



Digital Asset Management Solutions

by Pat Roberts

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media

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Managing your entertainment or communications company's digital media assets is a critical first step for all designers and producers who have ever had to create the same something out of nothing more than once and for publishers who desire to create re-expressions of their valuable branded products. As a producer of digital assets created from inspiration a significant commitment is necessary to invest in your own and foundation technologies for asset creation and management. The rewards if you do are great!

Overview of Digital Asset Management Solutions

Known as many things in this growing industry Media DataBases (MD), Digital Media Management (DMM), Digital Media Asset Management (DMAM) and Digital Asset Management (DAM) all refer to the management of digital media assets. I use Digital Asset Management (DAM) here to refer to the management of distributed media types for retrieval purposes in daily productions. At first glance a DAM solution is a collection of digital media assets including text, images, sounds, video and web based data types. A closer look at these systems reveal associated relationships between media assets, their instantiations and their intended experiences that define the requirements of an effective DAM solution. Transforming media files into branded product assets is one of the primary roles of the creative production team. DAM solutions lay the foundation for successful product branding, re-expressions and franchising of original content. Long lasting branding efforts are precedent on putting an effective DAM solution in place early. As producers, designers and creators we need access to single, multiple, past and present digital media assets organized and described in ways that facilitate fluid archival access.

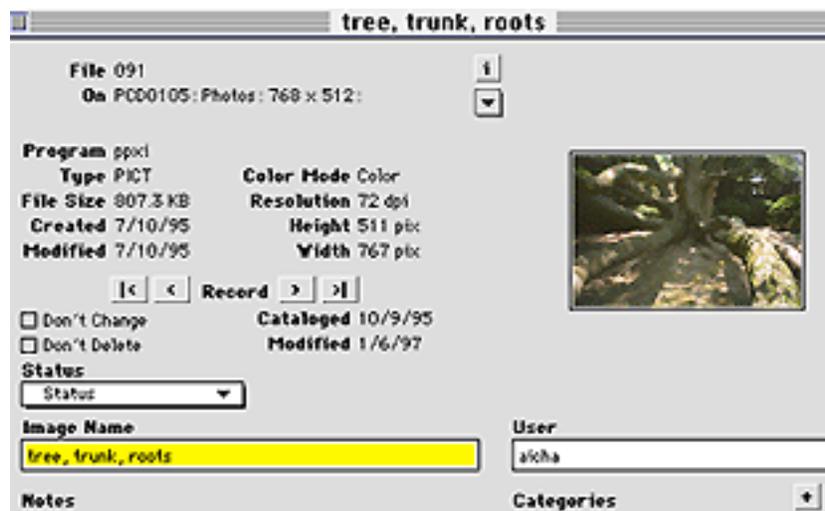
Research Perspective

In 1996, Apple Multimedia Developers received a report (GISTICS, Survival Guide for the Interactive Telemeida and Multimedia Developer, 1996) forecasting the requisite investment in valuable content returned as revenue as a function of early adoption of an effective DAM strategy. The next year GISTICS (GISTICS, Digital Media Asset Management Trends, 1997) advocated focusing on a solid digital asset management foundation to insure maximum potential of re-purposed product components and content elements. Since these predictions, DAM applications have organically grown out of the efforts of digital media think tanks such as Carnegie Mellon University (CMU), the MIT Media Lab, real time broadcast networks such as ABC news and CBS sports, collection intensive museums like The Getty Museum and The Peabody Museum, and digital media publishers on the forefront such as Hollywood Online, Starwave, CNN online and PBS online. Exponential growth in asset creation is predicted (GISTICS, Digital Media Asset Management Trends, 1997) to expand as the average number of media assets used per project is expected to increase from 3,000 in 1996 to 6,500 in 1999. Broadcast networks, corporations, productions, museums, government agencies and publishers of digital media create, derive and extend value from their media assets only if they can find them. In short, digital media elements are not only assets they are key commodities of a product. A segment televised and

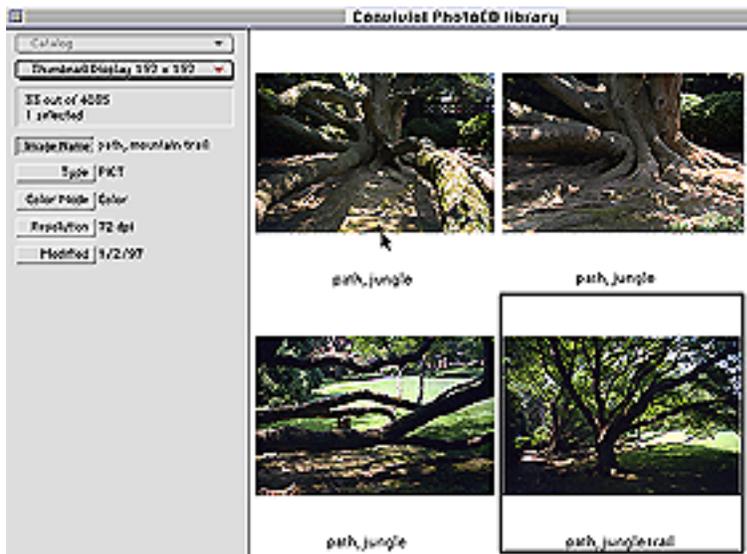
then published online are not only two unique distribution channels but also two different properties. Tracking content in context is a valuable, competitive strategy.

