Adobe InDesign Cross-Media Overview

Most content repurposing efforts start with print layouts. You spend hours designing and formatting print pages, but when you're done, your content is essentially locked in a file format that doesn't translate well between media types—you can't open a page layout file directly in a Web page layout program, for example. To get content out, you must export as some intermediary file type or copy and paste between applications.

However, text pasted into Web layouts from print files often carries with it unnecessary formatting infor- mation, such as line breaks, and often doesn't support extended characters. These artifacts must be removed before you can begin working with the text. Likewise, images must be reworked, downsampled, and optimized for presentation on the Web.

In the end, reworking content leads to inefficient and linear workflows. Content isn't really shared—it's passed between applications in a serial fashion. Along with the content comes formatting and other infor- mation that must be removed or reworked before new, media-specific formatting is applied.

What if you could reliably, and efficiently share content earlier in your print and Web publishing workflows? If you could work more fluidly between applications, using single source files to deliver content to both print and online channels? If you could spend more of your time being creative and, at the same time, being more productive?

Creating flexible content with XML

You may have heard of XML (eXtensible Markup Language) in the context of the Web. As a print designer or production artist, you may be wondering how XML can benefit you.

What is XML?

XML is a method for tagging text in a document so that its components can be distinguished and reused in another computer application. You use tags to label information and control its structure. For example, to indicate that a particular sequence of words is a headline element in a text flow, you could label it with a tag that describes its contents: <headline> Wonderfully Different </headline>.

Unlike HTML, which is comprised of a fixed set of tags and describes only formatting instructions for the Web, XML is completely extensible. You can define industry- specific tags or vocabularies to ensure that information is interchangeable between computer systems. Two examples are NITF (News Industry Text Format) and NewsML (News Markup Language), which enable the sharing of syndicated news articles from competing wire services.

In addition, XML is an open standard developed by the World Wide Web Consortium (W3C). This means that XML is non-proprietary and can be used with a wide range of applications, such as authoring tools, content display engines, translation tools, and database applications.

About structured content

In addition to describing content, XML can be used to specify the structure of information. Structure refers to the sequence and hierarchical relationships of tagged items in a document. Similar to an outline with sections and subsections, structure provides groupings for items so that you know how items are related. For example, you can label a story so that one image goes with the main story, another image goes with the sidebar, and the photo credit applies to both the images. Structured content is easier for applications to control, customize, and personalize.
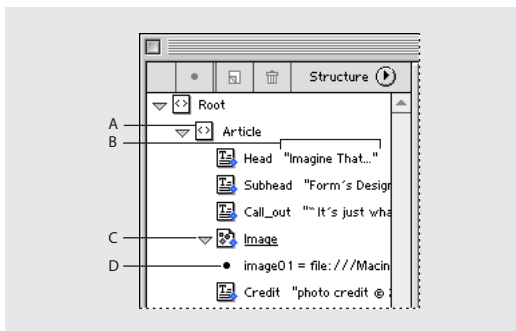
A. Element name B. Snippet C. Click triangles to expand or collapse elements D. Attribute

The building blocks of XML

XML is made from structural components and syntax.

Tags Tags are labels for page items (text and graphics) in your document. A tag describes the role of the item ("Title" or "Sidebar," for example) and its relationship to the other items. In InDesign, tags appear in the Tags palette. XML tags are extensible, not predefined. You can create your own custom set of tags.

Elements In Adobe® InDesign® , an element is an XML tag that appears in the Structure view window when you tag a page item. Child elements are subordinate to parent elements in the structure. Sibling elements appear on the same hierarchical level. In InDesign, elements appear in the Structure view window.

Attributes Strings that describe an element using tags or syntax understood in the XML language. Attributes contain a name and a value that can provide information about the element's content, such as when it was created and by whom. For example, when you tag a placed graphic in InDesign, an attribute indicates the location of the graphics file. Attributes appear under elements in the Structure view window. In InDesign, you use a convenient dialog box to enter the name and value of attributes.

What can XML do for me?

XML can improve your productivity in many ways.

Fluid interchange of content XML keeps content separate from the formatting you might apply to it for a specific medium, such as print or the Web. This separation makes content more flexible, and its interchange between applications and formats more fluid.

