identifier location** list. The options are as follows:

- **At current text point** – Places the identifier within the body of the text.  
Example: Not everyone Note 1 agrees...
- **Left of paragraph** – Places the identifier on the outside left margin of the line where the footnote reference occurs.  
Example: Note 1 Not everyone agrees...

- **Inclusion**

From the **When to include** list, you select which customers will see the footnotes – without having to create a rule. Select from the following options:

- **Always** – The footnote is always included.
- **Variable has content (text or value > 0)** – Include the footnote when this is true.
- **Variable does not have content (no text or equal 0)** – Include the footnote when this condition is true. This is the opposite state from the previous option.

If you chose an option that involves a variable, click  to select the variable from the list box.

- **Placement**

From the **Placement** list, you select where you want the footnote text to appear in an available footnote frame. Select from the following options:

- **Anywhere** – The engine will place the footnote text anywhere it will fit in a footnote frame within any of the documents for the customer. This lets you create a central location for all the footnotes from the documents for a customer.
- **On same page** – The engine will place the footnote text in a footnote frame on the same page as the text it references.
- **In same document** – The engine will place the footnote text in the same document as the text it references, but not necessarily on the same page.



Settings on the **Documents** tab of the application properties in Design Manager will override the settings configured in the **Footnotes Properties** dialog box in Designer.

---

### Creating a footnote frame

In contrast to TOC and index entries, all footnote output will appear in frames, not just the overflow. Exstream will place footnotes into only footnote frames.

In Designer, when you click  on the **Drawing** toolbar or select **Insert > Drawing Object > Frame** from the menu, the **New Frame** dialog box opens. From here, you must select the **Footnotes** option.

When you click **OK**, the **Insert Frame** dialog box opens. This dialog box contains one tab, called **Footnote Frame**, with properties you can specify for each individual frame.

You are already familiar with all the properties in the first column. In the second column, the **Footnote flow across frames** area has several unique properties.

Select the overflow characteristics of this frame from the **Footnote flow across frames** list. Select from the following options:

- **None** – Footnotes placed in this frame cannot flow out to another frame. Partial footnotes cannot flow into this frame.
- **In or out** – Footnotes placed in this frame can flow out to another footnote frame. Partial footnotes can flow into this frame.
- **In only** – Partial footnotes can flow into this frame.
- **Out only** – Footnotes placed in this frame can flow out to another footnote frame.

The **Pages which populate footnotes for this frame** list enforces where footnotes will appear relative to the text they reference. Select from the following options:

- **From this page only** – Footnotes flow only from the current page.
- **From any page** – Footnotes can flow from any page.

<b>Adding footnotes to a document</b>	In this exercise, you will add one footnote with text from a message and another footnote with constant text.
---------------------------------------	---



#### **Exercise 9.11: Add a text message footnote**

1. In the Library, expand **Documents > Class Exercises > Pages** and drag the **18 Thank You Page** page object to the Edit Panel.

The page opens in Designer.

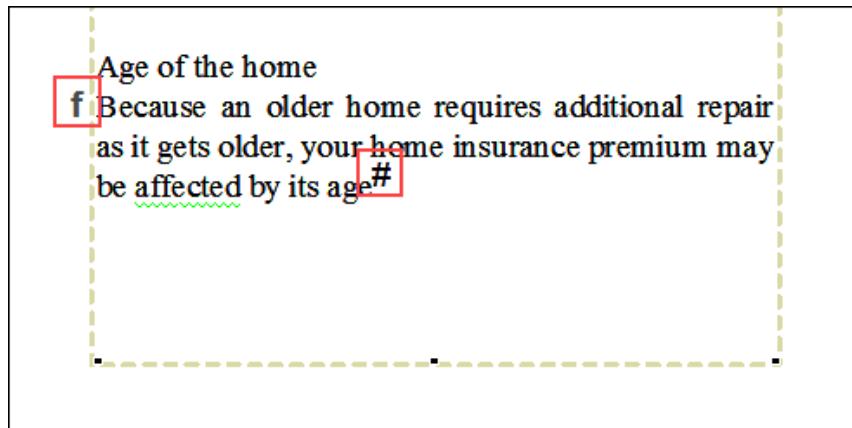
2. Scroll down to the last paragraph of the second column. At the end of the last sentence, place the cursor after the period.
3. Right-click and select **Paragraph > Add Footnote**.

The Footnote Properties dialog box opens.

4. In this dialog box, set the following options:
  - a. From the **Content** list, select **Text message**.
  - b. In the **Numbering method** list, make sure that **Automatic integer** is selected.
  - c. In the **Identifier location** list, make sure that **At current text point** is selected.
  - d. Select **New Home Discount (Class Exercises)** from the list of available messages in the database.
  - e. In the **When to include** list, make sure that **Always** is selected.
  - f. From the **Placement** list, select **On same page**.
5. Click **OK**.

Exstream places a gray 'f' identifier to the left of the text box and places a '#' symbol (or an extra space, depending on your system configuration settings) at the insertion point.

**Figure 9-7:**  
**Text message added to a footnote**



6. Click in a blank area on the page so that no object is selected.

7. On the **Drawing** toolbar, click .

The New Frame dialog box opens.

8. Select the **Footnotes** option.

9. Click **OK**.

The Insert Frame dialog box opens.

10. Click **OK**.

The frame appears on the page.

11. Right-click the new frame and select **Frame Properties**.

The Frame Properties dialog box opens.

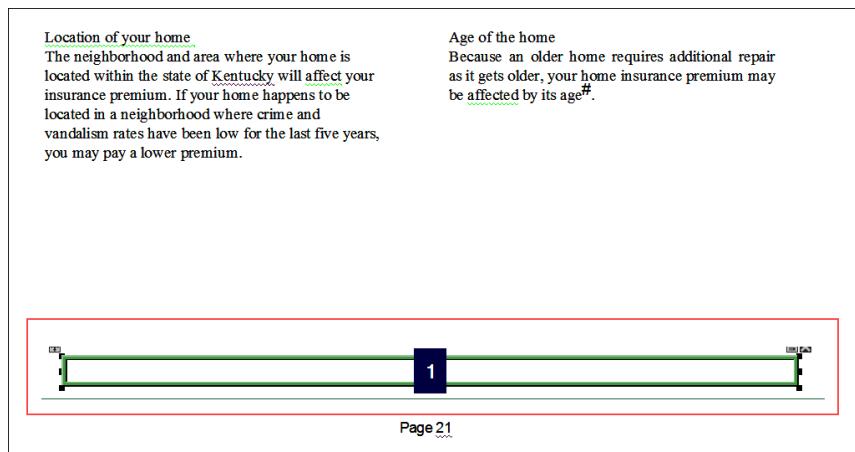
12. On the **Placement** tab, enter the following values:

Box	Enter
<b>Horizontal position</b>	0.7
<b>Vertical position</b>	9.6
<b>Width</b>	7.0
<b>Height</b>	0.3

13. Click **OK**.

The frame adjusts to the properties you specified.

**Figure 9-8:**  
**Footnote Frame**



14. Save and close Designer.



#### Exercise 9.12: Add a constant text footnote

1. In the Library, expand **Documents > Class Exercises > Pages** and drag the **06 Property Prov** page object to the Edit Panel.

The page opens in Designer.

2. Scroll down to the end of the bulleted list in the first column. At the end of the last bullet item, place your cursor after the word **fees**.
3. Right-click and select **Paragraph > Add Footnote**.

The Footnote Properties dialog box opens.

4. In this dialog box, set the following options:
  - In the **Content** list, make sure that **Constant Text** is selected.
  - In the **Identifier location** list, make sure that **At current text point** is selected.
  - In the blank text box, enter *Includes building permits*.
  - From the **Placement** list, select **On same page**.
5. Click **OK**.

Exstream places a purple f identifier to the left of the text box and places a '#' symbol at the insertion point.

6. Click in a blank area on the page so that no object is selected.
7. On the Drawing toolbar, click .

The New Frame dialog box opens.

8. Select the **Footnotes** option and click **OK**.

The Insert Frame dialog box opens.

9. Click **OK**.

The frame appears on the page.

10. Right-click the new frame and select **Frame Properties**.

The Frame Properties dialog box opens.

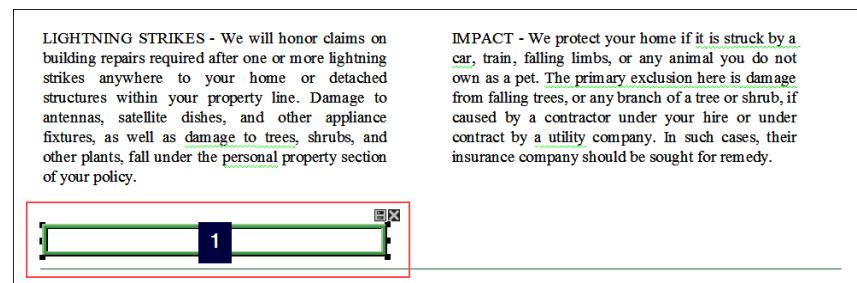
11. On the **Placement** tab, enter the following values:

Box	Enter
<b>Horizontal position</b>	0.525
<b>Vertical position</b>	9.6
<b>Width</b>	3.2
<b>Height</b>	0.3

12. Click **OK**.

The frame adjusts to the properties you specified.

