



White Paper

REPURPOSING CONTENT ACROSS MULTIPLE MEDIUMS

Table of Contents

Introduction 3
Unified Message..... 3
The Technical Challenge - Content Transformation 4
Presentation Neutral Content..... 4
Conclusion 5





Introduction

The modern business communicates in a vast number of ways with its customers, partners, stockholders, and the public at large. From television, internet, radio, and printed advertising, to maintaining a web presence, to shareholder reports and back-channel communications with partners and distributors, the form of communication varies widely, and the breadth of options for delivery in today's world of on-demand electronic media is staggering. Through all of this, the ability to deliver a consistent, coherent message to the right audience becomes increasingly difficult, yet never has it been so important to the success of the business. The obvious solution, to centralize the message, independent of the media and channel, is significantly more difficult than it may first seem. This paper examines the issues involved in providing such a centralized source, and attempts to offer solutions for a typical business.

Unified Message

Sharing content across multiple mediums presents unique challenges at every step of the process. From the very beginning, the message to be delivered must be coherent, and designed with an eye towards communication which spans the many forms of presentation and delivery to be used. This means the core of any cross-media strategy must be a well-crafted message of substance, which can be reasonably projected into a variety of media. Once a core message is determined, it can then be presented in a variety of ways into each desired medium, taking advantage of the unique presentation and delivery abilities of each, in turn.

The ability to tailor content for a specific medium will vary with the medium, and the technology available to support it. Television and radio advertising, for example, will likely require more resources - and of a more specialized nature - than web or wireless content. Most communication mediums, however, have some degree of automation available for use. Adobe Flash/Shockwave presentations can be data-driven, with content streamed in via programmatic APIs. Web and wireless data can be dynamically compiled and presented on the fly, with near real-time response. Even print media can be driven programmatically, through software such as Quark or Adobe InDesign, which support XML interfaces and programmatic manipulation.

Still, just because content can be shared, doesn't always mean it should be. Video content can be delivered over the web, or to wireless mobile devices, but television quality sound and video resolution require high bandwidth, and will leave many web users, and even more wireless users, waiting to complete a download, ruining the experience.

The Technical Challenge - Content Transformation

The greatest hurdle to overcome in cross-media content delivery is the ability to repurpose content from format to format, while retaining a high quality presentation. Content formatted for the web will often use layouts poorly suited to print media, and graphic quality will vary substantially. Wireless mobile content must be mindful of bandwidth considerations that many other channels can comfortably ignore.

Separating the content itself from its presentation is the first step to reusing content across multiple media channels. Some content tools make this difficult, as they require a user to store the presentation along with the content. A modern, enterprise-class Content Repository should support the storage of structured content, with the flexibility of deferring presentation to the delivery platform's content templates. Asset oriented content systems, like Refresh Software SR2 Component Content Management Solution, do this intrinsically, treating content as structured data, while putting the control of that structure in the hands of the user.

With content stored in structured, presentation-neutral form, the separate delivery implementations for each medium can apply presentation through templating, delivering a consistent message to all channels, because it comes from a single source while simultaneously tailoring the message to a format and presentation appropriate to the medium of the channel. In this way, transforming content from one medium to another never needs to happen; all content is transformed only from a neutral format, to a specific one.

With the rise of XML, and related technologies such as XSLT and CSS, this sort of transformation can take place programmatically, in real-time, and without massive investments in customized frameworks. Structured content can be wrapped in XML, transmitted to the delivery application for a given channel, transformed via XSLT into a form appropriate for consumption in that medium, and finally shipped to the requesting end-user. Even more empowering, is the ability to present access to the content as a Web Service, where XML is the lingua franca of integration. Content publishing and distribution systems can retrieve content from a centralized, presentation neutral repository via Web Services, obtain an XML payload of the content, transform it with XSLT into a presentable format for the target medium, and distribute to users. And as new mediums emerge, publishing can be routed to those mediums, as well, typically without impact to the repository or its ability to manage, archive, and retrieve the content.

Presentation Neutral Content

Removing the presentation from the content can be a difficult thing. The way in which content is consumed can affect the message it delivers. To



truly achieve presentation-neutral content storage, a system will need to support fine-grained information structure, as well as provide a capacity for tracking metadata at multiple levels, which has the potential to affect presentation in multiple mediums.

A flexible approach would likely include mechanisms for breaking up content into subsections that can be easily re-assembled on the fly. Intrinsic relationships within the content would be extracted and modeled, for example, tying a valuable graphical resource with a specific subsection of the content, to guarantee that those mediums capable of displaying the image correlate it's location with the appropriate part of the data being delivered. Neutral content would also contain a broad array of metadata, for use by delivery systems, not only in re-assembling the content into a complete form, but for appropriate display treatment. Visual and auditory cues about presented information would be assigned on the basis of relevant facets of the total content, perhaps even presenting views with different emphasis to different users.

With all the complexity involved in separating content from presentation, it may seem like more trouble than its worth. However, modern Content Management Systems with a vision for the future are already anticipating these needs, and reacting with features that make generating, tracking, transforming, and delivering neutral content easier than ever before. With mechanisms like SR2's embedded child functionality, where composite fields within a master asset can be created, with intrinsic relationships modeled implicitly, neutral content can be stored and managed easily. With Web Services APIs for content retrieval, editing, and manipulation, delivery applications can be built for practically every medium available, as well as those yet undreamed of. And with ubiquitous content services deployed at the heart of enterprise-class IT infrastructures, the question will soon change, from "how do we reuse content across channels?", to "what other channels can we publish to?"

Conclusion

Repurposing content for use in multiple mediums is a non-trivial task, but one with great benefits to the organization that can take advantage of the capacity to deliver a truly coherent message in real time, through all channels. Modern asset-oriented Content Management Systems, such as SR2, must provide the features to make this happen, and the enterprises who take full advantage of those capabilities will not only succeed in today's global marketplace, but be well poised for the emerging channels of tomorrow.