Flexible formatting In the same way that style sheets are used to dynamically format content for display on the Web, XML tags can be combined with style information to format content for a specific medium—Web, print, wireless, and so on.
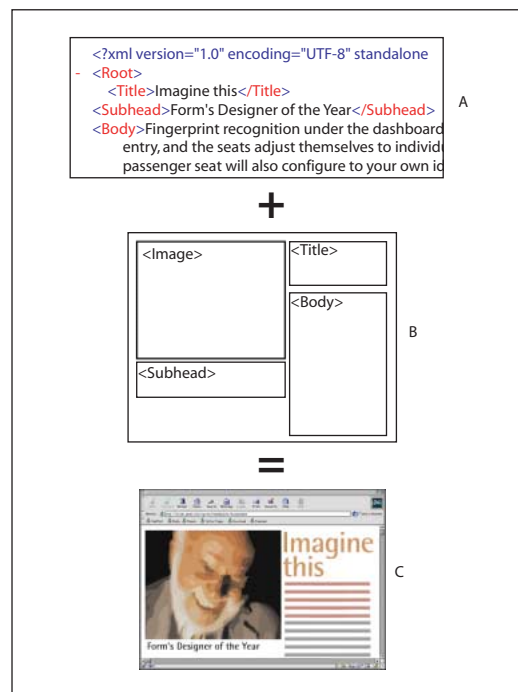
A. Raw XML file B. Template and style sheet C. Web page

The introduction of XML-aware layout and publishing tools, such as Adobe InDesign 2.0, Adobe GoLive® 6.0, and Adobe FrameMaker® 6.0, make it easier to repurpose content to multiple channels. You can use layout and publishing applications to supply the media-specific formatting necessary to automatically render and format XML content for delivery.

Sharing of assets You can also begin streamlining your cross-media workflows by sharing content earlier in the print and Web production process. By using XML files as a single content source, you can make changes in one place—the XML file—and then simultaneously update both the print and Web layouts. This more efficient workflow means designers and production staff spend less time updating and reworking content for specific channels and more time being creative.

External computer processing Because XML tags don't include formatting information, it's easy for computers to perform intelligent operations on the content. Programs or scripts can reorganize, transform, repurpose, and format content in a way that meets the specific requirements of a particular publishing channel.

Suppose you want to publish an end-of-year recipe annual that contains a subset of recipes found in a collection of monthly cooking magazines. The annual will be both a printed book and an online "premium" for subscribers who renew for the next three years. An XML parser could be used in conjunction with a query to gather, organize, and reformat recipes into a single publication. Compare that automated workflow with a traditional one, where you comb through old print layout files to locate recipe content, copy and paste it into new layouts, and then reformat it.

Freed of tedious manual tasks, you can concentrate more on creative tasks. And XML-based workflows increase your productivity by enabling you to manage your content more effectively. So how do you start taking advantage of the productivity gains XML offers?

XML in InDesign

Adobe InDesign provides native support for XML within your page layout application. It uses tools, processes, and metaphors you're already familiar with, plus a few new ones, to create, manage, and deliver XML.

Tags palette InDesign's Tags palette helps you organize and manage tag names used to label content. It also lets you create new tags for use with your document. Tags can be loaded into the Tags palette from existing XML files or other InDesign documents. This helps ensure consistent tag names are used to structure new or legacy documents.

The Tags palette displays a list of all available tags.

Structure view window The Structure view window provides an alternative view into your InDesign document. This view reveals the structure, or hierar-chical relationship, of tagged content. For example, you might have a spread that contains all of the elements for a magazine article—title, subhead, body, picture, caption, and table. If all of these elements have been structured, then you can use Structure view to look at their internal relationships rather than how they've been formatted or used on the page.
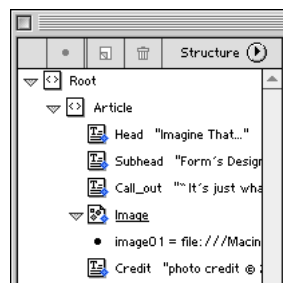
Structure view displays the hierarchical relationship of tagged content.

You can browse this hierarchy or even rearrange it by dragging elements to different positions in Structure view. Changing the hierarchy doesn't affect the position of frames in your layout. However, a change in hierarchy may reorder text within a frame, and it affects the structure of exported XML files.