**Figure 9-9:**  
**Frame for constant text footnote**



13. Save the page and close Designer.



#### **Exercise 9.13: Reference the objects**

1. Drag the following page objects to the **New Policy Document** document object under the **New Policy Holder Mailing** application object:
  - a. **06 Property Prov**
  - b. **07 Property Exlsns**
  - c. **18 Thank You Page**

The **07 Property Exlsns** page already contains a footnote.



### Exercise 9.14: Package the application and view the output

In Design Manager, package the file and run the engine to produce output and view the sample output in the Exstream Viewer.

1. Right-click the **New PolicyHolder Mailing** application object and select **Package**.

The Build Package dialog box opens.

2. To specify the output, complete the following steps:

- a. In the **Package file** text box, enter  
C:\Training\Introduction\Pub  
Files\NewPolicyHolderMailing.pub.

- b. In the **Package file** area, select the **Specify output** option.  
c. Click

The Select Output dialog box opens.

- d. Select **Exstream Viewer**.  
e. Click **OK**.

The Select Output dialog box closes.

3. Select the **Run Engine when complete** check box.

4. Click .

The Run the Engine dialog box opens.

5. Make sure that the **Package file** check box is selected.

The box adjacent to the Package file check box should automatically display the path that you entered in step 2.

6. Click **OK**.

The Run the Engine dialog box closes.

7. Click **OK**.

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

8. Click **Yes**.

The System Report dialog box opens. Scroll through the messages to review a summary of the engine run.

9. Click **OK**.

Footnotes appear on current pages 5, 6, and 13 in customer documents.

10. As you view the output, note the following:

- a. *Exstream sequentially numbered the footnotes correctly with no regard to the sequence in which they were created.*
- b. *The engine generated sequential numbers as footnote identifiers at the insertion points in the main text. The footnote numbers in the main text are automatically formatted as superscript (they are positioned above the line of associated text).*
- c. *The footnotes that had constant text content on page 6 took on the text formatting of the default style (Arial, 10 points). On page 13, the footnote with content that came from a text message had specific text formatting (in this case, Arial, 9 points).*
- d. *Exstream added to the table of contents and index with the addition of the new pages to the application.*

## Cross-references

Cross-references point where readers can find information that is outside of the current topic or logical flow of a document. Cross-referencing saves readers time, reduces the duplication of information, and helps streamline complex content. You can refer a reader to a single page or multiple pages either before and after a reference point. The engine takes the responsibility of updating cross-references and eliminates time-consuming manual page updates.

### Creating a cross-reference

To create a cross-reference:

In Design Manager	In Designer
Create cross-reference variables.	Associate each cross-reference target with a cross-reference variable.
Make the variable an array if pointing to multiple targets.	Specify the same variable if the same target appears on different pages.
Add the variables to the application in the Library.	Add these cross-reference variables to the flow of the text where you want page numbers to appear.
	Make sure that all of your cross-references are valid, or unexpected results might occur when you run the engine.

**Specifying a cross-reference target**

In Designer, you associate a cross-reference variable to one or more cross-reference targets. The target is a table or text that you point to in a cross-reference. There is no system limit to the number of cross-references that you can make to any target.

A purple 'C' identifies a cross-reference target and appears when the object is active in text edit mode. If the target appears on another page, specify the same variable. This will add an element to the variable (if created as an array). The engine will output all page numbers having the same cross-reference variable.

**Adding a cross-reference entry**

You add a cross-reference within the text wherever you want a target's page number(s) to appear in final output. The engine will replace the name of the variable with the page number of the target table. If the target appears on multiple pages, then the cross-reference variable needs to be an array. Each element in the array points to a different page number.



If you want the 's' in pages to appear only if there are multiple references, place a rule so that it appears only if the array has more than one element.

---

When you right-click a cross-reference variable in Designer and select **Variable Properties**, the **Variable Properties** dialog box opens. You can set the properties in this dialog box to fine-tune the way the engine will format the cross-reference variable in the output.

**Adding cross-references to a document**

In these exercises, you will create a simple cross-reference that points backward in the customer document.

**Exercise 9.15: Create a cross-reference variable**

1. In the Library, expand the **Documents > Class Exercises** folder and right-click the **Data Dictionary** heading.
2. Select **New Variable**.

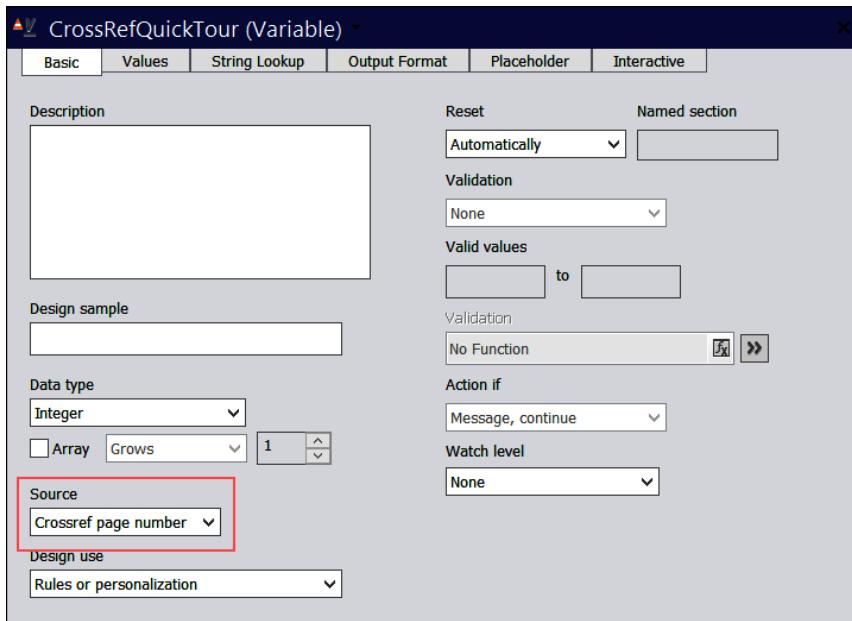
The New Variable dialog box opens.

3. In the **Name** text box, enter *CrossRefQuickTour*.
4. From the **Type** list, select **Integer**.
5. Click **Finish**.

The variable appears in the Property Panel.

6. On the **Basic** tab, from the **Source** list, select **Crossref page number**.

## 7. Save and close the Property Panel.



**Figure 9-10:**  
Cross-reference variable

If you include multiple targets and do not select the **Array** check box, the value of the cross-reference variable is the last target in the document you specify using this cross-reference variable.

With an array, you can supply multiple pages to a reference. Without an array, a cross-reference will be limited to one page.

**Exercise 9.16: Specify a cross-reference target**

In these steps, you identify the target for the variable. At run time, the engine will set the variable to the appropriate page number in each customer document.

To specify the cross-reference target, complete the following steps:

1. In the Library, drag the **02 Policy Intro Back** page object to the Edit Panel.

The page opens in Designer.

2. In the last paragraph on the page, highlight the word **QuickTour**.
3. Right-click and select **Paragraph > Add Cross Reference**.

The Cross Reference Properties dialog box opens.

4. Click .

The Select Variable dialog box opens.

5. In the list box, select the <CrossRefQuickTour> variable in the **Class Exercises** folder.

If the variable does not appear in the list box, click  and make sure that either **Integer** or **All Types** is selected.

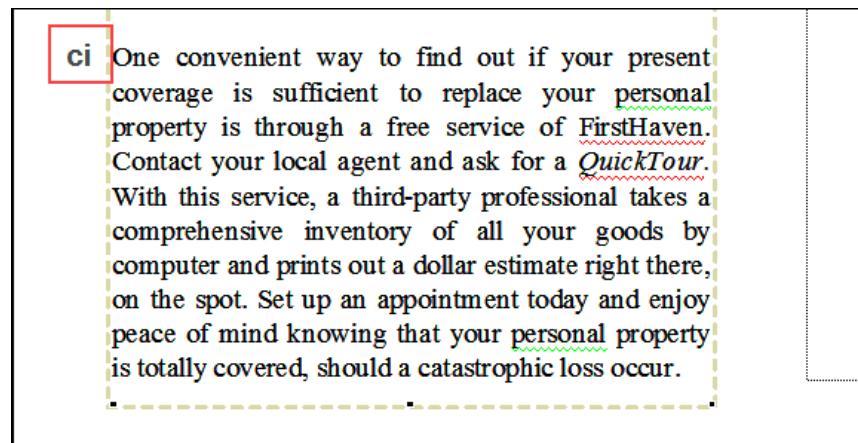
6. Click **OK**.

