

Attaining Workflow Nirvana: User Enlightenment through Next Generation DAM Solutions



A Frost & Sullivan White Paper

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Executive Summary

The Digital Asset Management (DAM) market has seen healthy traction from all manner of companies across verticals and geographies even through the economic downturn. We live in an on-demand, anytime, anywhere, on any device world. Knowledge workers demand the same amount of technology robustness and collaboration at work that Web 2.0 and online content socialization has brought to them in their personal life.

With widespread digitization across organizations, the need to manage the ever growing volume of content in all different formats has become paramount for businesses. Market agility provided through a well-integrated content management solution is a must-have for any organization looking at streamlining its business processes and eliminating workflow redundancies and silos.

The DAM market has evolved tremendously since its inception. Today, the next generation of DAM solutions and services provide cutting-edge intuitive search capabilities within a widget-based dashboard interface. This paper looks at the benefits DAM brings to the table and how new technology perspectives further strengthen this proven value proposition.

Comprehending DAM...

Digital Asset Management (DAM) has been a robustly growing market since the early 90s. Unfortunately, the term DAM has been misused and abused repeatedly since its inception, and even more so now as DAM, in all its flavors, has started getting tremendous traction across verticals all over the world.

It is therefore important to define what DAM really is at the start of this paper. Digital Asset Management (DAM) is also known as Rich Asset Management (RAM), Media Asset Management (MAM), Digital Media Management Software (DMMS), Brand Resource Management (BRM), and also lately as a key component of Enterprise Content Management (ECM).

DAM is defined as a value chain of software solutions that enable the ingest, archival, indexing, search, retrieval, browsing, annotation, repurposing, collaboration, display, and transport of digital media in a seamless, collaborative, and secure environment, which is easily integrated with third-party systems within the content workflow, spanning the asset lifecycle from creation through delivery.

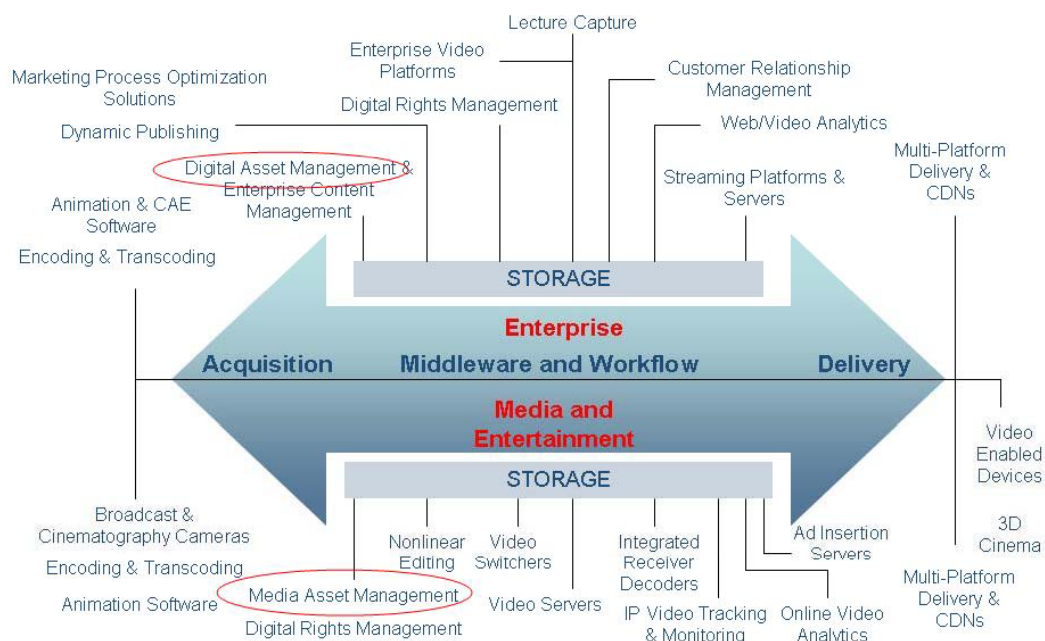
DAM can be provided through installed deployments or through the cloud with logger capabilities at one end of the value chain, core DAM solutions in the middle, and digital delivery systems and services at the other end.

