

## PLANNING ASSUMPTION

### Planning Assumption

# Market Overview: Content Management in E-Commerce — an Emerging, Converging Market

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## Giga Position

E-commerce initiatives are driving the convergence of the content management (CM) market. Increasingly, customers are turning to vendors that provide the highly packaged end-to-end solutions that enable rapid deployment of e-commerce sites. While CM solutions and commerce servers previously represented distinct markets, functionality from both kinds of products must now be tightly integrated to satisfy the demands of today's e-businesses. The then-fledgling vendors that marketed discrete CM and commerce server products early on have enjoyed great success in the converging CM/e-commerce market, even though these discrete offerings have not been uniformly well-integrated to date, while more established vendors from both backgrounds have struggled to expand and integrate their products simultaneously. The fruits of these development and integration efforts will soon ripen, and Giga, therefore, expects that complete, well-integrated packaged solutions will be available by the first quarter of 2001 [.9p].

While customer requirements are driving this convergence, the ability to apply technological developments in the areas of content personalization and analysis to CM and e-commerce are rendering it possible. Indeed, personalization and analysis are now *de rigueur* in enterprise-level commerce applications, and since both require sound content management practices, they have become the most logical convergence points — as evidenced in notable recent acquisitions by e-commerce vendors. Such acquisitions will continue during the next 12 months [.9p]. Since this is a large and dynamic market, however, room will exist for a number of market leaders, including **BroadVision**, **Vignette**, **ATG**, **Open Market**, **Allaire**, **Blue Martini**, **InterWorld** and **Interwoven** [.9p].

## Proof/Notes

CM and commerce server applications have historically had distinct features. While CM applications were initially developed to enable the creation, management and deployment of large quantities of content to Web sites, commerce servers were engineered primarily to process online transactions and secondarily to assist in maintaining Web-based catalogs. Tables 1 and 2 summarize the key attributes of these applications.

**Table 1: Content Management — Key Attributes**

Production Functions	Delivery Functions
Distributed authoring	Personalization
Version control	Dynamic page generation
File access control	Caching
Automated approval processes	Syndication
Workflow	Search
Site management	Analysis

Source: Giga Information Group

**Table 2: Commerce Servers — Key Attributes**

Front-End Functions	Back-End Functions
Profiling and personalization	Price negotiation
Customer service	Order management
Technical support	Electronic bill presentment
Merchandising	Payment processing, including electronic bill payment
Electronic catalog	Digital content distribution
Product configurator	

Source: Giga Information Group

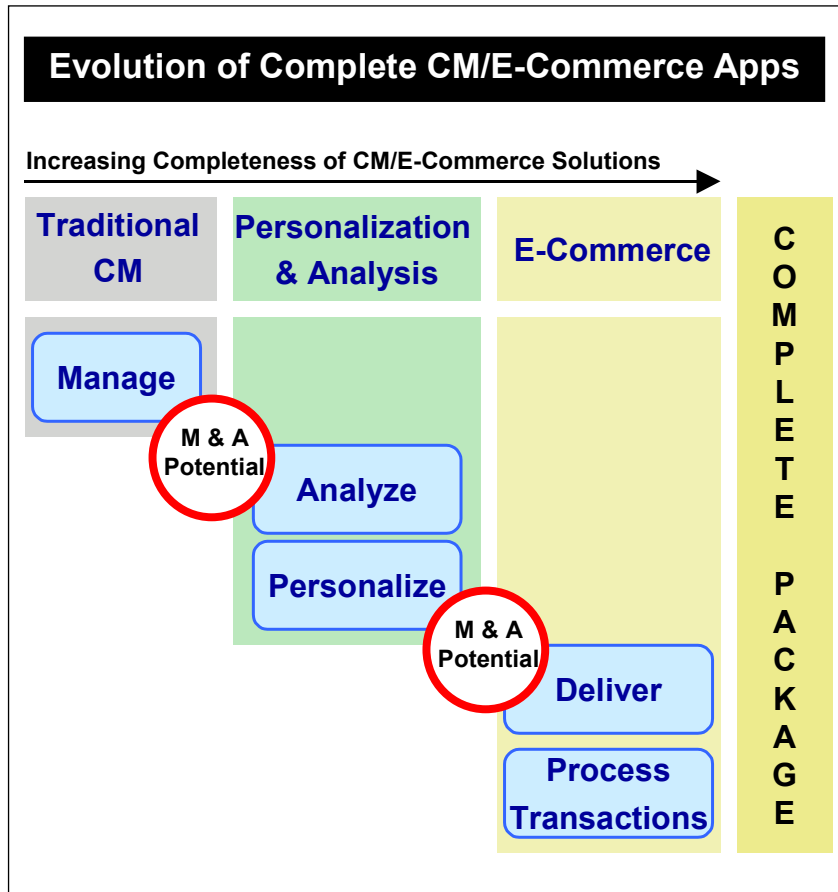
Early players in the content management market focused largely on production and on selling to new media and other content-heavy sites that had no overlapping need for transaction processing, but rather focused on site design, authoring, workflow and dynamic delivery. However, as CM vendors look to move beyond this traditional stronghold, many are realizing that enabling commerce sites is the next logical step. Indeed, personalization and analysis can improve customer relationships as well as fuel cross-selling and up-selling, and CM vendors have added more personalization and analysis capabilities in the past year. Vignette is the prime example of a vendor that moved beyond classic CM to add personalization features during the last couple of years. It will also expand StoryServer to include an e-commerce platform later this year.