Additionally, Structure view shows at a glance which elements have been placed on the page and which have not (a blue dot on a Structure view icon indicates the element has been placed). It can display text snippets for each element—opening phrases that help you identify what something is and where it's located in your document. Structure view also allows makes it possible to show, hide, and browse the attributes imported with different XML content. For example, every graphic includes an attribute that specifies the location of the file. You can also add attributes to XML content easily.

Imported XML documents automatically appear in the Structure view window, and the associated XML tags appear in the Tags palette.

With Structure view and the Tags palette, InDesign introduces a design-friendly, approachable way of working with XML files—one that lets designers take advantage of the benefits of structure without giving up the fluid interactivity they need to design pages

Tagging content in InDesign

To create XML, you tag, or label, content. Once you've set up your tags, either by creating them with the Tags palette, loading them from another InDesign document, or importing them from an existing XML file, you can begin tagging content within your page layout. Content imported from other layout applications, such as QuarkXPress or Adobe PageMaker®, can be tagged once it's been converted to InDesign's own file format.

By taking advantage of your existing design efforts, InDesign makes XML creation easy. For example, if you use paragraph styles to format your content, then InDesign can automatically map them to corresponding XML tags.

InDesign offers three additional ways to tag content:

- Drag-and-drop a tag from the Tags palette to a text frame or a graphics frame.
- Select or direct-select a text frame or graphics frame, and then click corresponding tag names in the Tags palette.
- Select or direct-select a text frame or graphics frame, drag the frame to the Structure view window, and then select a tag name from the menu that appears.

Once the content is tagged, use Structure view to monitor the structure you're creating or to rearrange the hierarchy of elements as necessary.

Exporting XML from InDesign

Once you've tagged all your content and arranged the structure of your document, you can export an XML file. To learn more about working with XML in InDesign, go to http://www.adobe.com/products/indesign/crossmedia.html.

Publishing XML

Now that you've successfully separated the structure and formatting information from the content in your InDesign document, how do you use the XML file in your print and Web publishing efforts?
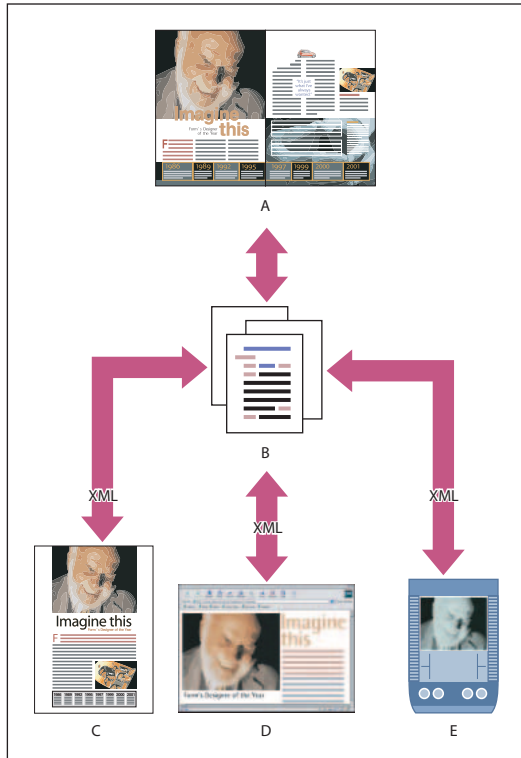
A. InDesign layout B. XML file C. Alternate InDesign layout D. Web page E. Handheld device

XML can be used in conjunction with a variety of XML-aware software tools to prepare the content for publication in different venues. For example, Adobe GoLive 6.0 recognizes XML files as a data source and can combine elements from those files with templates you've created to dynamically generate fully designed Web pages. Alternatively, you can use XML as content sources for print publications by importing XML content directly into InDesign.

Importing XML into an InDesign document

InDesign's XML import capabilities are flexible and highly interactive. In fact, it's as easy to design with XML files as it is with any other text or graphics file. You simply import an XML file into an InDesign document using the File > Import XML command and then start dragging and dropping elements onto a page to create your layout. On import, you can choose whether to append or replace existing XML content. Alternatively, you can import only the tags from an XML file to add structure to a new or existing document.