Products that come within the scope of the DAM space are used in the management of both static and time-based digital content, including audio, video, graphics, CAD files, images,

“DAM solutions married to storage systems have become arguably the most crucial piece within the content workflow.”

medical imaging, print layouts, animation, text files, presentations, and spreadsheets – basically all sorts of content.

As seen in the chart, DAM solutions married to storage systems have become arguably the most crucial piece within the content workflow. DAM provides a platform for systems that traditionally require silos to integrate with and provide a collaborative workflow environment for different knowledge workers to seamlessly work on content creation, management, repurposing, and delivery.



“Fuelled by government mandates and the value proposition that digitization brings to the table, companies now realize that digitization and managing digital assets are no longer nice-to-have propositions.”

Frost & Sullivan’s research on the Digital Media market, spanning the past decade and the entire value chain from content acquisition down to content delivery, shows the DAM market accounting for over half a billion dollars in 2009. Just the storage and DAM components together achieved close to \$7 billion in global revenues for 2008. The DAM market is expected to grow at a CAGR of more than 20 percent through 2014, despite a significant dip through 2008 and 2009 due to longer sales cycles caused by the economic slowdown.

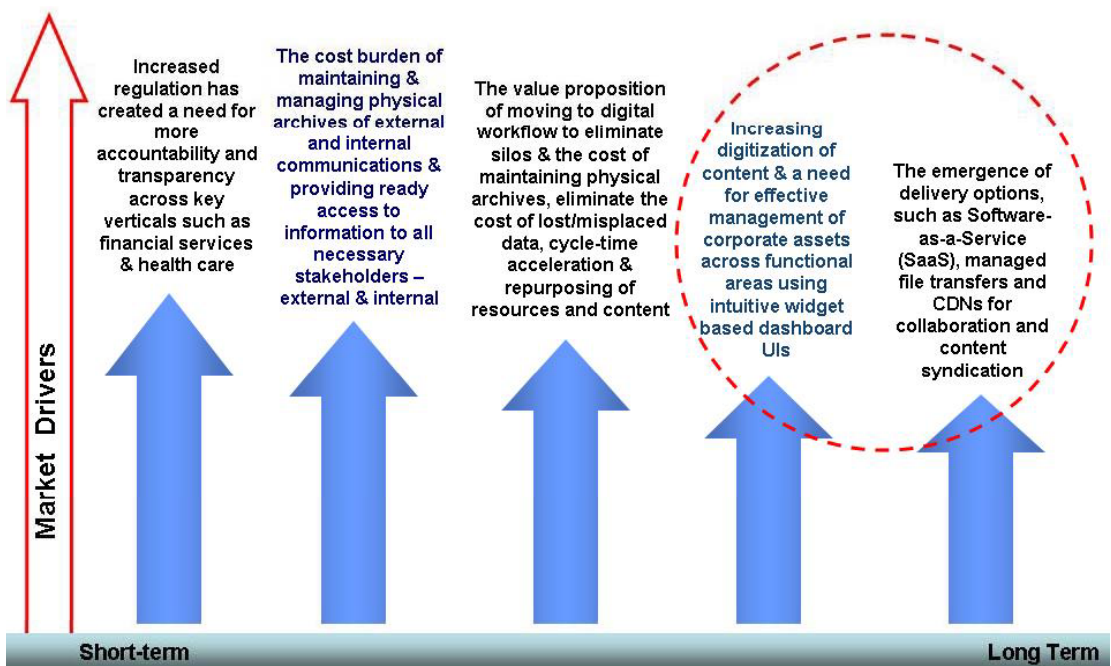
But what is powering this growth? Despite the global recession and longer sales cycles, the DAM market has been posting enviable growth rates.

The DAM Value Proposition

Catalyzed by adverse economic conditions, enterprises are even more interested in solutions that will help streamline their processes and help reduce costs while making them more competitive. Companies, regardless of vertical, are faced with an ever increasing flow of digital content spanning every possible functional area within the organization. This has

created many silos and disparate workgroups that create bottlenecks and inefficient workflows to say the least.