Commerce server vendors have expanded their initial focus on transaction processing and online catalogs to enable rules-driven personalization for merchandising, cross-selling and up-selling, and BroadVision, ATG, Blue Martini and InterWorld are leading the pack. As the ability to deliver personalized content is inextricably tied to sound content management practices, it follows that the commerce server vendors enabling personalization either offer content management functionality themselves or partner with best-of-breed CM vendors. Blue Martini, for instance, is a single vendor that currently offers solid content management, personalization, analysis and commerce features, while the Interwoven/BroadVision partnership provides an example of best-of-breed cooperation.

There are a number of vendors that are currently repositioning themselves in the personalization and analysis markets, and they come not only from the CM and commerce server markets, but also from the recommendation engine, collaborative filtering, marketing automation, usage analysis and e-mail marketing arenas. As the ability of a site to personalize user experience becomes more accepted and even expected, the personalization features offered by many of these stand-alone tools will be incorporated into larger applications from content management and commerce server vendors. Likewise, analysis of content usage, purchase data and campaign success will be closely tied to content delivery, personalization and merchandising. Thus, we will see continued consolidation in these markets, the result of which will be the acquisition of the many of the remaining independent personalization and analysis vendors within the next 12 months [.8p].

### Vendor Landscape

Profiling and personalization are components around which this content/commerce convergence is hinged. Online business-to-business (B2B) and business-to-consumer (B2C) sales are the driving force behind the development of this emerging, unified market. Since completing online sales often requires personalization, which, in turn, requires sound content management, the consolidation of this market will result primarily from mergers and acquisitions at the convergence points (in red) in Figure 1.



Source: Giga Information Group

Figure 1

The following synopses provide insight into where each vendor falls within the broad market trends implied in Figure 1.

#### Allaire

A new entrant into the content and commerce arena, Allaire announced the general availability of its Spectra product in December 1999 (see IdeaByte, [Allaire Enters the Web Content Management Fray](#), Kathleen Hall). Spectra sits on top of Allaire's ColdFusion application server and bundles a range of services for content management, personalization and analysis with a commerce platform. Since this represents a new type of product and selling model for Allaire, it may be too soon to evaluate the strength of this offering. However, Spectra is clearly generating significant market interest due to the large installed base of Allaire's application server and development tools. On technical merits alone, this is a competitive product that builds on Allaire's core strengths. Provided that Allaire is able to build and maintain technical support, direct sales and reseller operations, Spectra will be a strong contender in this space [.9p].

## ATG

Art Technology Group (ATG) offers similar commerce and personalization functionality to that offered by BroadVision (see Planning Assumption, [ATG Dynamo Commerce Server 4.1 Is Flexible and Strong in Profiling and Personalization](#), Erica Rugullies). However, ATG does not offer any content management production features. It currently partners with both Interwoven and **Documentum** for this. Despite its strong, open application server, personalization server and commerce server offerings, ATG risks being squeezed significantly when content-to-commerce solutions from Vignette, Open Market and BroadVision become available. In order to remain competitive during the coming 12 to 18 months, ATG will also need to incorporate tighter integration with third-party CM products or purchase CM technology for incorporation into its products [.8p].

## Blue Martini

A comparably new product in the commerce world, Blue Martini is generating significant interest (see IdeaByte, [Update on Blue Martini Software and the Customer Interaction System](#), Erica Rugullies). Blue Martini points to its lack of partnerships as a strength, implying that it single-handedly offers end-to-end functionality for CM, personalization, analysis and commerce. It does, however, OEM other vendors' technology, namely **BEA's** application server, **Seagate's** analysis tools and a **Fulcrum** search engine. These out-of-the-box products contribute to Blue Martini's E-Merchandising Suite, which enables content management, commerce functions, personalization, merchandising and analysis. While this end-to-end solution is attracting attention from customers looking for a solution from one vendor, the base pricing of Blue Martini's Customer Interaction System starts at \$800,000. This price point inevitably puts the product out of reach for some companies, and Blue Martini may be forced to lower it as this space becomes more competitive.

