



Papers

Beyond digital asset management — Unlocking value where interactions and content intersect

Brian Meek

brings over two decades of high-technology engineering, sales and marketing experience to his role as Director of Product Marketing at Interwoven. He joined Interwoven with the acquisition of MediaBin, Inc., where he was central to the definition of MediaBin, a market-leading Digital Asset Management solution that enables organizations to more effectively maintain, control and distribute brand-correct marketing materials and other rich media content. In 2006, he was awarded a US patent covering the unique image data rendition management capabilities implemented within the MediaBin product line.

Keywords: *DAM, enterprise software, web content management, automated publishing systems, XML, multichannel*

Abstract DAM systems provide a foundational component of enterprise software solutions aimed at managing and delivering effective customer-facing communications across a broadening array of communication channels. This paper identifies “Web Content Management” software as the other key foundational element of multichannel “Automated Publishing Systems” that are now evolving from conventional DAM implementations in order to drive customer acquisition and build customer loyalty.

Journal of Digital Asset Management (2007) 3, 60–64. doi:10.1057/palgrave.dam.3650069

The underlying business factors that are motivating more and more companies to invest in DAM systems stem from the sheer speed of modern markets — the unrelenting competitive pressures on businesses to rapidly deliver rich and consistently branded messages across a broadening array of communication channels.

The core functions of DAM systems and the disciplines they promote certainly enhance an organization’s ability to rapidly produce and deliver customer-facing communications — collect and organize all of the rich media content used to promote your brands, products and services into a central web-accessible location so that all authorized stakeholders can quickly and easily draw from a common palette of pre-approved brand assets. The ROI for this fundamental role of a DAM system is clear; such a resource demonstrably accelerates time-to-market and fosters brand consistency while raising worker productivity and reducing costs.

What next? While traditional DAM implementations neatly support creative professionals in their roles of producing and

distributing marketing collateral, the real benefits occur when the content is ultimately consumed by the intended audience: a prospective or existing customer. How do we further accelerate the process of delivering optimal customer-facing content in a targeted fashion, to the right audience, at the right time, through the right communication channel? This bigger question nags at those who choose to implement DAM because improvements in these capabilities will most directly support the strategic goals of any business: to acquire new customers, increase brand loyalty and fuel revenue growth.

AUTOMATED PUBLISHING

Business leaders, whether they are aware of it or not, are in need of a broad content management strategy, with systems that unify and, wherever practical, automate all of the disparate processes aimed at creating and publishing customer-facing content. How can we assemble such an “Automated Publishing System” that allows a company and their brands to “speak with one

Brian Meek
3304 O’Neill Court
Soquel, CA 95073, USA
Tel: +1 (831) 476-4760
Email: Brian@Meek.com

voice” across all channels of customer communication?

The concept of such a system is described in general terms within a White Paper published by GISTICS in 2006 entitled “*Digital Supply Chain Strategies for Enterprise Content*”. The following diagram from GISTICS’ White Paper (Figure 1) shows how DAM is but one necessary component of a broader automated publishing system.

Today, such comprehensive automated publishing systems are still quite uncommon. Where similar systems have been implemented, they rarely support the multiple communication channels depicted on the right side of GISTICS’ diagram. Beyond the technical challenges, the reason for this is simple — those who concern themselves with the mechanics of assembling marketing collateral (or web pages) are usually not the same people who have global management responsibility for *all* customer-facing content. The result is that a thin horizontal slice of the beautiful functionality outlined by GISTICS tends to get implemented (or outsourced) by a small team responsible for only one channel of communication. In many companies, these “slices” or “silos” of content management and automated publishing capabilities exist in numerous departments with little or no visibility between them.

A recent report published by Forrester Research¹ confirms this in observing that “many enterprises implement content management technologies in a manner that only allows for one channel — such as the web or print channel — to publish or deliver content”.

It takes an insightful management team to recognize that not only are there great strategic, top-line benefits and economies of scale to be had by unifying all processes aimed at delivering customer-facing content, but also that a failure to take a unified approach in this area risks presenting a disjointed and potentially negative experience to increasingly demanding (and increasingly vocal) customers.

