

The Rich Media Asset Market

Keynote Speech

Digital Media Management (DMM) is software that allows media companies to better manage their digital and analog media. What do we mean when we talk about managing media? Managing includes storing, finding, and using media. DMM provides solutions that can make effective e-commerce possible, that can link to media production systems and rights management, and that can provide the infrastructure for an effective digital media environment.

As the economics of digital media evolve, DMM will appeal to more and more users. Processing power continues to plummet in price in accordance with Moore's Law, which holds that speed doubles every 18 months. Bandwidth is getting cheaper, too: pipes double in capacity every nine months. Storage is more and more affordable, with disk size doubling every 12 months. And finally, the economics of digital media are affected by Metcalf's Law, which notes that "The value of any asset increases by the factor of the number of people using it." And we would add a corollary: "The value of any asset falls to zero if you cannot find it."

Exploiting digital media means taking media assets and converting them from paper and film and tape into digital form. Text and documents, motion, film and video, still images, art, logos, and audio, are all converted into a series of 1's and 0's.

Once the assets are in digital form, you can manage them across the value chain, manipulating them as 1's and 0's from where they are created, to where they are consumed. This value chain incorporates cataloging,

archiving, retrieval, analysis, collaboration, distribution, e-commerce, and delivery.

Why is Digital Media Management necessary? What purposes does it serve, and for whom? New e-business and e-commerce opportunities will be media driven, and DMM allows for that intensive reuse and repurposing. A key message in this business climate is that DMM saves money for companies, by increasing their efficiency in producing and managing their media. But saving money is not the only element. DMM is also capable of producing new opportunities for companies to make money, by selling their media via the web. DMM enables e-commerce, offering a chance for that dusty old footage of your fifty-year-old product to have new life in a feature film or an advertisement. Given what we know about copyright issues on the

This year's keynote speaker was Robert L. Griffin, President and CEO of eMotion, Inc. Mr. Griffin's address was delivered by eMotion's Chief Technology Officer, Dr. Sharon Flank, as Mr. Griffin was detained in Florida by Hurricane Michelle.

web, it is important to acknowledge that e-commerce requires dynamic DMM (and digital rights management as well) to protect, audit, measure, and track assets.

One analyst says every company will be a media company, and that the simple creation, managing, and reuse of digital media assets will be the base entry point into the e-commerce channel and the differentiating element for all other channels.

Since money is involved, customers get very serious very quickly. Any monetization requires back-end ERP



Robert Griffin joined PNI in January 1998, where after leading PNI to profitable growth, crafted the merger between PNI and Cinebase software to form eMotion in January 2000. He is a senior executive with more than 25 years progressive consulting and management experience. He has been involved with building and leading consulting and systems integration organizations, corporate and enterprise business re-engineering, and executive leadership since 1973.



Sharon Flank is CTO and Vice-President of Technology at eMotion, Inc. In this role, her responsibilities include identifying emerging technologies of interest to eMotion and making bets on the winners. This includes technologies in information retrieval, rights management, image recognition, speech recognition and other areas.

Flank is a computational linguist, an expert in natural language processing and information retrieval. She is a co-holder of the patent on eMotion's natural language-based multimedia search engine, with other patents pending.

and GA integration, as well as accounting, reporting, and auditing. Cash is king, and companies will use this as the critical element of digital rights management.

At eMotion we have been in this marketplace for longer than the DMM or ASP or even e-commerce markets have existed. Our software runs PictureQuest, the largest B2B media exchange in the world.

It is no accident that we refer to media assets: they are worth money. Currently, corporations derive value based on their media assets, because they are key to branding. That "branding," if you will, is inevitably the difference between the book value of a company, and the market capitalization of the company. In the future, we can expect that the SEC may require corporations to value their media assets, or their brand, in calculating ROA. ROA or "Return on Assets" is a standard Wall Street measurement. In the near future, Wall Street will be looking for a return on media assets, indeed, the goodwill on balance sheets, the amount overpaid from book value of assets, is a good proxy for the value of media assets. You can well imagine that businesses will work hard to extract every dollar's return on any asset they are forced to place on their balance sheet. Only through digital media can a company measure and monetize media assets.

For several years now, analysts have been telling us that the media management market is about to explode. IDC predicts that the market will grow from \$196 million in 2001, to \$1.8 billion in 2005. In Stage 1, we saw the Early Adopters: high impact users eager to get on the technology bandwagon. Now, in Stage 2, we see the growth of the Middle Market, consisting of media savvy users. We can expect growth in Stage 3, the Corporate Market, and huge expansion in Stage 4 as the Consumers join in.

What key shifts have we seen in the market? How have things changed since 2000? Increasingly, vendors are touting an out-of-the-box solution, one that a system administrator can install

in a matter of hours. This out-of-the-box approach replaces the old customized solutions, which could take months and hundreds of thousands of dollars to get up and running. We are seeing more ties to back-end office systems, including CRM, ERP, document management, and the supply chain. And, in an acknowledgement that the surrounding software environment will continue to evolve, we are seeing the growth of enabling "middleware," including Microsoft's BizTalk Server 2000, and offerings from Agari and BBC Technologies.

What does the future hold? We can expect to see new platforms, new communication modalities, new configurations, and new players in the marketplace. All of these new developments, however, are leavened with a continuing need for media experience and media expertise.

Look Ma, no keyboard! There is nothing natural about accessing media through a keyboard or a mouse. People point and touch, and they have been doing so long before computers and long before typing. Considering that the key users of media management software are creative artists, it is reasonable to assume that they will be more comfortable with visual and tactile interfaces. Soon interactions will employ speech, touch, and pen interfaces, and the keyboard will be as much a relic as the typewriter. Speech access, in turn, presupposes some kind of plain-English retrieval interface, since we can hardly expect users to dictate Boolean expressions. Fortunately, natural language search is already available in some DMM applications. You can see one example on the Creatas site <http://www.picturequest.com>, which is powered by eMotion.

We can anticipate that wireless access will be important. Do not expect to see crowds of people watching movies on their cell phones, or even on their PDAs. Just because something is possible does not mean that it makes sense, and watching a tiny movie is unlikely to be much fun even when it is fast and smooth.

However, the technology will still be important for business functions, such as approval on the run. When a traveling executive needs to approve an ad, the fastest way will be through a wireless web-based connection to a portable device.

Image and face recognition are emerging technologies that are receiving additional attention (and funding) because of their use in security applications. For the moment, they are whiz-bang tools that offer utility only in carefully constrained applications. For general use, it is still difficult to distinguish a pencil from a flagpole or a deer from a horse. Face recognition depends on full-face shots, similar hair and lighting, and other limitations. DMM applications are beginning to sprout up that offer image and face recognition as search options, but, unfortunately, the quality is currently insufficient to support any but the most narrow business purpose.

What can we hope for as DMM evolves? The winning systems will provide cleaner APIs and middleware, for fast integration with existing systems, such as scheduling, billing, and play-to-air. They will work directly out of the box, but they will also supply good integration hooks.

We can also expect to see new players and new alliances in the marketplace. Larger companies such as Oracle, Microsoft, and Sun increasingly view media as key. In addition, media creation companies such as Adobe and Avid can be expected to extend their reach.

What should you do to take advantage of the best in DMM? Seek an anchor in the shifting sands by looking for players who have longevity in the digital media marketplace. Change will continue to define this space, and the nimble and the experienced will fare best in anticipating that change and keeping their technology ready for the next new development. There are many lessons to be learned, and you can draw on the expertise of the established players by making friends with the people who have already learned those lessons.