## BroadVision

BroadVision is a current leader in this space and has set the standard for packaged, all-in-one commerce functionality (see Planning Assumption, [BroadVision Continues to Shine With One-to-One Commerce Version 4.1](#), Erica Rugullies). While it has offered its One-to-One platform and packaged commerce applications for some time, the recent acquisition of **Interleaf** increases its strength in the content management space. BroadVision has a strong commerce server that has rules-driven personalization and some basic collaborative authoring features. It partners for more robust analysis and specific personalization features, such as collaborative filtering. The acquisition of Interleaf gives BroadVision strong XML technology, which will help it move into multichannel distribution of content. Given its strong commerce and personalization features and recent Interleaf acquisition, BroadVision will continue to be the vendor to beat in this space. Longer term, however, BroadVision risks being squeezed by competitors if it does not release a version of One-to-One that supports industry standards such as Java and Enterprise JavaBeans (EJB) [.8p].

## InterWorld

Originally a commerce server vendor, InterWorld has added significant CM functionality with the release of its Dev Station and Design Station tools. InterWorld also partners with Interwoven and others for sites that need version control for a large number of authors. The Dev Station and Design Station tools do, however, provide significant flexibility for content authoring, site design and management. In conjunction with strong commerce server functionality and merchandising features, InterWorld will continue to gain market share in the coming 12 months, particularly in the retail sector where it is focusing its energies [.9p].

## Interwoven

Interwoven differs from the other vendors covered here because it makes no attempt to handle delivery, personalization or commerce. Its focus is on production, and it offers the most robust feature set for collaborative authoring, workflow and versioning. Interwoven partners with several delivery and commerce vendors, including ATG, BroadVision and InterWorld, but TeamSite is also frequently used for intranets or other sites where personalized delivery is not important. Going forward, Interwoven could be acquired by a large commerce vendor, although its current market capitalization makes this very unlikely. Alternatively, if

its current partners (i.e., BroadVision and ATG) buy or grow their own CM application, Interwoven will be less able to play in this space as a stand-alone CM vendor [.7p].

### Open Market

Open Market acquired **FutureTense** last year to add CM to its commerce product line (see IdeaByte, [Open Market Completes FutureTense Acquisition](#), Kathleen Hall). With this acquisition, Open Market now has solid offerings in two of the three key technologies — commerce and CM. While the Internet Publishing System (IPS) from FutureTense has some basic personalization capabilities, these currently do not compete with the rules engines and merchandising abilities from other vendors in this space. Open Market will release a new version of IPS early this year, which will include a rules engine and concept mapping technology from **Autonomy** for user profiling. Open Market will need analysis features to compete with the DataSage technology now available from Vignette, but provided that Open Market is able to execute on adding needed features, this will be a competitive product in this space [.9p].

### Vignette

Vignette has been the leader in the CM space due to its early entrance into the market and large number of established accounts. Vignette is somewhat unique in its ability to offer both production and strong delivery capabilities. While Vignette does not currently have a commerce server product or the ability for business managers to drive campaigns or personalization via a rules engine, it plans to roll out a series of packaged applications early this year to sit atop its StoryServer platform. These will include marketing, customer service and a rules engine for personalization. Its recent acquisition of **DataSage** gives it robust analysis features, and it OEMs **NetPerceptions'** collaborative filtering technology. To succeed during the coming 12 to 18 months, Vignette needs to move away from its proprietary platform and embrace industry standards such as Java, EJB and XML [.8p]. If it begins to embrace these standards and offers its next release as a modular solution, Giga expects to see continued success from Vignette.

Table 3 outlines the above vendors' strengths in the production, delivery and commerce areas. For more specific evaluation criteria, see IdeaByte, [Content Management: Collaborative Web Publishing Evaluation Criteria](#), Tony White.