Fuelled by government mandates and the value proposition that digitization brings to the table, companies now realize that digitization and managing digital assets are no longer nice-to-have propositions. Reams of tangible proof are now available, ranging from the elimination of costs associated with lost or misplaced content, cycle time acceleration and increased collaboration, to increased revenue through content and resource repurposing. In a complex content value chain where everyone demands tailored on-demand content anytime, anywhere, and on any device, it is imperative that organizations enable themselves to provide relevant content as demanded.



We can look at the value proposition from three perspectives:

Cost Reduction

- Cost savings on real estate
- Cost savings on maintenance of physical archives
- Elimination of the cost of lost or misplaced work
- Cost savings on delivery

By putting a DAM system to work, an organization migrates from physical storage to disk-based storage – eliminating the cost of expensive real estate to maintain physical archives and the expensive maintenance it demands. With a good metadata schema using platforms such as XMP from Adobe, companies can keep a well-indexed repository of all enterprise content for role-based access, enabling knowledge workers to search and retrieve relevant content and eliminating organizational silos, which reduces the cost of lost or misplaced

work. Digital delivery through managed file transfers, or CDNs, allows companies to save on the cost of terrestrial delivery and insurance.

Workflow Optimization

- Cycle time acceleration
- Increased workflow collaboration

Organizations can achieve time reduction in the business process through accelerated search and retrieval, and increased real-time collaboration of assets. Further, DAM integrated through Web services with other workflow elements, such as dynamic publishing solutions and Web content management tools to name a few, fosters increased collaboration among knowledge workers while significantly reducing the time-to-market through every phase of the content lifecycle from creation to delivery.

Revenue Generation

- Repurposing of content
- Repurposing of resources

Using DAM integrated within the content workflow, companies can now easily repurpose content, whether it be for viral marketing on the Web, re-rendering content to provide on-demand content through mobile platforms, or just updating a piece of corporate collateral instead of re-creating it from scratch. This not only opens new avenues to reach customers and earn revenue, the time saved by knowledge workers in searching and repurposing content can be used toward more productive tasks that increases the potential for companies to earn revenue.

Despite these obvious benefits and the proven ROI, many organizations have still not been fully sold to the idea. Though there have been an increasing amount of deployments each year, the market still lacks widespread enterprise-wide deployments.

The Pain Points

With a multitude of competing solutions that claim to be DAM, interoperability issues and shoe-string budgets, companies are caught between a rock and a hard place trying to figure out their requirements and mapping them to a vendor at the appropriate price.

Every vertical is invested in digital assets in various forms. These include enterprises trying to harness video, images, animation, and text among other media types for corporate and marketing communications, as well as training. For companies in the media and entertainment market and many services markets, digital assets are also their products – their bread and butter. Everyone is trying to find workflow efficiencies and monetization

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opportunities using their digital assets. Regardless of vertical, companies in all these markets are faced with similar content management and distribution challenges stemming from legacy systems, silos, and manual workflows.

Too often, companies focus on integration at the application level instead of integration at the data level, which can create another slew of problems as operations start scaling up. Loosely tied together, ad-hoc systems become increasingly cumbersome to handle as the amount of media assets and media formats keep increasing.

Many of the issues that companies have to deal with emerge from prevalent internal practices or, as in many cases, a lack of any coherent asset management practice. Large organizations are just coming to realize the tremendous disconnect that exists amongst various internal divisions causing duplication of work, a lack of homogeneity in message, and delays in time-to-market, all costing the companies a tremendous amount of money. Many companies compound the problem by creating rigid workflows to accommodate the limitations of the content management system(s) at hand. This practice is counter productive, as the very concept of managing content is to provide agility to the organization and knowledge workers.

The DAM solution needs to be user-friendly and easily integrated with the existing workflow and business process instead of having to re-architect the workflow and/or the business process to fit the limitations of the solution. The solution must strive to reduce the lifecycle cost and maximize its impact on accelerating cycle time and help the company react quicker to the dynamics of the market.