This variable now appears in the Cross Reference Properties dialog box.

7. Click **OK**.

Designer now adds a gray C (for cross-reference entry) next to the i (for index entry) in the space to the left of the text box, which is visible in text edit mode.

**Figure 9-11:**  
Cross-reference marker



8. Save and close the page.



#### Exercise 9.17: Add a cross-reference entry

1. In the Library, drag the **08 Personal Prov** page object to the Edit Panel.
- The page opens in Designer.
2. In the second column, go to the last sentence of the first paragraph (**COMPLETE LOSS OF HOME**).
  3. Place your cursor immediately after the word **page** and insert an additional space.
  4. Click  in the Standard toolbar and insert the <CrossRefQuickTour> variable.
  5. Save the page and close Designer.



### **Exercise 9.18: Package the application and view the output**

In Design Manager, package the file and run the engine to produce output and view the sample output in the Exstream Viewer.

1. Right-click the **New PolicyHolder Mailing** application object and select **Package**....

The Build Package dialog box opens.

2. To specify the output, complete the following steps:

- a. In the **Package file** text box, enter  
`C:\Training\Introduction\Pub Files\NewPolicyHolderMailing.pub`.

- b. In the **Package file** area, select the **Specify output** option.
  - c. Click .

The Select Output dialog box opens.

- d. Select **Exstream Viewer**.
  - e. Click **OK**.

The Select Output dialog box closes.

3. Select the **Run Engine when complete** check box.

4. Click .

The Run the Engine dialog box opens.

5. Make sure that the **Package file** check box is selected.

The box adjacent to the Package file check box should automatically display the path that you entered in step 2.

6. Click **OK**.

The Run the Engine dialog box closes.

7. Click **OK**.

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

8. Click **Yes**.

The System Report dialog box opens. Scroll through the messages to review a summary of the engine run.

9. Click **OK**.

10. As you view the output, note the following:

- a. The page to which you added a cross-reference variable (**08 Personal Prov**) appears as page 7 in the current output. If successful, the variable will output page 2 as the location of where the reader can go to find more information about an inventory service.
- b. When you look at the output on page 2, there are no visible changes to the QuickTour text that you set as the target for this cross-reference.



## 10. Assembling documents dynamically

### Objectives

After completing this module, you should be able to:

- Use document inclusion methods to build dynamic documents.
- Order documents in the application using document list variables.
- Add dynamic message objects to the application and create message-driven pages.
- Add marketing limits and postage breaks to the application.
- Create and use document assembly variables.

### Important terms

The following important terms are used in this module:

- **List variable** – the variable that determines which documents are to be sent to a particular customer.
- **Marketing limit** – a specification that the total number of marketing pages added to a document cannot exceed a maximum number.
- **Postage break** – a specification of the number of pages that can be added to an envelope without needing additional postage, controlled by number of pages or paper weight.
- **Variable-based assembly** – a method of assembly that uses an array variable to specify all the possible documents for your application.

### Assembling customer documents

When assembling documents, you must choose from various messages and other forms of content to provide to each customer. One method of doing this is to create applications with all possible messages and select which ones are needed by using section data or rules.

Another method is to specify an array variable containing all the possible documents for your application. To accomplish this, in the **Documents** tab of the application properties, select the variable and populate it with the documents you want to include as part of the initial customer processing.

You also need to decide how to select each document. This is done in the **Targeting** tab on the document properties.

**Using document inclusion methods**

In the properties of a document, in the **Document inclusion method** area of the **Targeting** tab, the following document inclusion methods are available:

- **Rule** – This is the default setting. If you select this option and the document has no rule, the document will always be included for every customer.
- **Named section** – If you select this option, you must enter the name of the section. The document is included when the document name is found in the data file.
- **Document - assembly variable, check rule** – If you select this option, the document is included only if the document is included in the array and the rule on the document is true.
- **Document - assembly variable, ignore rule** – If you select this option, the document is included only if the document is included in the array. Even if this option is selected, document rules are executed.
- **End of named section** – If you select this option, the document is included after the named section has been read from the data file. You must enter the name of the section.
- **XML Node** – If you select this option, the document is included after the named XML node in the data file has been read. You must enter the name of the XML node.

If you select either of the document assembly variable options, you must also click the **Documents** tab of the application and select the variable that the application is going to use to determine the order. Here, you can also choose the order in which the documents appear when processed.

If the application uses a variety of selection methods, non-section-based documents that do not use the array variable are selected first. Then the documents using the array variable (in the order contained in the array) are selected, then section-based documents, and then post section-data documents.

**Document list variables**

Use the **Documents** tab of the application properties to control which documents appear in the output and the order in which they are placed.

If you select either of the document assembly variable options as the method for selecting documents in the **Targeting** tab of a document's properties, you must specify in the application object properties which variable determines the documents to be included. Specify the variable on the **Documents** tab, in the **List of documents to send to customer** box.

In the **Document reordering variable** box, you can dynamically arrange the documents by customer. This box lets you control the order in which documents are delivered after composition. There are several things you should note about the variable:

- The variable must be an integer between one and the total number of documents, including section-based documents. The variable must be set before composition begins.
- If the variable is empty, you receive a warning.
- If the number of elements in the array is not equal to the number of documents, you receive a warning.
- If a value in the array is higher than the number of documents, you receive an error.
- Zero values are ignored, unless all values are set to zero. In this case, you receive a warning and no output is produced.
- If the same document number is used more than once, you receive a warning.
- If all documents are selected via the selection array variable, you can use the order of that array to control the output order.

#### Selecting dynamic document content

The document assembly process often requires you to select from various document paragraphs and sections for a specific customer. You can create messages for each paragraph (as you will do in this class) and include them in the document in the order that they are to be used. Each message should have a rule to determine whether to include the message. This works in most cases but, when the order of the messages changes based on the customer, it is difficult to create the rules on each message.

The **Message inclusion method** area on the **Targeting** tab of the document properties provides a way to accomplish this task more easily.

#### Using methods for including messages

In the **Message inclusion method** area, the following methods are available:

- **Specified, check rule** – If you select this option, messages are selected when the document is produced, based on the rules assigned to each message. This is the default setting if the message has no rule.
- **Variable driven, check rule** – If you select this option, messages are selected based on the content of the array variable in the order in which they are specified in the array. The rule for each message must be true for the message to be included.
- **Variable driven, ignore rule** – If you select this option, messages are selected based on the contents of the array variable in the order in which they are specified in the array. The rule for each method is ignored.

If you select the second or third option, you must then select the string array variable that contains the names of the document messages to be included. The messages will appear in the order specified in the array variable. A message name may appear more than once in the variable. The variable only applies to document messages. Campaign messages are not included.

## Assembling a document from messages

For the lab exercises in this chapter, you will be using files from within the Marketing folder in the Design Manager Library.



### **Exercise 10.1: Create a string variable**

You will create an array variable containing the names of the message that will be included in the document.

1. *In the Library, go to **Marketing > Class Exercises > Data Dictionary**.*
2. *Right-click **Data Dictionary** and select **New Variable**.*

The New Variable dialog box opens.

3. *In the **Name** box, enter **PrivacyMessages**.*
4. *Click **Finish**.*

The variable opens in the Property Panel.

5. *Select the **Array** check box.*

The adjacent list becomes available.

6. *From the list, select **Static**.*

You select **Static** because there are only 10 elements in the array and they never change because of data.

7. *In the **adjacent** box, enter **10**.*

The **Initial value** box is now enabled on the **Values** tab.

8. *On the **Basic** tab, in the **Source** list, make sure that **User value** is selected.*



You can enter a value in the **Initial value** box on the **Values** tab. Use the **Initial value** box if the value of the variable is always the same for all Exstream applications and all runs.

9. *On the **Values** tab, in the **Initial value** box, enter **Introduction**.*
10. *In the **Array** element box, enter **2**.*
11. *In the **Initial value** box, enter **Collection of Info**.*

12. Increment the array element and enter the appropriate value in the Initial value box for each element as shown below. Each value must be entered exactly as shown, or messages will not be placed on the page.

Array element	Initial value
1	Introduction
2	Collection of Info
3	Policies and Procedures
4	Sharing Within
5	Sharing Outside
6	Service Agents and Suppliers
7	Share with Financial
8	Other Circumstances
9	Former Customers
10	It's Your Choice

13. Save and close the variable object.



#### **Exercise 10.2: Specify the message inclusion method**

You will now create a new document which will be populated with the messages you referenced in the array above.

