

# An Integrated Infrastructure for Content Services

*The Sun ONE Content Services Platform  
& the Interwoven Content Platform*

*Sebastian Holst  
March 30, 2003*

## **Abstract**

This paper presents the case for proactively developing a broad content strategy and architecture built upon a “content-capable” infrastructure. Optimizing operational efficiency, leveraging existing technology investments and investing in emerging business opportunities are among the many, often competing, demands on today’s businesses. The teaming of the Sun ONE Content Services Platform with the Interwoven Content Platform presents an example that illustrates the benefits of an integrated architecture and advanced content management services.

# Why an Infrastructure Approach?

---

## Content Volume, Diversity, and Complexity

Today's businesses are faced with an exponential growth in business content. Many companies have deployed enterprise content management systems to control, leverage, and reduce the cost of managing and delivering business critical content. The problem of managing enterprise content however, is too cumbersome for point-application solutions to solve alone. Businesses need to develop a comprehensive content strategy and architecture that is built upon a content-capable infrastructure.

The increase in the volume of content is only part of the problem. Content has become increasingly richer and more complex.

- Content is comprised of multiple data types sourced from disparate repositories and databases.
- The use of rich media content is growing, which adds new requirements in management functionality, bandwidth and storage.
- Businesses are learning the benefits (and difficulties) of more sophisticated use of metadata, which compounds the complexity of content.

Content in the enterprise includes a wide variety of formats, including structured database records, and unstructured text, graphics, audio, video and streaming media. There are a growing number of content application services, including web content management, document management, digital asset management, knowledge management, enterprise search and categorization, collaboration, and syndication that focus on managing either specific content types, or specific aspects of the enterprise content management problem. Many medium to large sized companies now have many of these content services in place, but while these provide important benefits, in most cases their real value is only realized when the content is integrated with larger enterprise data systems, and when a business has implemented disciplined, yet flexible, business process management.

The good news is that more business content is being managed; the bad news is the growing complexity of integrating and managing all of the systems that manage the content.

---

## Content Accessibility & Integration

Most enterprise content is tightly integrated with one or more business applications (although that is not to say it is integrated with all appropriate business applications). Content plays a critical role in business processes ranging from customer relationship management (CRM), supply chain management (SCM), enterprise resource planning (ERP), business intelligence (BI), and other enterprise applications. In order for these processes to provide value, they must be able to incorporate the right data, in the right process, at the right time. Content often comes from diverse repositories across the enterprise and even between enterprises that have business-to-business relationships. Data exists in structured databases or may exist as unstructured data in numerous content repositories – from the desktop to back-up tapes. Furthermore, many companies already have one or more enterprise systems, and most

companies need a strategy for extending the value of, and not replacing, those systems. Yet, there also needs to be a strategy that allows for a smooth migration to new systems when there is a need for technology change.

Not only is content complexity on the rise, but the integration required to make a content solution provide value for the enterprise has become a daunting challenge. Companies need a strategy that simplifies content accessibility and helps to manage this content complexity throughout the content lifecycle.

---

### Content Services Infrastructure

The rise in content complexity means that businesses need to follow an infrastructure approach that enables content services throughout the enterprise. It means that IT managers need to deploy an architecture that ties content and content-based applications together in powerful yet flexible ways. The need to share and integrate content is broad based, and not limited to particular vertical or departmental applications. Therefore it doesn't make sense to solve the problem only through individual integration efforts – a strategy that is based on an infrastructure approach is the only way to meet this challenge head on.

Today, this means deploying a stack built on a network-computing infrastructure foundation. It also means an architecture that can support legacy applications, but is designed to optimize the use of web services for both content and application integration.