Some corporations have experimented with in-house solutions or have had different divisions using various DAM solutions independently. When they decide to implement an enterprise-wide deployment, they face huge hurdles in terms of creating a common taxonomy for the archiving system. Often the task of merging multiple and different databases used prior to going for a single DAM solution creates massive problems, both in terms of internal business practices as well as technology integration. Content needs to flow seamlessly within internal units of a company, as well as to all necessary external users. Inability to do so with your technology choices creates internal resistance to adopt the technology, and the ROI for any project or investment becomes difficult to assess while adding unnecessary maintenance complexity.

Many end-users are also far from satisfied with the user-interface. End-users are rarely satisfied with the interface they get out of the box, and vendors struggle with trying to customize the interface on a limited budget. Customers always demand highly flexible and easy to configure user interfaces for stakeholder groups ranging from enterprise level to virtual groups, business units, partner channels, and even for individual projects. The problem arises between the creative and noncreative asset owners at a client site, both requiring the interface to work differently and too often nomenclature discrepancies among functional workgroups that make asset searchability cumbersome to say the least.

Traditional content management systems and homegrown solutions provide a certain degree of flexibility when it comes to configuring skins and branding, but are limited in their

scope. Usability of a solution is one of the most important factors to assess the success of any investment in technology. Cumbersome systems always face push-back from workers who have to use it, and adoption remains spotty at best. Forced adoption requires extensive training classes and months of professional services, adding to the total cost of ownership. This defeats the purpose of deploying a DAM system, with knowledge workers never really adopting such complex and unintuitive systems.

Further complicating things is the need to syndicate content across various delivery platforms, such as the Internet and mobile platforms, to enable viral marketing and messaging.

The perception of DAM systems being complex and painful stems from the legacy of trying to stitch together various component modules to create a DAM system. For example, a typical DAM system architecture with common components like a fileserver, database, and an application tied together may result in shockingly low uptimes even with all individual components and technologies linking them working at their maximum uptimes. A modular approach to complex software applications needs to factor in the various technologies used to provide the solution since this is usually only apparent once the solution is already paid for, deployed, and users are being trained on it. Low uptimes for such complexly woven together “Frankenstein” solutions are a persistent deterrent to adoption.

Technology to the Rescue

Future-proofing Your Technology Investment through Standards

People can only guess what the next big killer application will be. Companies need to future-proof their investments as best as they can so that they are nimble enough to proactively and efficiently adjust their business and technology processes to stay profitable and grow with iterative investments without having to re-architect everything from scratch every few months. Deploying solution built on industry standards instead of proprietary technology is a time-tested way of ensuring tangible ROI on your technology investments. Using standard databases such as SQL-92 and standard data models such as RDF and XML, along with standard fileservers, allows companies to model business processes independent of the DAM vendor, enabling the scalability of the DAM solution with minimal impact on future IT decisions.

Modular vs. Monolithic

Companies should look at a standards-based modular approach instead of a proprietary monolithic approach for their digital workflows. The solution should be as unobtrusive as possible and adapt to the customers business model and not the other way around. Companies should not have to rethink and change their business models to justify their technology investments. However, modularity should not equate to complexity as explained earlier in this paper. Modular applications should not have interdependent nodes that could possibly sabotage the entire system. Deploying simple architectures based on standards future-proofs the technology investment while ensuring simplicity of maintenance and

“Deploying solution built on industry standards instead of proprietary technology is a time-tested way of ensuring tangible ROI on your technology investments.”

collaboration with other enterprise systems. Standards ease the integration pain even when new technologies are integrated with the DAM system.

Service Oriented Architectures

By creating SOA-based interoperable “service” modules for each process, the manageability of complex workflows increases and the processes are repeatable and trackable. SOA allows for a better alignment of IT with business goals, while allowing for the maximum reuse of IT assets. By exploring architectures like SOA and using Web services, companies are now looking at eliminating workflow silos and bringing disparate systems and processes together in a collaborative environment with DAM married to storage as the nerve center and collaboration hub for the workflow.