So where do we find functioning “automated publishing systems” of this sort, however limited in scope they may be?

Automated print publishing systems are rarely found within companies outside of the printing business. Marketing services firms and print service providers have implemented such systems for their corporate clients, and these systems are becoming increasingly sophisticated in their ability to execute personalized direct mail campaigns and other Print-on-Demand applications.

On the other hand, most companies today *have* invested in web content management (WCM) systems in order to more effectively control the growing number of web properties now deemed mission-critical to their business.

THE INTERNET EFFECT — WHERE CONTENT MANAGEMENT HAS EVOLVED TO BE MISSION-CRITICAL AND STRATEGIC

In the mid-1990s and through much of the past decade, many marketers saw the emerging World Wide Web and the internet as “yet-another-channel” for marketing communications.

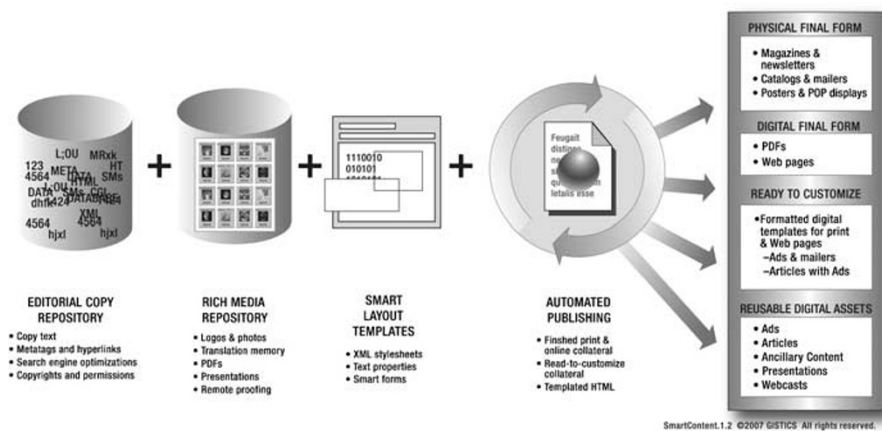


Figure 1: Dam is one component of a broader automated publishing system

The earliest corporate websites were considered optional and often described as “brochure-ware” because of the way content developed for traditional printed marketing collateral was converted into HTML and posted to the company web server... As the web gained popularity and company websites became more visible, IT departments purchased “Web Content Management” or “WCM” software as a tactical response to supporting the escalating demands of marketing executives who were just learning to react to (and ultimately exploit) this delightfully disruptive new technology.

Today, the web has evolved from “yet-another-channel” for marketing communications into what is now the foremost representation of companies, their products and their brands. Customers rarely conduct business or make any significant purchase decision without first visiting all likely vendors’ websites and researching the opinions of other consumers online.

This new level of competition in cyberspace has elevated the importance of delivering a more interactive, relevant and overall-compelling customer experience online. It has also brought the most technically savvy marketers, their colleagues in IT and their interactive agencies to the decision table where brand marketing strategies are defined.

At the same time, the role of WCM software has evolved and broadened from that of a tactical tool used for managing a single communications channel, into what is now becoming the center of all customer-facing content and communications. In effect, WCM is rapidly becoming the strategic foundation for the customer-facing communications aspects of modern Brand Management.

Many attributes of modern web publishing make WCM software a suitable foundation for automated multichannel publishing systems. For one thing, the web is perhaps the most complex and challenging of all marketing communication channels: the interactive design; the necessary frequency of updates; the need to deliver targeted content to specific segments of users (and even to specific individuals); the need to maintain consistently branded websites across multiple divisions and in

multiple languages, not to mention the ever increasing use of time-based rich media, including video content and audio podcasts. These complex requirements of publishing to the web have fueled the evolution of WCM software to handle complexities not common to other customer-facing communications channels.