**Table 3: Content Management and Commerce Vendors — Current Strengths**

Vendor	Production	Delivery/ Personalization	Commerce
Allaire	√	√	√-
ATG		√+	√+
Blue Martini	√	√+	√+
BroadVision	√-	√+	√+
InterWorld	√	√+	√+
Interwoven	√+		
Open Market	√	√	√+
Vignette	√	√+	

Source: Giga Information Group

There are a number of smaller CM vendors not covered here, including **Eprise**, **NetObjects**, **MediaSurface** and **e-Business Technologies**. Likewise, there are other commerce server vendors, such as **IBM**, **Oracle** and **Microsoft**. The vendors we predict to be leaders in the next 12 months are attempting to fill out functionality across the three areas outlined in Table 3 in large part because they recognize the need for integrated, packaged applications. Current market leaders offer products in at least two of the areas above or, as with Interwoven, are considered the leader in one area and partner extensively across the other two. CM vendors not included here as market leaders have not implemented the range of personalization, analysis and commerce features offered, for example, by Vignette and Allaire. Likewise, commerce server vendors not

included here do not have personalization features competitive with those offered by BroadVision, ATG, Blue Martini and InterWorld, and furthermore have not integrated a CM application.

## Alternative View

Emerging XML, EJB and other standards will enable the implementation of best-of-breed systems consisting of components from a variety of vendors. Currently, the urgency of customers' time-to-market concerns has placed the onus on vendors to develop packaged applications running on proprietary application servers, but as application server (especially Java-based) standards take shape, vendors will face an increasing demand for their products to contribute added value within the context of more centrally managed enterprise applications. Furthermore, as price tags from vendors such as Blue Martini, BroadVision and Vignette often approach hundreds of thousands of dollars, emerging standards may empower customers in the next 12 to 24 months to turn to application service providers (ASPs) to choose, assemble and manage the required components of a complete solution.

Our list of leading vendors in this space is notable for the absence of industry heavyweights, such as Microsoft, IBM and Oracle. As previously stated, the addition of CM and personalization capabilities is key to the success of any vendor claiming to offer a commerce platform. Currently, these vendors are lacking these key pieces and so are not considered leaders at this point. However, an acquisition of a CM vendor by IBM could easily catapult IBM into a major force in this arena, for example. If such an acquisition should occur, the prediction of leading vendors in this space would change.

## Findings & Recommendations

Web sites have moved well beyond static pages, which characterized the early Web, and profiling, analysis and personalization have become crucial enablers of successful e-commerce strategies. Giga clients should now be linking existing CM applications with personalization/analysis engines and integrating both with their e-commerce platforms.

Complete, packaged CM/e-commerce applications that manage the full life cycle of Web content, deliver it dynamically based on user profiles and usage analysis, provide a digital storefront, as well as process online retail and B2B transactions will begin to appear within the next six to 12 months [.8p]. Turn to BroadVision, Vignette, Open Market, Blue Martini and InterWorld for the first complete solutions beginning in the third quarter of 2000.

As the number of vendors falls during the next 12 months, BroadVision, Vignette, ATG, Open Market, Allaire, Blue Martini, InterWorld and Interwoven will continue to be market leaders. Factor this into vendor/product viability considerations.

As the CM/e-commerce/personalization market continues to converge, Giga's vendor clients tracking market trends should look to **Accrue**, **net.Genesis**, **iLux**, **Personify** and **Epiphany** as the most likely acquisition targets. CM vendors that may get snapped up include Mediasurface, Eprise and eBusiness Technologies (Inso) [.9p].

As these markets converge, prospective customers should develop lists of requirements based on three feature sets:

1. CM production capability
2. CM personalization and delivery functionality
3. E-commerce application servers

Currently, Interwoven leads the pack in CM production capability, but it will need to continue partnering with delivery and commerce vendors, such as BroadVision and ATG, to remain a CM market leader. Interwoven customers looking to build e-commerce sites should monitor these partnerships closely for signs of strain, since a breakdown would completely jeopardize the viability of e-commerce initiatives.

ATG, BroadVision, Blue Martini, InterWorld and Open Market lead in CM delivery and commerce and are appropriate for dot coms and other sites that need merchandising and rules-driven personalization to push products or services. These vendors offer the most complete solutions available from a single vendor. However, the most complete options come from best-of-breed partnerships between BroadVision/Interwoven and ATG/Interwoven. Giga clients should choose a single vendor when ease of implementation is a top priority, but they should opt for a BroadVision/Interwoven or ATG/Interwoven solution when a best-of-breed approach takes precedence.

Giga clients with infrastructure built on ColdFusion should consider Allaire's Spectra for CM and e-commerce, but should bear in mind that it provides more of a build-it-yourself commerce platform than a packaged commerce application.

Terms such as "CM," "personalization" and "analysis" are used in broad and contradictory ways. Therefore, clients must understand how these technologies relate to specific business goals before choosing an appropriate vendor. Have vendors address requirements in plain English; restrict their use of jargon, and make sure that responses are based on currently available products rather than future marketing strategy.

## References

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