---

### Sun ONE Content Services Platform

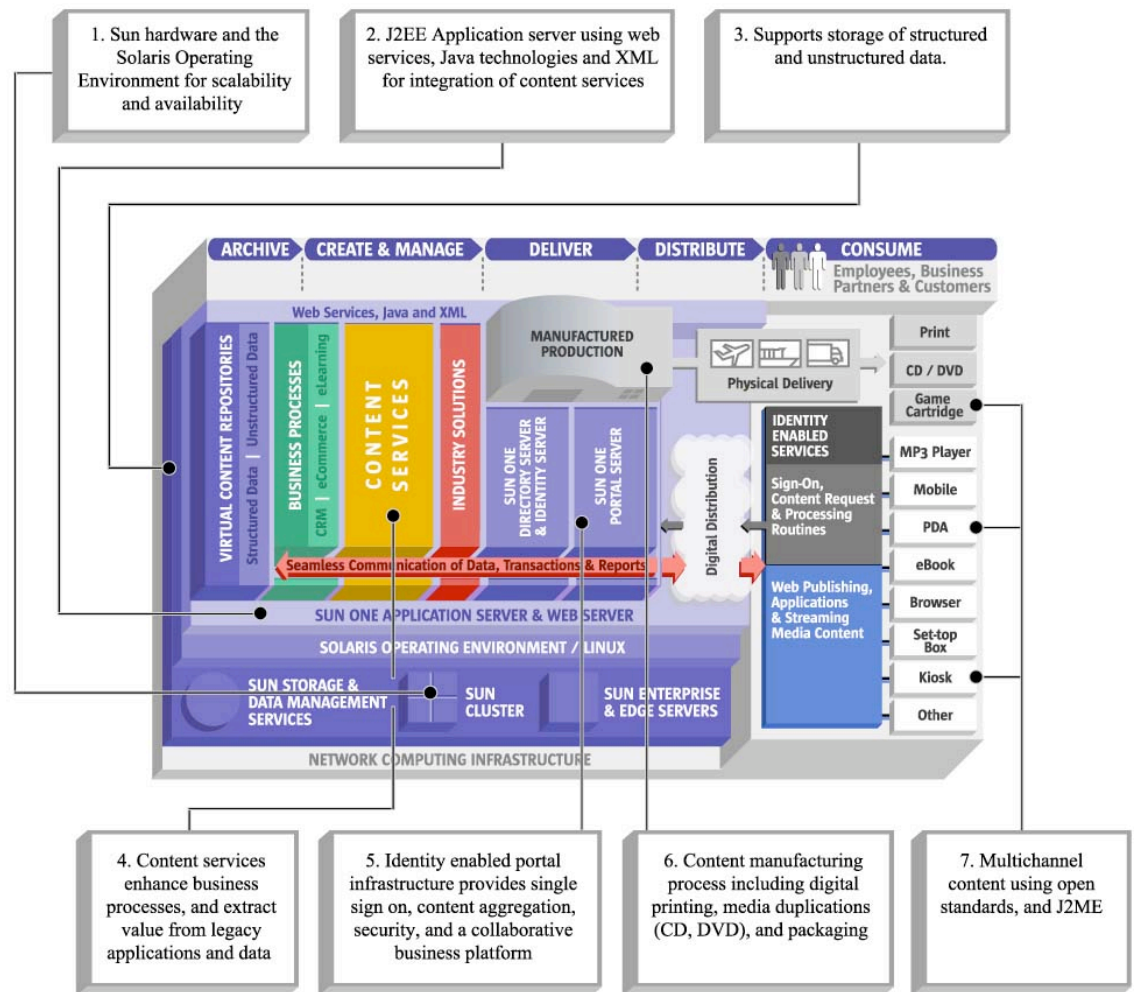
The Sun Open Net Environment (Sun ONE) Content Services platform in Figure 1<sup>1</sup>, is an example of what we mean by an integrated infrastructure for content services. The figure illustrates the way business content and processes fit into infrastructure stacks both vertically and horizontally. This requirement for an integrated content services approach cuts across various industries such as financial, manufacturing, retail, healthcare, government, media and entertainment, and others.

Figure 1 is designed to show the range of solutions that Sun provides, from servers, storage and operating system, to application server, identity management, and portal technologies. On top of this network computing infrastructure Sun partner technology can be integrated into this modular architecture. This illustration also suggests how one could incorporate other component technologies into an integrated infrastructure. Note that if you think of an infrastructure in this way, light is shed on the relationship and scope of the components, which is very useful given the extensive functional overlap between many of the functional categories. It is important to understand the functions and features of the various components, so as to better able to make your own choices to match your business requirements, and to be able to substitute components with minimal effort, and cost.

---

<sup>1</sup> Diagram courtesy of Sun Microsystems, Inc.

## An Integrated Infrastructure for Content Services



### One Architecture, Multiple Choices

Paradoxically, the one-to-many relationship between an architecture and the suppliers that populate that architecture is both the root of the value proposition, and often the cause of anxiety for businesses that must assimilate and build out that architecture. This anxiety often results in avoidance strategies that rely unnecessarily upon service-laden “one-stop” solutions at the high-end or simpler, more proprietary solutions at the low-end.

A compelling characteristic of the Sun ONE Content Services Platform is that it provides an infrastructure that frees content technology providers to focus valuable resources on their areas of expertise by providing easy and reliable access to critical portal, networking and storage services. The following section illustrates the value of this approach by taking a closer look at the synergistic characteristics of the combined Sun ONE Content Services Platform and the Interwoven Content Platform.

# Interwoven's Open Content Platform

---

## A Code and Content management and Distribution Platform Improves Service, Accelerates Development and Reduces Cost

Interwoven focuses its resources and talent on the broad requirements an enterprise will have in order to manage content and code across their customers' organizations and to ensure that the distribution of this code and content across multiple outlets is secure, accurate, timely and personalized.

The Interwoven Platform consists of four primary components; Content Integration Enterprise Repository Connector Suite, TeamSite Content Management, MetaTagger Content Intelligence, and OpenDeploy Distribution Server.

These four primary components combine to manage of a wide range of content:

- Content Management for Portals: Business users maintain content control, facilitate portal adoption, and place searchable content onto portals.
- Collaborative Document Management: Simplify document management, collaboration, and the sharing of work.
  - Media Asset Management: Enforce brand control across channels, reduce production and access complexity and provide marketing automation across an organization.
- Web Application Management: Provide organization and code management in a single environment.
- Web Content Management: Create, manage, and deploy content to web sites.
- Content Management for CRM: Integrate unstructured enterprise content with structured customer information.