Baby Steps to Deployment Success and Achieving Business Goals

Business managers need to work with DAM vendors to initially focus more on deploying a pilot project and using a bottom-up approach for further deployment through the enterprise. Allowing customers to build familiarity with the product at a relatively low price tag through a divisional deployment, vendors working closely with their customers can help achieve early success in pilot projects and use that to get further buy-in within other divisions and steadily scale up toward full enterprise deployment in phases. This enables business managers to continuously justify raising money, internally for further deployments by using successful divisional deployments as a benchmark for budgetary justification and also creating more awareness within the organization.

The Power of Intuitive Search

Asset searchability is always top-of-mind for business managers looking at justifying an investment into a DAM system. Sites like Amazon have made users accustomed to deep search capabilities, and they now have similar expectations from their DAM systems. Some vendors now provide deep indexing and search capabilities, which no longer look at just metadata to enable content searches but a deeper probabilistic algorithm that provides contextual searches with the metadata as one part of the entire algorithm. The system becomes more “intelligent” as it keeps getting used, providing more relevant search results as it learns to map relationships around varied asset groups. Such “organic” search capabilities add to the value proposition discussed earlier, making ROI realization that much easier. Data trending and faceted browsing enable “dynamic taxonomies” that are automatically generated and re-drawn with each click. This significantly simplifies locating the right assets and boosts productivity.

DAM Widgets

Companies like Apple and Google have paved the way for customizable dashboard-based applications called widgets. Early users have found this sort of a user interface very user-friendly. A few DAM companies are now rolling out their next generation of solutions using this very approach of a customizable dashboard with widgets to ease the usability of the solution across functional groups. Knowledge workers can now use widgets to easily grab

content and send it for syndication across various platforms such as the Web and mobile platforms. Functional DAM components in the form of widgets provide a modular approach to building on-demand portals with just the right functionality and layouts. Such flexibility enables granular and user-friendly access to rich media assets and simple branding of portals.

Solution Brief: MediaBeacon

As discussed in this paper, the DAM market is very fragmented with an amazing array of solutions available out there. We have also seen how many challenges faced by companies are now being answered by the next generation of DAM solutions coming to market. To put these offerings in perspective, the next section of this paper will look at a vendor example to illustrate how these solutions can help companies accelerate the deployment and monetization of digital content. It will explore MediaBeacon's offering in the DAM market as an example.

MediaBeacon – A Quick Overview

Based out of Minneapolis, MediaBeacon, Inc., formerly BrighTech, Inc., provides Digital Asset Management solutions for a wide array of customers ranging from Business-to-Business customers such as Manufacturing and Communications, to Business-to-Customer including entertainment, printing and life sciences. Privately held MediaBeacon specializes exclusively in Digital Asset Management, allowing it to continually develop its DAM offering.

MediaBeacon is a rapidly growing company and one of the foremost proponents of using strongly attached metadata and Rich Internet Applications to create an extremely easy-to-use user interface using widgets with dashboard functionality.

The MediaBeacon system contains two main components: **The Digital Asset Management Widget Platform** and the **Faceted Enterprise Search** component, enabling faceted search navigation and dynamic taxonomies. The combined solution provides powerful search functionality coupled with DAM-specific feature sets, including tracking, versioning, reporting, collaboration, transformation of graphics and video, granular access control, among others.