1. In the Library, go to **Marketing > Class Exercises > Documents**.
2. Right-click **Documents** and select **New Document**.

The New Document dialog box opens.

3. In the **Name** field, enter *Privacy Document*.
4. Click **Finish**.

The document opens in the Property Panel.

5. Click the **Targeting** tab.
6. In the **Message inclusion method** area, from the **Method** list, select **Variable driven, check rule**.
7. In the **Variable containing list of messages** box, click .
8. From the **Select Variable** dialog box, select **<PrivacyMessages>**.

You may need to filter by the **Marketing > Class Exercises** to see this variable.

9. Click **OK**.
10. Save and close the document object.



### **Exercise 10.3: Add message objects to the application**

To use the messages for output, they must be referenced within the application. You will also create references for the newly created **Privacy Document** and the data source for the customers.

1. In the Library, expand the **Pages and Messages** headings in the **Introduction** folder.
2. In the **Marketing > Class Exercises** folder, expand the **Documents** heading.
3. Create references, in the following order, for the **Privacy Page** and **Privacy Overflow Page** page objects to the **Privacy Document** object that you created above.
4. Move the following message objects from the **Introduction** folder into the **Privacy Document** object in the **Marketing > Class Exercises** folder.
  - a. **Collection of Info** message object
  - b. **Former Customers** message object
  - c. **Introduction** message object
  - d. **Its Your Choice** message object
  - e. **Other Circumstances** message object
  - f. **Policies and Procedures** message object
  - g. **Service Agents and Suppliers** message object
  - h. **Share with Financial** message object
  - i. **Sharing Outside** message object
  - j. **Sharing Within** message object
5. Open the **Privacy Document** document object in the Edit Panel.
6. Double-click the right column of the **Privacy Overflow Page** page object.
7. In the **Document Page Properties** dialog box, select **Message-Driven (placed at end or on backs)**.
8. Click **OK**.
9. Save and close the document object.
10. In the **Class Exercises** folder, right-click the **Applications** heading and select **New Application**.
11. Enter *New Customer Application* as the **Name**.
12. Click **Finish**.

13. In the **New Customer Application** application object, create a reference for the **Privacy Document** document object.
14. Open the **New Customer Application** application object in the Property Panel.
15. On the **Marketing** tab, make sure that the **Limit number of marketing pages sent to a customer** check box is cleared.
16. Save and close the application object.



You must save and close the application object or you will not get all of the pages for the Privacy Document since the Overflow Page is message-driven.

17. Expand the **Introduction > Data Files** heading in the **Library**.
18. Drag the **BankData** data file onto the **New Customer Application** object to create a reference.

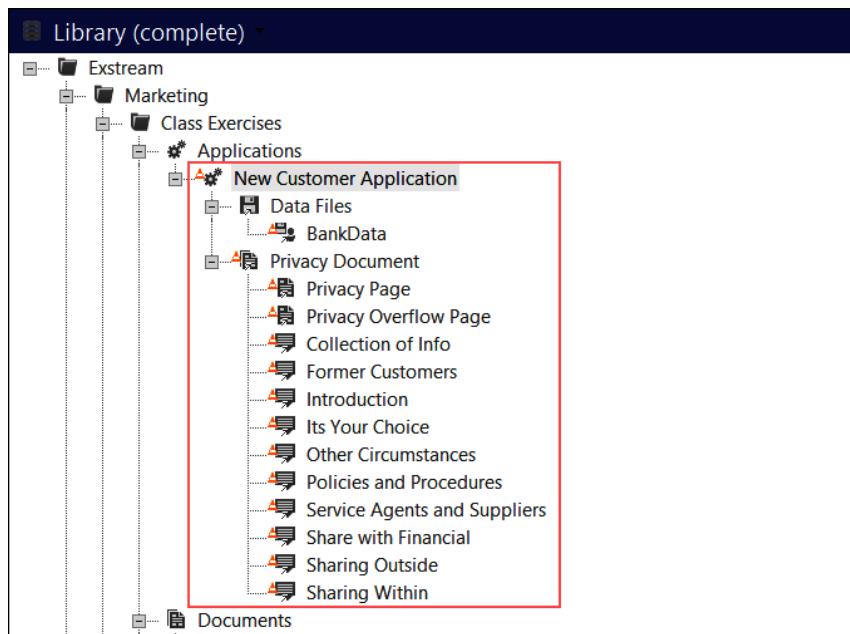


Figure 10-1:

Structure for New Customer Application object



#### **Exercise 10.4: Package the application and view the output**

In Design Manager, package the file and run the engine to produce output and view the sample output in the Exstream Viewer.

1. Right-click the **New Customer Application** object and select **Package**....

The Build Package dialog box opens.

2. To specify the output, complete the following steps:

- a. In the **Package file** text box, enter  
`C:\Training\Introduction\Pub Files\NewCustomerApplication.pub`.
  - b. In the **Package file** area, select the **Specify output** option.
  - c. Click .

The Select Output dialog box opens.

- d. Select **Exstream Viewer**.
  - e. Click **OK**.

The Select Output dialog box closes.

3. Select the **Run Engine when complete** check box.

4. Click .

The Run the Engine dialog box opens.

5. Make sure that the **Package file** check box is selected.

The box adjacent to the Package file check box should automatically display the path that you entered in step 2.

6. Click **OK**.

The Run the Engine dialog box closes.

7. Click **OK**.

The Build Production Package File dialog box opens and shows a packaging progress bar.

When the engine run is complete, you receive an informational message asking if you want to view the engine message file.

8. Click **Yes**.

The System Report dialog box opens. Scroll through the messages to review a summary of the engine run.

9. Click **OK**.

In the Exstream Viewer, view the output. Notice that the messages are displayed in the order that they are listed in the <PrivacyMessages> array variable.

**Privacy Statement for 4875113**

**Local National Bank**

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- ◆ Information about you from consumer reporting agencies (such as your credit history and creditworthiness). We use this information when, for example, we process applications, monitor and collect existing accounts, make "pre-approved" offers and as otherwise permitted by law.
- ◆ Information from market research companies (such as purchasing patterns). We use market research information, for example, to develop products we believe our customers will find most useful.

**Policies and Procedures**

LNB companies use advanced technology and information management techniques to implement security, audit and control programs designed to protect the confidentiality and security of the information we collect.

LNB limits employee access to customer information to those employees we believe have a legitimate business need for the information. We have adopted policies, procedures, employee orientation, training and education programs, and communication programs designed for the protection of customer information. It is the responsibility of each LNB company employee to comply with our Consumer Information Privacy Principles.

**We May Share Information Within the LNB Family of Companies To Improve Our Services To You**

LNB offers financial services to consumers through its family of affiliated companies that provide, for example, deposit, lending, investment advisory, brokerage, insurance, trust, and related products. By sharing information about you and your accounts, we are able to offer you the convenience of round-the-clock customer service, combined statements, simple application procedures for a variety of financial services, and special discounts or other benefits.

## Marketing limits and postage breaks

You can set limits on the amount of marketing (campaign) material to include in an application. You can also limit the marketing material included in an application by specifying that the number of pages in each document that is produced cannot exceed a maximum number; by specifying that the total number of marketing pages added to the document cannot exceed a maximum number; or by setting a weight limit on all pages.

### Designating message-driven pages

Marketing limits are only valid with applications containing message-driven pages. Pages are defined as message-driven in the Document Page Properties dialog box. These pages can be driven by campaigns containing either whitespace messages or content messages.

If a customer qualifies for more content messages than can be placed within the text boxes or tables, and if there is a page set to be message-driven, the extra content messages will be placed in the overflow frame on the message-driven page. The same is true for whitespace messages.