---

## A Case in Point: The American Hospital Association

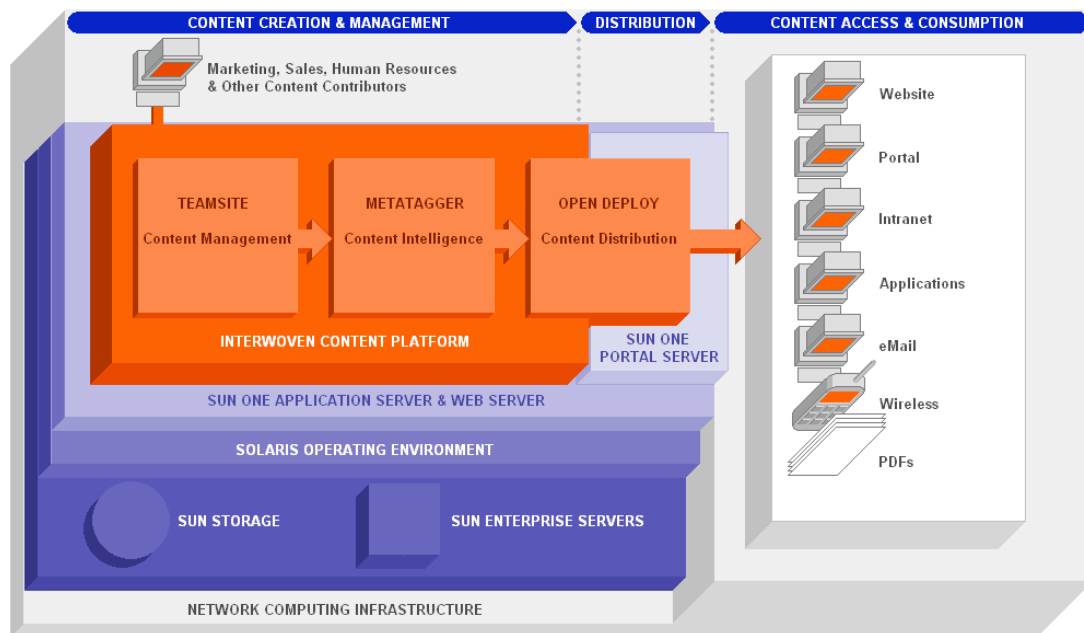
The American Hospital Association, founded in 1898, has a mission to advance the health care of individuals and communities by leading, representing, and educating health care provider organizations that are accountable to the community and committed to improving healthcare. AHA members include nearly 5,000 hospitals, health care systems, networks and other care providers and over 37,000 individual members.

The American Hospital Association (AHA) faced a classic problem: affiliate information was spread out over multiple sites, administered by different managers on a variety of different operating platforms. AHA conceived of a unique type of portal to solve the complex content publishing and distribution issues that its members faced. The group used an enterprise-wide content management and delivery solution from Interwoven and Sun Microsystems to consolidate material from 50 disparate websites and reinvented the way that it supports, educates, and represents the interests of hospitals and healthcare providers.

The AHA solution, HospitalConnect.com, is built upon the content management and distribution products from Interwoven and the Sun ONE Content Services Platform. The resulting benefits of centralized management and automated content submission and distribution workflows across their entire affiliate community included increased operational

## An Integrated Infrastructure for Content Services

efficiencies, a more productive workforce, better-organized content, and improved patient care.



*Diagram courtesy of Interwoven, Inc.*

Some specific characteristics of the AHA solution include

- Affiliates and staff contribute and manage files directly from existing word processing and desktop applications.
- Users can convert content into form-based XML data
- Collaborative users can add "sticky notes" to content directly from their browsers.
- Users can browse and review content as it appears throughout the portal and related websites.
- Users can access content management tasks within an existing email system so that content can move quickly through the approval process.
- Users can automatically distribute material to the HospitalConnect.com portal and AHA affiliate sites.

One advantage to Interwoven's architecture is that its open approach ensures that their suite of components can leverage an infrastructure such as the Sun ONE Content Services Platform.

The fact that the respective product lines and architectures from Sun Microsystems and Interwoven can be developed independently and deployed concurrently is a positive indication that large, complex and mission critical deployments can be built upon a modular technology stack.

The American Hospital Association case study shows how a solid, scalable content-driven infrastructure can effectively integrate key business processes, content services, and healthcare industry solutions all into one system.

## Sponsoring Company:



For more information, please visit <http://www.sun.com> or contact:

Sun Microsystems, Inc.  
4150 Network Circle  
Santa Clara, CA 95054  
USA

US 1-800-555-9SUN  
International 1-650-960-13001



For more information, please visit <http://www.interwoven.com> or contact:

Interwoven, Inc.  
803 11th Avenue.  
Sunnyvale, CA 94089  
USA  
Corporate +1 408.774.2000  
Sales +1 408.530.5800  
Fax +1 408.774.2002  
[info@interwoven.com](mailto:info@interwoven.com)