Imported XML files contain no text formatting information because XML separates form and content. That's why elements will use default text and graphics characteristics when you drag and drop them on the page. However, you can easily style text elements by mapping XML tags to paragraph styles you've specified before you start laying out your pages. (You can also map paragraph styles to XML tags to immediately add structure to styled documents.) In addition, graphics do not retain cropping information, paths, masks, or similar adjustments on import, but you can easily adjust the InDesign graphics frame containing the image to produce the exact results you want.

Publishing XML using structured templates in InDesign

The XML capabilities in InDesign 2.0 support a more production-oriented, template-based workflow, as well as the interactive drag-and-drop design approach described in the previous section. The goal for a template-based workflow is to turn out many good-looking pages as rapidly as possible using XML content. The key is to be rigorous about setting up and applying tag names and structuring your document so that it consistently matches the tag names and values used in your InDesign templates. In addition, paragraph styles can be mapped to XML tags, allowing InDesign to automatically style XML files on import.

Here's how a structured template-based design approach works with XML content: The first step is to establish a common tagging structure, whether that's based on an industry standard format, such as NITF (Newspaper Industry Text Format), or one you've devised for your workgroup. This structure can be saved in an XML file or an InDesign file and loaded into InDesign at any time.

You can lay out text and graphic placeholders on an InDesign page and apply tags to the placeholder frames from the Tags palette. This creates an "intelligent," structured template. When you import an XML file that uses those same tag names into the template, InDesign recognizes the tags and automatically flows the XML content into frames with corresponding tag names in the order that they appear, instantly generating the layouts you need. If you've mapped tags to paragraph styles in advance, InDesign will automatically format the text as it flows in.

Newspapers, magazines, and other high-speed publishing environments can take advantage of these XML capabilities to streamline content production for print and other mediums. What's more, the XML capabilities in InDesign are based on open standards and are highly extensible—just like every other part of InDesign—so it's straightforward to integrate InDesign into XML-based publishing systems to maximize productivity.

To learn more about working with XML in InDesign, go to http://www.adobe.com/products/indesign/crossmedia.html.

Publishing XML to the Web using Adobe GoLive

Similar to the process of creating structured templates in InDesign, smart templates can be created using Dynamic Content features in Adobe GoLive 6.0. Frames can be linked to the tag names in an XML file and the content will automatically flow in, assuming the style information associated with the frames and dynamically creating HTML Web pages. GoLive's Dynamic Content features can be used in conjunction with a series of XML files and ASP or JSP technologies (server-side technologies for dynamically creating and customizing web pages) to build and serve up Web pages on-the-fly.
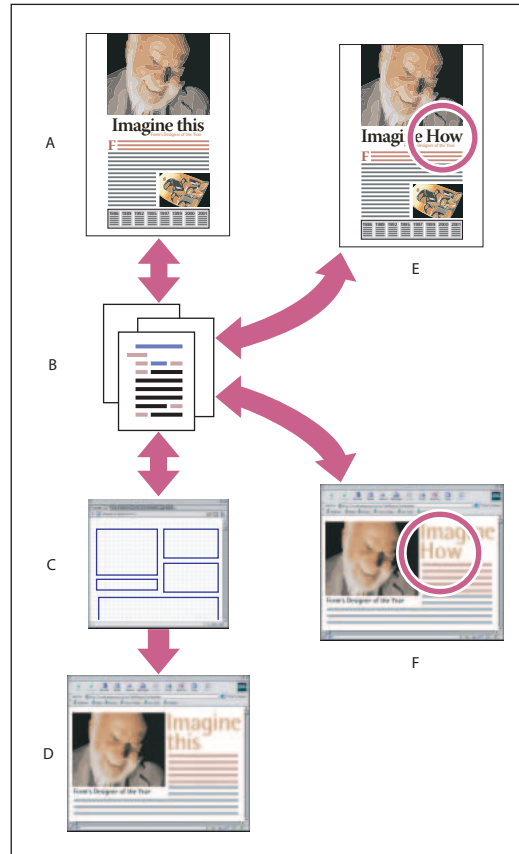
A. InDesign layout B. XML file C. GoLive template D. Web page E. Alternate InDesign layout F. Dynamic Web page

For more information on using GoLive to publish XML content to the Web, see the GoLive documentation.