<b>Specifying marketing limits</b>	<p>Marketing limits are specified at the application level.</p> <p>The <b>Marketing</b> tab of the application object properties contains options that let you set limits on the amount of marketing material that can be included. You can limit the amount of marketing material included in the output in one or more of the following ways:</p> <ul style="list-style-type: none"><li>• Specify that the total number of pages included in each document cannot exceed a certain limit.</li><li>• Specify that the total number of marketing pages included in each document cannot exceed a certain limit.</li><li>• Specify that the weight of each document cannot exceed a certain limit.</li></ul> <p>To set marketing limits on an application, complete the following steps:</p> <ul style="list-style-type: none"><li>• Open the application object in the Property Panel.</li><li>• Click the <b>Marketing</b> tab.</li><li>• To specify whether required campaigns should ignore marketing limits, select one or more of the following options from the <b>When to add marketing</b> area:<ul style="list-style-type: none"><li>– To specify a maximum number of pages to include in a complete mailing, select the <b>Limit number of marketing pages sent to a customer</b> check box. The number of pages you specify includes business and marketing pages.</li><li>– To specify a maximum number of marketing pages to include in a complete mailing, select the <b>Do not add marketing pages if total pages exceeds limit</b> check box. The number of pages you specify does not include the total number of business pages.</li><li>– To specify a total weight limit for the complete mailing, select the <b>Do not add marketing pages if total weight exceeds limit</b> check box. You can enter a total weight limit in ounces or grams.</li><li>– To include campaigns whose page creation property is set to <b>Always</b> (campaign must be sent) no matter what other limits are set on the application, select the <b>Allow required campaigns to force marketing pages</b> check box.</li><li>– To force marketing pages to include required campaigns, regardless of marketing limits, clear the <b>Allow required campaigns to force marketing pages</b> check box.</li></ul></li></ul>
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**Controlling postage breaks**

Postage breaks give you control over the cost of postage for customer documents. In the properties of an application, in the **Postage breaks** area of the **Documents** tab, you can specify the number of pages that can be added to an envelope without needing additional postage. You can control postage breaks by number of pages or weight, and the weight units can be in either ounces or grams. You can set up to five postage breaks for each application.

To set postage breaks for an application, complete the following steps:

- Open an application object in the Property Panel.
- Click the **Documents** tab.
- From the **Control postage by** list, select one of the following options:
  - **Weight** – This option sets the postage breaks by weight. From the **Weight units** list, select **Ounces** (default) or **Grams**.
  - **Pages** – This option sets the postage breaks by number of pages.
  - **None** – This option does not set postage breaks. This is the default setting.
- If you selected **Weight**, use the following formula to calculate the total postage weight:

Paper Weight x Number of Sheets

+ Insert Weight

+ Carrier Envelope Weight

= Total Postage Weight

- In the Postage breaks boxes, enter the weight or number of pages for the postage breaks. The first postage break must be entered in the first box. If you want to specify additional postage breaks, enter the weight or number of pages in the remaining text boxes sequentially.

## Creating message-driven pages

In the exercises that follow, you will create a message-driven bank statement for the New Customer Application. You will first create an overflow page to support the variable length of the statement document.

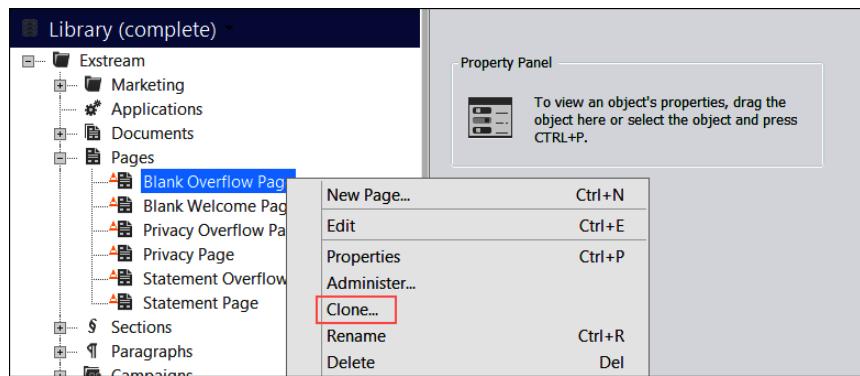


### **Exercise 10.5: Create the overflow page object**

1. In the Library, expand **Introduction > Pages**.

2. **Clone the *Blank Overflow page* to the *Marketing > Class Exercises* folder (right-click the page and select *Clone*).**

**Figure 10-3:**  
**Cloning the blank overflow page**



3. **In the *Class Exercises* folder, rename the page *Statement Overflow Page*.**
4. **Drag the *Statement Overflow Page* page object from the Library to the Edit Panel.**

The page opens in Designer.



#### **Exercise 10.6: Add an overflow frame to the page**

1. **In Designer, on the Drawing Objects toolbar, click .**

The New Frame dialog box opens.

2. **Select the *Content flow area* option.**
3. **Click *OK*.**

The Insert Frame dialog box opens.

4. **Select the *Messages can be placed into unused area at bottom of frame* check box.**



Selecting this option places messages under the table if the table does not completely fill the page.

5. **From the *Message flow across frames* list, select *In or Out*.**



This option ensures that text messages that do not completely fit in the frame continue on the next page.

6. Select the **Text messages** check box.
7. Make sure that **Any** is selected from the **Allowed message type** list.
8. Select the **Graphic Messages** check box.
9. From the **Primary template** list, select **3x3 Graphic Ad**.
10. From the **Alternative contents** list, select **Anything**.
11. Select the **Allow smaller messages** check box.



These options ensure any message that can fit in the frame is placed there, regardless of the type or template. Selecting these options means all available whitespace on the page will be filled.

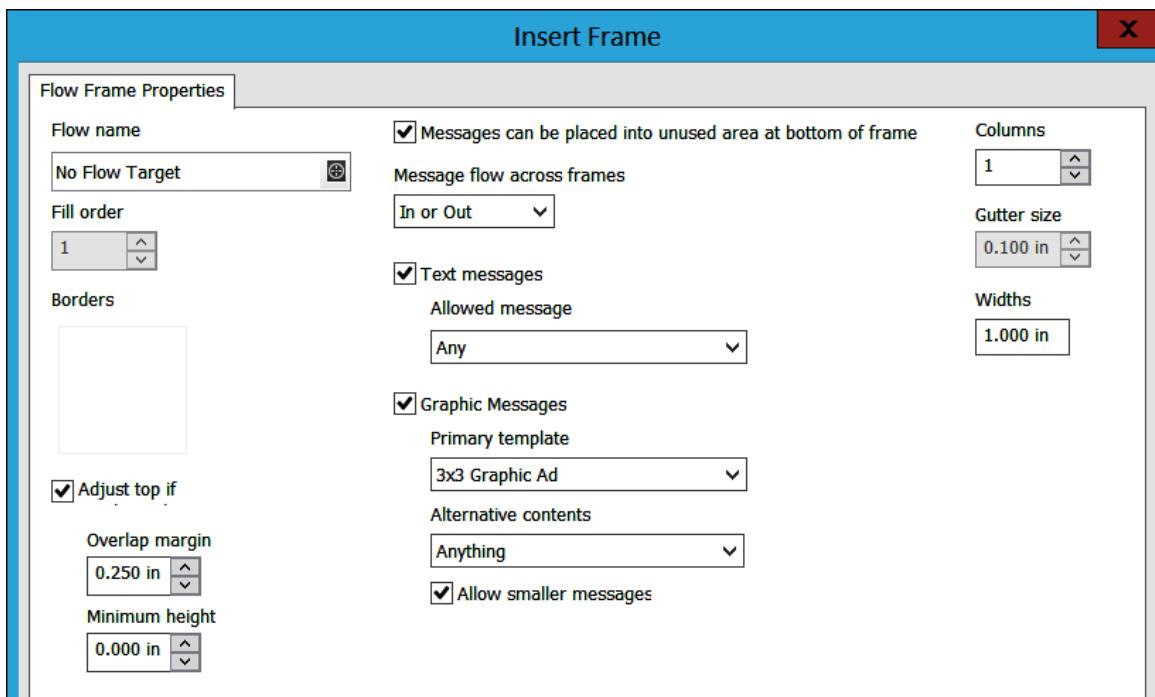


Figure 10-4: Overflow frame properties

12. Click **OK**.

The Insert Frame dialog box closes and the frame appears on the page.

13. Right-click the frame and select **Frame Properties**.

The Frame Properties dialog box opens.

14. On the **Placement** tab, enter the following values (Make sure that the **Lock proportions** check box is cleared):

Box	Enter
Horizontal position	0.125
Vertical position	2.25
Width	5
Height	8.5

15. Click **OK**.

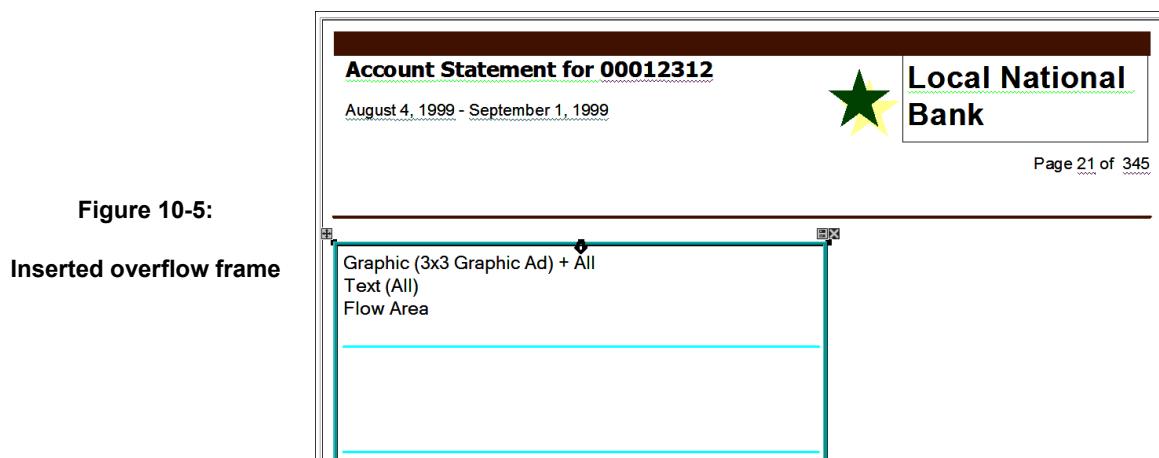


Figure 10-5:

Inserted overflow frame

16. Save the page object and leave it open for the next exercise.



#### Exercise 10.7: Add a second frame to the page

1. On the Drawing Objects toolbar, click .

The New Frame dialog box opens.