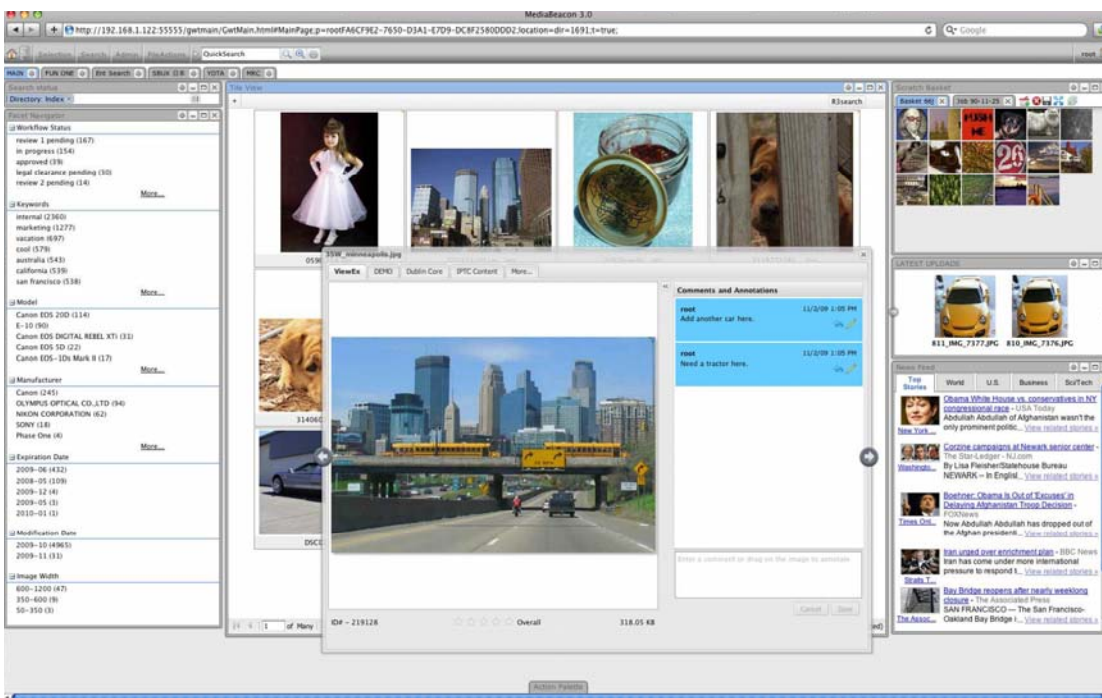
The following is an overview of MediaBeacon's offering:

MediaBeacon R3volution 3.0 Widget Platform

MediaBeacon R3volution is one of the few Digital Asset Management systems featuring a widget-based interface and strongly attached data. As discussed earlier in this paper, widget-based UIs are increasingly being preferred by knowledge workers for the modularity and ease of use it provides. It enables corporations to index large repositories of rich media and documents, organize them, and securely distribute through flexible portals.

R3volution enables widgets for all DAM function such as: the taxonomy browser; asset tile view or slideshow; version comparison; MediaBeacon's Faceted Enterprise Search; scratch baskets; virtual catalogs; saved searches; approval cycles; the file system; the metadata spreadsheet; the asset rating system; the asset distribution loading dock; RSS feeds; and subscriptions among many others.

Such an intuitive and user-friendly interface enables users to create custom interfaces using drag and drop functionality, allowing the creation of portals in seconds. Users can mix and match functional widgets as required by their workflow. Dynamic portals with arbitrary functions can be constructed and shared almost on the fly.



What empowers this widget technology is the use of the Google Web Toolkit (GWT) – the same Web toolkit used in the development of sites like Facebook and many of the Google tools. The advantages of this development platform are significant:

- **USER EXPERIENCE:** Enables users to have a true Web 2.0, flexible portal experience, making it possible for customers to change their environments quickly and have more of a desktop experience with features like right clicking of the mouse, highlighting multiple assets, among others -- all without browser plug-ins
- **PORTABILITY:** Since Google is amongst the leaders and a critical component in today's Internet environment also using the GWT framework, all operating system and Internet browsers will support the MediaBeacon solution as well

- **OPEN AND EASY:** Users can now plug-and-play into a widget environment, going beyond the widget-based features within the Mediabeacon solution and include open social widgets from organizations like Google. For example, if a customer wants to add Google Docs as a widget into a MediaBeacon environment, it is something the end-user can configure in minutes. Mediabeacon is also looking to create and work with industry experts in creating vertical solutions that would be simple plug-ins to this portal interface.