It is also worth noting that the quantity and timely quality of information, gleaned through web analytics concerning the origin and sequenced actions of website visitors, can not only help marketers to determine how to build better websites, but also be useful in determining when and where to employ other means of customer communications, such as personalized direct mail correspondence or the placement of advertising in the most effective publications and regions.

The key aspect of WCM that supports GISTICS’ model of multichannel automated publishing systems is found in addressing the need to enable nontechnical business users, or subject-matter experts, to author textual content and “editorial copy”, independently of how that copy will ultimately be presented. In most WCM systems, such copy is authored using a common editor, such as Microsoft Word, or is keyed into a web form. Following (or during) an appropriate approval process, the textual copy is tagged with identifying metadata and stored in a reusable, format-independent XML repository before it is ultimately rendered through “smart layout templates” into consistently and correctly formatted HTML web pages.

This fundamental separation of content and the content authoring process from the complexities of how the content will ultimately be formatted and presented in publication is fundamental to successful WCM implementations, and in no other area has this technical discipline become more highly evolved.

THE MULTICHANNEL CHALLENGES OF AUTOMATED PUBLISHING SYSTEMS

Historically, creative professionals concerned with the creation of high-quality printed materials have spoken a slightly different language than their web-focused peers.

While the former routinely work with page layouts containing CMYK images that are hundreds of megabytes in size, the latter deal almost exclusively with sRGB or indexed color images measured in pixels... But creative talent easily spans mediums, and a great deal of cross-training has occurred in recent years as marketers have realized that it is no longer acceptable to treat the web as a channel unto itself. Integrated, multichannel campaigns have become the norm as companies look for ways to further reduce cycle time and achieve competitive advantage.

While the textual content that is thoughtfully authored, tagged and stored as reusable chunks of XML with WCM systems can be easily shared across publishing mediums, image content destined for multichannel publication requires more attention with respect to how color and resolution affects output quality. This is where the media transformation services now available in certain high-end DAM systems become an essential ingredient of multichannel automated publishing systems. Images must now be created with attention to best practices in color management, and produced with sufficient clarity of detail to meet the highest anticipated output resolution requirements.

Since most WCM systems were designed and deployed to manage content destined only for web browsers, the low resolution images, graphics and animations common to websites are often created only to meet predefined website conventions. As a result, many WCM systems are very limited with respect to what are seen as traditional DAM capabilities.

AN INTERWOVEN EXAMPLE

As of early 2007, Interwoven, Inc. finds itself in a unique position as a content management software company that offers market-leading products in both DAM and WCM categories. While Interwoven's WCM product, Interwoven® TeamSite® and their DAM product, Interwoven MediaBin®, can be and frequently are implemented independently of each other, the manner in which a standard TeamSite implementation is able to leverage web services to reference and utilize rich

To provide a foundational infrastructure for automated publishing systems and to support the broad needs of a business and its users effectively, an enterprise DAM system should provide the following essential attributes:

EXTENSIBILITY

While a DAM system should generally meet your key requirements "out-of-the-box," needs inevitably evolve over time. To provide DAM services to automated publishing systems and other applications, comprehensive and well documented APIs are essential. A Services Oriented Architecture (SOA) should be in place to provide higher-level Web Services that will enable rapid the integration of numerous "composite applications" with core DAM services and content.

SCALABILITY

a DAM system must be able to "scale up" to handle periods of peak load, where thousands of assets are being transformed and delivered to thousands of users. It should also be able to "scale out" where multiple servers are needed within distant geographies, allowing users to define business rules to determine how assets are replicated or cross-referenced between servers.

ASSET TRANSFORMATION SERVICES

Image and video content is typically edited and stored in one form, then transformed into a rendition of the original according to immediate output requirements. For example, a high-resolution Adobe Photoshop asset may need to be transformed into a 300 pixel-wide JPEG image for a Web page, and a 600dpi CMYK EPS file for a printed brochure. The system should also be able to restrict which ways different groups can access different assets – some may only be allowed to download low-resolution renditions, but not the original asset.