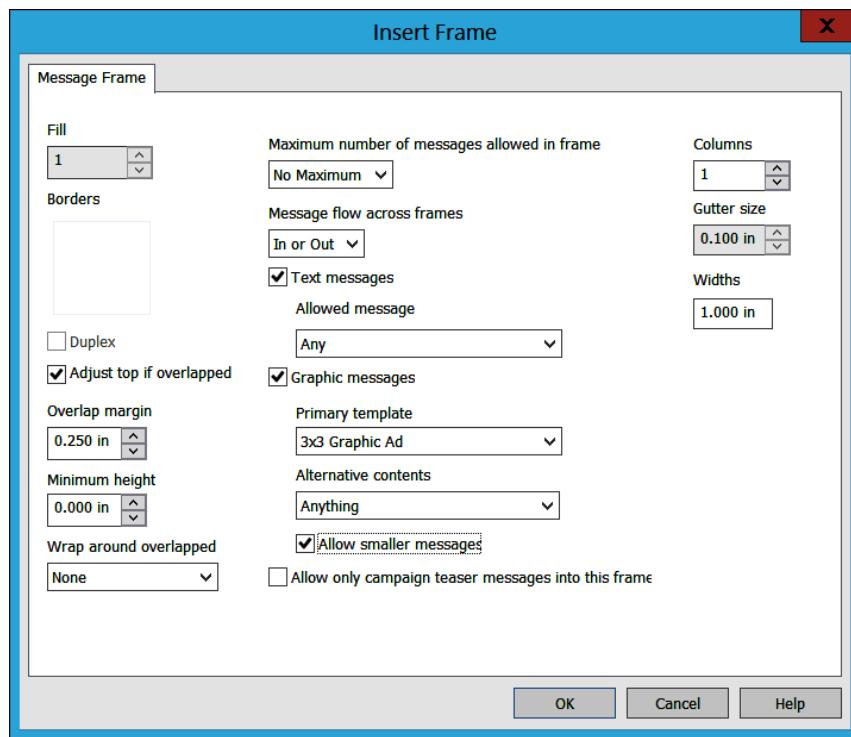
2. Select the **Messages** option.
3. Click **OK**.

The Insert Frame dialog box opens.

4. From the **Maximum number of messages allowed in frame** select **No Maximum**.
5. From the **Message flow across frames** list, select **In or Out**.
6. Select the **Text Messages** check box.
7. Make sure that **Any** is selected from the **Allowed message type** list.

8. Select the **Graphic Messages** check box.
9. From the **Primary template list**, select **3x3 Graphic Ad**.
10. From the **Alternative contents list**, select **Anything**.
11. Select the **Allow smaller messages** check box.

**Figure 10-6:**  
**Message frame properties**



12. Click **OK**.

The frame appears on the page.

13. Right-click the frame and select **Frame Properties**.

The Frame Properties dialog box opens.

14. Click the **Message Frame** tab.
15. In the **Fill order** box, enter 1.




---

Entering 1 ensures that messages will be placed in this frame before they are placed below the table.

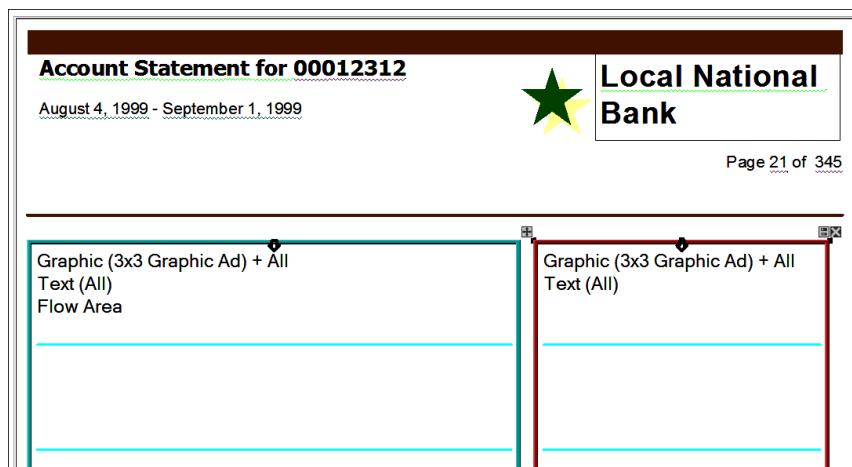
---

16. On the **Placement** tab, enter the following values (Make sure that the **Lock proportions** check box is cleared):

Box	Enter
Horizontal position	5.25
Vertical position	2.25
Width	3
Height	8.5

17. Click **OK**.

Overflow page with both frames inserted



18. Save and close the page object.



#### Exercise 10.8: Create the new document

Now that you have defined the overflow page for the statement, you need to create the statement document itself, containing the first page and the overflow page from the steps above.

1. In the Design Manager Library, expand **Marketing > Class Exercises > Documents**.
2. Create a new document and name it *Statement Document*.
3. Save and close the document object.
4. In the Library, expand **Introduction > Pages**.
5. Clone the **Statement Page** page object to the **Marketing > Class Exercises** folder and rename the page object to *Statement First Page*.

6. Add references for the following page objects, in the following order, to the **Statement Document** document object:
  - a. **Statement First Page** page object
  - b. **Statement Overflow Page** page object



#### **Exercise 10.9: Set the overflow properties for the first page**

1. In the Library, open the **Statement First Page** page object in the Property Panel.
2. Click the **Flow** tab.
3. From the **Destination of overflow from this page** list, select **Flow to specified page**.
4. In the **Page** box, click

The Select Page dialog box opens.

5. In the **Marketing > Class Exercises** folder, select the **Statement Overflow Page**.

This ensures that the specific page is used if there is more information than can fit on one page.

6. Click **OK**.

The Select Page dialog box closes.

7. Save and close the page object.
8. Open the **Statement Overflow Page** page object in the Property Panel.
9. On the **Flow** tab, from the **Destination of overflow from this page** list, select **Copy this page**.
10. Save and close the page object.



#### **Exercise 10.10: Specify that a page is message driven**

1. Open the **Statement Document** document object in the Edit Panel.
2. On the far right side of the Edit Panel, double-click the **Statement Overflow Page** page object.

The Document Page Properties dialog box opens.

3. From the **Position of page in document** list, select **Message-Driven (placed at end or on backs)**.

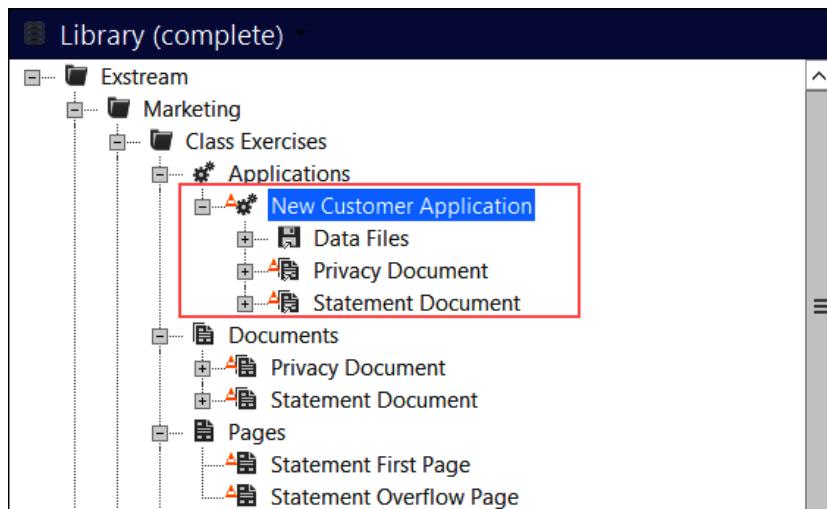
The total number of pages in the output is driven by the number of qualified messages rather than by the data amount.

4. Click **OK**.

The Document Page Properties dialog box closes.