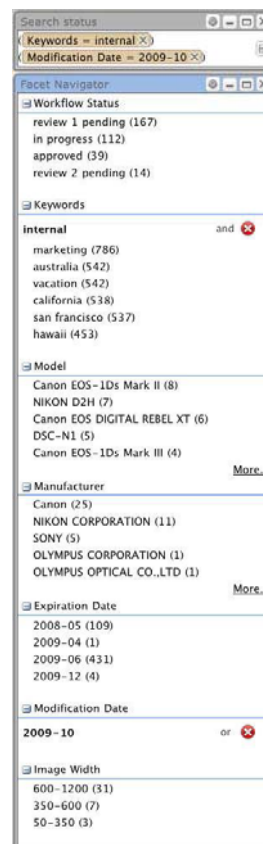
MediaBeacon R3Search

MediaBeacon R3Search is one of the few Enterprise Search engines organically integrated into an enterprise-grade Digital Asset Management System. Intuitive organic searchability, as discussed earlier in this paper, is a must for companies looking at rapid realization of the return on investment on their DAM system. R3Search analyzes all metadata in every asset and builds structure and relationships organically without requiring planning. It enables organizations to streamline vast data sets in a way that makes the most sense both visually and logically. Relationships across millions of files are automatically analyzed and fed to widget-based distribution portals.

R3Search continuously analyzes all metadata in a MediaBeacon system. It creates an organic relationship matrix that allows users to instantaneously explore the relationships of assets across all data. It automatically indexes large data sets, figures out asset relationships based on common attributes, and correlates them, so end-users can work more efficiently.

R3Search is built around a scalable infrastructure that automatically replicates across any number of Web interface servers and across any number of clusters without any theoretical limit to the number of users served. This provides for a high level of performance for high availability environments with thousands of users and millions of assets. It differs from traditional enterprise search engines in that it requires no data import conversions, mapping, or manipulation. R3Search attaches itself to the MediaBeacon R3volution server and obtains all configuration instantly.

Each file in a MediaBeacon database may have a different set of fields, and each field may have any number of values. MediaBeacon organically grows the structure out of the content. R3Search can be configured to update and consult an external enterprise search engine in tandem with or in place of its internal SOLR engine to facilitate global data analysis or compliance in a corporate data repository.



R3Search can be accessed by any authorized external service, such as a custom Web site or external data feed. Customers can even build custom search sites that have access to the configured search subsystem independent of MediaBeacon.

MediaBeacon in Action



Showtime Networks, a division of CBS Corporation, is one of the leading premium broadcast cable organizations in the entertainment industry. With break-through original productions like "Dexter," "Nurse Jackie" and "Weeds," the company based out of New York City has a multi-faceted advertising and marketing strategy. MediaBeacon enables Showtime's distribution and development of more than 40 terabytes of rich media assets used to promote the company's multiple brands. The assets are distributed using various portals developed to allow the system's more than 300 users to search and find assets to fit their individual marketing needs.



Hallmark, based in Kansas City, employs 800 artists, designers, stylists, writers, editors, Web designers, and photographers. MediaBeacon allows Hallmark's Creative community to do what they do best - create. MediaBeacon's rich capabilities in digital asset management and digital rights management provide a robust environment for those creating that perfect piece of artwork or finding just the right words for a product that will ultimately make a genuine difference in someone's life.

The Bottom Line

This article has only scratched the surface of how a well-integrated DAM solution becomes the nerve center of your workflow and will not only significantly drive down costs but also help in added revenue generation. Even so, through the examples we have seen, it is apparent how a well-integrated DAM system can help users save resources. Every few months the market is made aware of newer and more creative ways in which enterprising users have made DAM work for them in ways even the vendor community had not imagined. We have also seen through MediaBeacon's example how a proactive vendor community is carefully analyzing end-user wants and needs and integrating technology processes such as widgets, dashboards, and organic search capabilities to make DAM a must-have component for any workflow. With digital proliferation accelerating and a work environment characterized by convergence, collaboration and outsourcing, such systems will go a long way in helping the user community realize the true potential of their content assets regardless of vertical or functional area.

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