METADATA FLEXIBILITY

The capture of relevant and consistent asset metadata, or data about your digital assets, is a critical success factor for an enterprise DAM system ("Full-text search" isn't particularly useful when searching for an image). Your DAM system should allow for administrators to quickly and easily add or remove new metadata categories at any time; changing your mind, or accommodating a new requirement, should never mean starting over. The system should also allow for access controls on individual metadata fields so that sensitive data about an asset may be maintained, but not made visible to certain groups who may still need access to the asset itself.

FLEXIBILITY IN USER MANAGEMENT

The most efficient and reliable approach is for a DAM system to provide login authentication and access authorization based on a user's existing network login ID and group affiliations. Most companies have an existing LDAP directory or Microsoft Active Directory where user accounts are centrally managed. The ability to support multiple types of user directories simultaneously can sometimes be necessary when dealing with multiple user populations (employees and business partners, for example).

AUTOMATED IMPORT/EXPORT FUNCTIONS

While many DAM systems are primarily used interactively, batch processing via "Hot Folders" and scheduled processes for exporting thousands of product images, in multiple formats, to online and printed catalog systems can be hugely beneficial in terms of speed-to-market and accuracy.

REPORTING FLEXIBILITY

The way a DAM system is actually used within a given organization represents valuable information, from seeing who has accessed a particular asset and in what form, to summary reports regarding overall usage over time.

DAMPrimerSidebar.1.0 ©2007 GISTICS, All rights reserved

media assets maintained and managed within a MediaBin server provides the best packaged example of how DAM systems should be integrated into WCM and multichannel automated publishing systems.

In the Interwoven model, textual copy pertaining to any subject is stored within TeamSite as an XML data record, which in turn references one or more related media assets maintained within MediaBin. For example, an XML data record in TeamSite, which contains copy describing a product in various ways, also references a product image and a product logo within the MediaBin DAM system. The product image reference in this case would typically point to an original, high-resolution photograph (in native Adobe Photoshop or TIFF format), while the logo reference would likely point to a native Adobe Illustrator or vector EPS file.

When this XML data record is ultimately rendered through a smart “presentation template” to form a web page, TeamSite requests renditions of the product image and logo from MediaBin according to the formatting and pixel dimensions defined within the presentation template. Should the presentation template that defines product web pages be modified such that a new product image size is needed, or were a new presentation template to be defined that optimizes products to be displayed to web visitors using certain mobile devices, TeamSite will call upon MediaBin to generate the thousands of new image renditions automatically. Likewise, should an original product image within MediaBin be materially revised, a TeamSite workflow can be dynamically invoked to automatically update all out-of-date renditions across potentially hundreds of websites.

When it becomes necessary to generate print-ready documents from content managed within these systems, an approach similar to that described above is employed to generate PDF

documents with properly formatted image elements to meet quality guidelines established through best practices in digital color management.

TAKE A PHASED APPROACH...

Implementing a comprehensive, multichannel automated publishing system for your business is a process best viewed as a journey (which in all likelihood will encompass many discreet and pressing projects along the way). Keep the end goal in mind with each phase and you will get there while “claiming victory early and often.” Do not be surprised if the organizational hurdles in the way of taking this new approach turn out to be every bit as formidable as the technical ones.

Remember that the motivation for implementing this new level of content publishing capability is firmly rooted in the market dynamics of today that are forcing businesses to pay much more attention to how they are viewed by their customers. Never before have prospective customers and existing customers found it so easy to communicate with each other and discuss their alternatives...

This new market dynamic puts a solid emphasis on proactively planning your customer's experience to deliver the right message, at the right time, through the right medium; to unlock value wherever interactions and content intersect. By investing in the right content management and delivery systems today, your company can ultimately achieve new levels of marketing efficiency, brand consistency and speed-to-market, while harnessing the full range of established and emerging communications channels to reach new prospects and build customer loyalty.

Reference

- 1 McNabb, K. (2006) *Use Persuasive Content to Improve the Customer Experience*. Forrester Research, Inc. Cambridge, MA, USA, December 7.