5. Save and close the document object.
6. In **Marketing > Class Exercises**, drag the **Statement Document** document object to the **New Customer Application** application object to create a reference.

**Figure 10-8:**  
**New customer application object**



#### **Exercise 10.11: Package the application**

1. On the Standard toolbar, click .

The Build Package dialog box opens.

You can skip step 2 through step 5 if you have not changed the settings addressed in those steps since the last time you packaged.

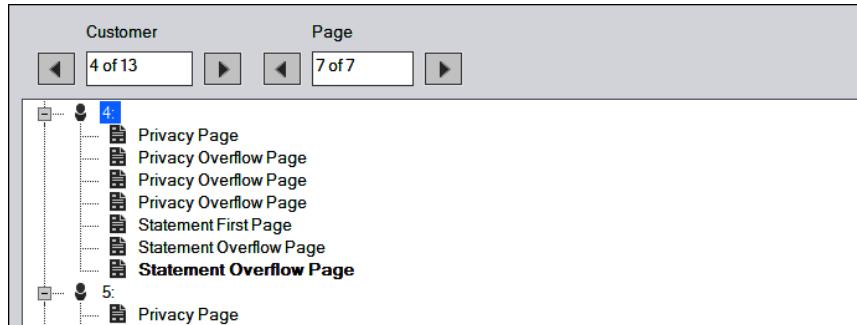
2. From the **Target** list, select **Application**.
3. In the **Application** field, make sure that **New Customer Application** is displayed.
4. In the **Package file** box, enter the following path:  
*C:\Training\Marketing\Pub  
Files\NewCustomerApplication.pub*
5. Select the **Specify Output** option and make sure that **Exstream  
Viewer** is displayed.
6. Click **OK**.

The application is packaged.

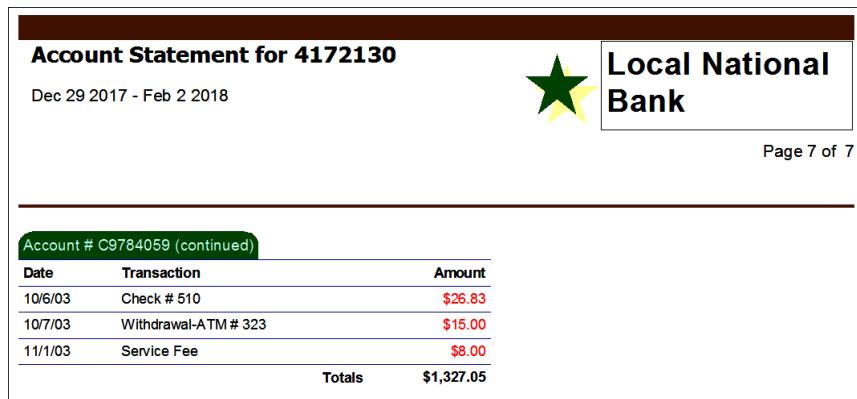
7. To view messages, click **Yes**.
8. To close the **System Report** dialog box, click **OK** or **Cancel**.

9. In the Exstream Viewer, view the output. Notice that the **Statement Overflow Page** is repeated as necessary to include all the transactions for the statement.

**Figure 10-9:**  
Multiple overflow pages used in customer output



**Figure 10-10:**  
Overflow page from statement document



## Variable-based document assembly

A common requirement for applications is the ability to provide specific documents for each customer by selecting them from a set of available documents. You could create applications with all possible documents and select which ones you need by using section data or rules. This method works well for most cases, but when the order of the documents changes based on the customer, it is difficult to create the necessary rules.

You can also specify an array variable containing all the possible documents for your application. The variable is selected on the **Documents** tab of the application properties. You must populate this variable with the documents you want to include as part of the initial customer processing.

You must specify how each document is to be selected. This is done on the **Targeting** tab of the document properties.

If you select the variable and the rule, or the variable only, you must also go to the **Documents** tab of the application properties and select the variable that the application will use to determine the order. Here, you can also choose the order in which the documents are to appear when processed.

If the application uses a mix of selection methods, non section-based documents not using the array variable are selected first. Then the documents using the array variable (in the order contained in the array) are selected, then section-based documents, and then post section data documents.

#### Dynamic content selection

In applications that use variable-based documents, another common requirement is a need to select from various document paragraphs and sections for a specific customer. You could create messages for each paragraph and include them in the document in the order that they are to be used. Each message has a rule to determine whether it is to be included. This works in most cases, but when the order of the messages changes based on the customer, it is difficult to create the rules on each message.

To more easily accomplish this task, you can use the **Method** list on the **Targeting** tab of the document properties. The **Method** list lets you specify that document messages are selected based on one of the following methods:

- **Rule** – Lets you control inclusion based on a rule. This is the default setting.
- **Named Section** – Lets you control inclusion based on the existence of a named section.
- **Document-assembly variable, check rule** – Lets you control inclusion based on the existence of the document in an array variable and a rule. If both conditions are not met, the document is not included. You must create an array variable containing the names of documents to be included.
- **Document-assembly variable, ignore rule** – Lets you control inclusion based on merely the existence of the document in an array variable. You must create an array variable containing the names of documents to be included.
- **End of named section** – Lets you control inclusion based on the existence of a named section. Inclusion occurs after the named section has been read from the data file.

If you select the second or third option, you must then select the string array variable that will contain the names of the document messages to be included.

The messages will appear in the order specified in the array variable. A message name can appear more than once in the variable. The variable applies only to document messages and not campaign messages.

When you select **Named section** or **End of named section**, the **Section document combination** list becomes active. The following options are available on the Section document combination list:

- **Always start a new document** – The document always starts a new document.
- **Start a new document first time only** – Start a new document only the first time the engine calls the section.
- **Combine with previous** – The document is always combined with the previous document.

Select the **Allow documents to be combined with this one** check box if you want to allow other documents to be placed after the document.

## Using variable-based document assembly

In this exercise, you will choose and sort an application's contents by using an array variable. There are four documents that will be a part of the application, although in a real-life situation, you will probably have more. This exercise will show the basics of how this feature is used.

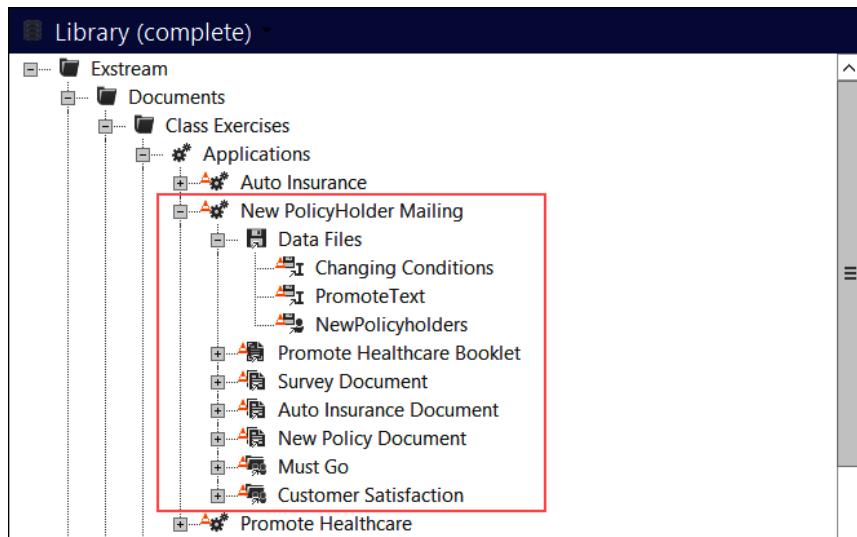


### **Exercise 10.12: Create references for the documents in the application**

1. *Expand the **Introduction > Documents > Class Exercises** folder.*
2. *From the **Class Exercises** folder, drag the following document objects to the **New Policyholder Mailing** application object (order is not important since it will be addressed by the dynamic document assembly variable).*
  - a. **Auto InsuranceDocument**
  - b. **SurveyDocument**
  - c. **Promote HealthcareBooklet**

3. From the **Introduction > Data Files** folder, drag the **Promote Text** data file object to the **New Policyholder Mailing** application object and place it under the **Changing Conditions** data file object.

**Figure 10-11:**  
**Expanded New Policyholder Mailing application**



Don't worry if some of your items are approved and others are **Work in Progress**. Effectivity and approval states are not necessary for this exercise.



#### **Exercise 10.13: Create the document assembly variable**

1. In the **Introduction** folder, right-click the **Data Dictionary** heading.
2. Select **New Variable**.

The New Variable dialog box opens.

3. In the **Name** box, enter *DocumentSelection*.
4. Select the **Array** check box.
5. Click **Finish**.

The new variable appears in the Property Panel.



#### **Exercise 10.14: Specify the variable properties**

1. Click the **Basic** tab and make sure of the following:
  - a. In the **Data type** list, **String** is selected.
  - b. The **Array** check box is selected.
  - c. In the **Source** list, **User value** is selected.
  - d. In the **Reset** list, **Automatically** is selected.

2. From the list to the right of the **Array** check box, select **Static**.
3. In the box to the right of the list, enter 3.
4. On the **Values** tab, make sure that the **Array** element box is set to '1'.
5. In the **Initial value** box, enter *New Policy Document*.

Make sure that your spelling and case are correct and match the document names. If you make a mistake, the output will not be as expected.

6. Select 2 in the **Array** element box using the arrow boxes.

Notice that the **Initial value** box is now clear.

7. In the **Initial value** box, enter *Promote Healthcare Booklet*.
8. Select 3 in the **Array** element box using the arrow boxes.
9. In the **Initial value** box, enter *Auto Insurance Document*.
10. Save and close the Property Panel.



The **Survey Document** is not included in this variable at this time.  
You will add it to the variable later.

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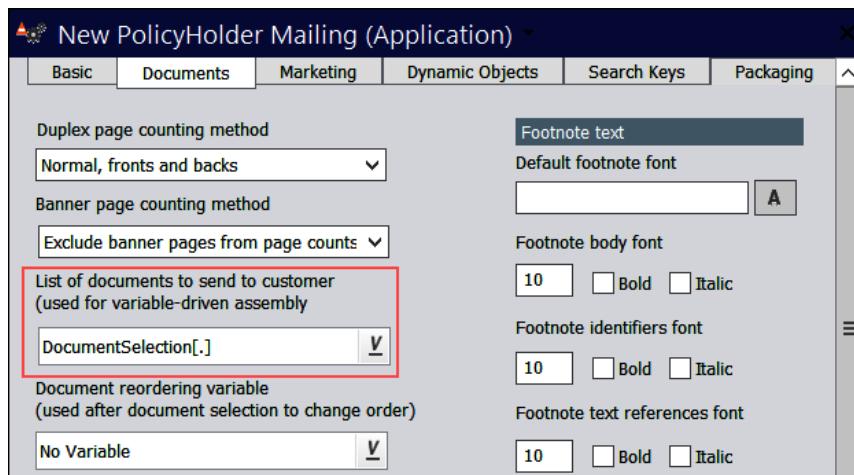
#### **Exercise 10.15: Specify the document selection variable**

1. Drag the **New Policyholder Mailing** application object to the Property Panel.
2. Click the **Documents** tab.
3. Click in the **List of documents to send to customer** box.

The Select Variable dialog box opens.

4. Select the **<DocumentSelection>** array variable you just created in the **Introduction** folder.

**Figure 10-12:**  
List of documents to send to customer



5. Save and close the Property Panel.



#### Exercise 10.16: Specify the document properties

##### Auto insurance document

Because FirstHaven does not offer its auto insurance in Florida, make sure that the information is not sent to those customers.

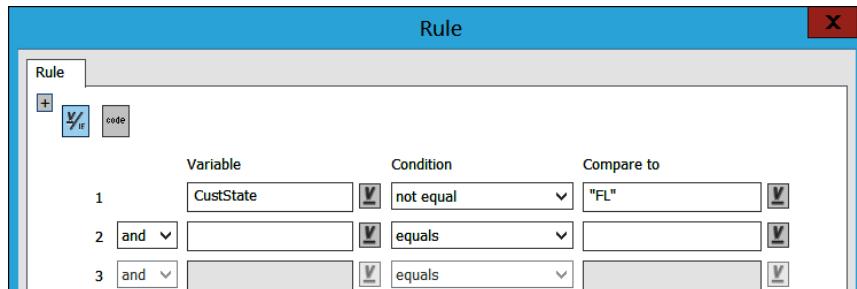
1. Drag the **Auto Insurance Document** document object to the Property Panel.
2. Click the **Targeting** tab.
3. Click in the **Rule** box.
4. Click .

The Rule dialog box opens.

5. Set up a rule for the following:
  - a. Variable is '**CustState**'.
  - b. Condition is **not equal**.
  - c. Compare to is "**FL**".

Note that the **quotation marks** are required for a direct string comparison.

**Figure 10-13:**  
**Customer state rule**



6. Make sure that the **Include** check box is selected.
7. Click **OK** to return to the Property Panel.
8. In the **Document inclusion method** area, from the **Method** list, select **Document-assembly variable, check rule**.



When you choose this option, the inclusion of this document is controlled by the variable and the rule. In other words, the document must pass through both the variable and the rule to be included in the final output. In this case, if the document is included in the variable, it will be used. However, if a customer lives in Florida, the rule will keep it from being included for just that customer.

9. Save and close the Property Panel.

#### Survey document

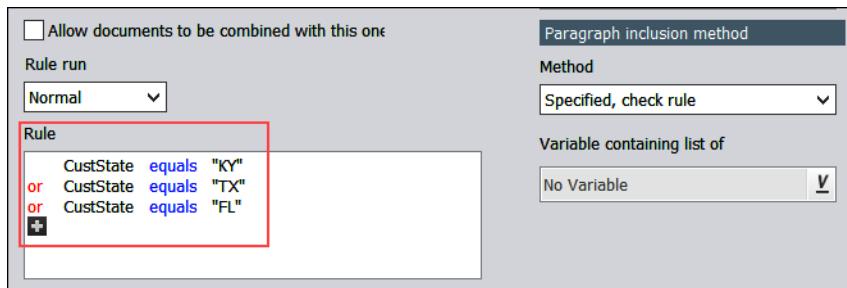
10. Drag the **SurveyDocument** document object to the Property Panel.
11. Click the **Targeting** tab.
12. Click in the **Rule** box.
13. Click .
14. The **Rule** dialog box opens.
15. Set up a rule with three conditions by completing the following steps:
  - a. In the **Variable** column, you will use the <CustState> variable for all three conditions.
  - b. The **Condition** will be **equals** for all three conditions.
  - c. In the **Compare To** column, enter "KY" for the first condition, "TX" for the second, and "FL" for the third (including the quotes).
  - d. From the **and/or** list, select **or** for all three conditions.
16. Make sure that the **Include** check box is selected.

With this rule, you want the document to be included for those customers in each of these three states.

17. Click **OK** to return to the *Property Panel*.
18. In the **Document inclusion method** area, from the **Method** list, select **Document-assembly variable, check rule**.

Figure 10-14:

**Survey rule**



19. Save and close the *Property Panel*.

#### New policy document

20. Drag the **New Policy Document** document object to the *Property Panel*.
21. Click the **Targeting** tab.
22. In the **Document inclusion method** area, from the **Method** list, select **Document-assembly variable, ignore rule**.

You want this document to appear for each customer in the data file, so a rule is not necessary here.

23. Save and close the *Property Panel*.

#### Promote healthcare booklet

24. Drag the **Promote Healthcare Booklet** document object to the *Property Panel*.
25. Click the **Targeting** tab.
26. In the **Document inclusion method** area, from the **Method** list, select **Document-assembly variable, ignore rule**.
27. Save and close the *Property Panel*.



#### Exercise 10.17: Package the application and viewing the output

1. On the Standard toolbar, click .

The Build Package dialog box opens.

2. Make sure that the **Application** is set to **Documents > Class Exercises > New Policyholder Mailing**.
3. Click **OK** to package the application and run the engine.

As you view the output, note the following:

- The first customer contains three documents: the **New Policyholder Document**, the **Promote Healthcare Booklet** and the **Auto Insurance Document**.
- The last customer, who lives in **Florida**, did not receive the **Auto Insurance Document**, but he did receive the **New Policyholder Document** and the **Promote Healthcare Booklet**.



#### **Exercise 10.18: Add an element to the array**

1. From the Library, in the **Introduction** folder, drag the **<DocumentSelection>** variable (**Data Dictionary**) to the Property Panel.
2. On the **Basic** tab, in the box next to the **Array** check box, change the number from **3** to **4**.
3. Click the **Values** tab.
4. In the **Array** element box, change the number to **4**.

The Value box clears.

5. In the **Initial value** text box, enter **Survey Document**.
6. Save and close the Property Panel.



#### **Exercise 10.19: Package the application and view the output**

1. Using On the Standard toolbar, click .

The Build Package dialog box opens.

2. Make sure that the **Application** is set to **New Policyholder Mailing**.
3. Click **OK** to package the application and run the engine.
4. As you view the output, note the following:
  - a. The **Survey Document** is now included for some customers. The second customer, who lives in Michigan, did not receive the **Survey Document**. This is because the rule instructed Exstream to include the document only for those customers in Kentucky, Texas, or Florida.
  - b. The last customer still did not receive the **Auto Insurance Document**; he did, however, receive the **Survey Document**.