Digital Asset Management Application Features

First and foremost, the DAM solution must be able to meet your production, organization and access requirements for any given project. Selecting a DAM solution begins with determining what your functional requirements are. Why do I need to manage assets you might ask? Consider the following somewhat standard features for asset management: User friendly data entry interface; affordances for development of custom interfaces to media assets; anticipated search engine capabilities including relational media file requirements; ability to work with a variety of indexing tools for speed searching; tools for management of multiple versions of media types and formats; flexible data import and export tools; support for multiple users on a network with various levels of user access; client software available for multiple platforms accessible from the web; integration of media into custom and commercial drag and drop applications; concurrent users and a high volume of data transfer during production; ability to convert media assets from one format to another; and where security is concerned, enterprise wide authentication, secure transactions and data encryption. After you create a media asset you will probably use it again in its original or derivative form and you will require an assessment of which DAM system will work best for your requirements.



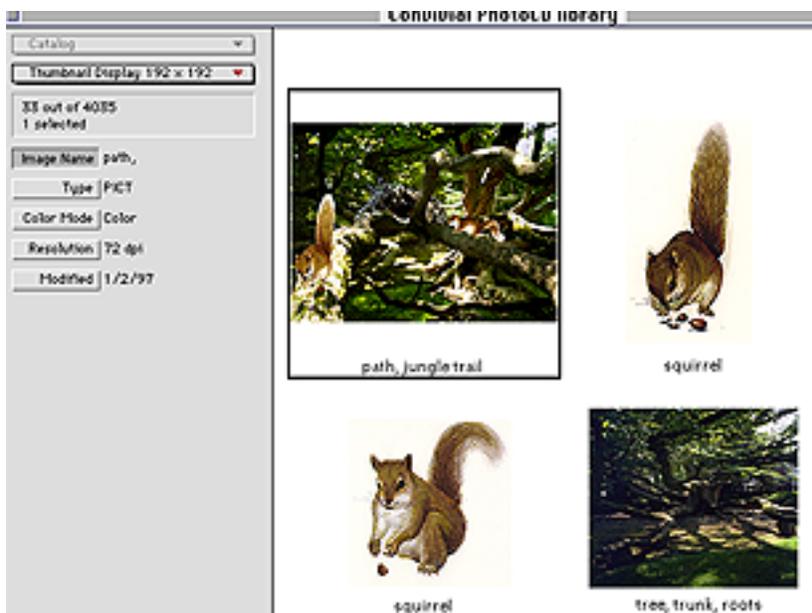
An original photograph catalogued in Cumulus.



A second original photograph catalogued in Cumulus.

Cumulus at Convivial

At Convivial Studios using Cumulus from Canto Software (<http://www.canto-software.com>) enables designers to not only retain the value of the assets we create but also to increase their value by making them available for reuse. During the production process an individual asset is tracked in it's raw original media type such as a photograph, illustration, sound effect or video clip. Designers then employ a media management solution to catalogue or create a digital library of their original media asset. Then the fun starts. Digital assets are almost always manipulated and versions created. Each instantiation of a digital asset is carefully catalogued and tracked. There is no way for you predict when you will require use and reuse of one of your valuable creations, when you do you will need to search and retrieve it. Using a digital asset management application makes it possible to search for original elements and their derivatives.



Original illustrations catalogued in Cumulus.



A final product illustration combining four assets: two photographs and two illustrations.

Categories of Solutions

An easy way to filter down your feature set is to decide which flavor of DAM solution you need today and whether can it grow with you if you want it to. Three typical flavors of DAM applications are: Desktop, Networked and Enterprise. As each name implies you may be sitting at your PC, connected to your latest production project or linked into a shared media bank of multimedia elements providing reuse for a number of projects. Many vendors listed as resources at the end of this article allow end users to craft their own personal solution and re-craft it as their projects grow and multiply. It is important to look for customization and upgradability in solutions. A simple networked product works great for local area networks and intranet environments. Whereas client/server environments and web-based solutions allow digital media libraries to be easily accessed remotely with high or low bandwidth options may be better suited for enterprise solutions.

Digital Watermarks

Another way to protect your assets is the use of digital watermarks. Digital watermarks exist for sounds as well as images. With Digimarc's patented digital watermarking technology (<http://www.digimarc.com>), for example, watermarks are embedded in an image creating a copyright communication device. Anyone who views your watermarked image containing your unique identifier will know who you are and how to contact you. Managing your digital assets may include embedding watermark specific identifiers to protect your unique creations.

Price Availability

Prices range dramatically between DAM application providers as well as within the product solutions one vender offers it is best to review the websites referenced in this article. Remember upgrades play an important role in determining which application solution to purchase. Upgrades from a standard version to an professional version is available for many products. In addition, companies often provide upgrades from competitors products. But most important can the DAM application you are

considering migrate from a Desktop to Networked to Enterprise solution allowing you and your company to grow in an organic fashion?

Conclusion

Even NAB'98, April 4-9 in Las Vegas, Nevada, has added a DAM category this year, "Asset Management, including ways to boost your revenues, protect and grow your business," (www.nab.org/conventions/). Digital Asset Management solutions assist in extending the shelf life of digital properties. Further, DAM solutions provide a bridge extending a collection of images and sounds to include the intended relationships between the images, sounds as well as other media types. The return on initial investments of asset creation is recouped to the extent that intellectual properties are managed well. This brief review of DAM systems is intended to provide pointers to some of these management solutions. Understandably the creation of original content is expensive. The creation of different expressions of same content should be less expensive with persistent yields. With new digital media platforms on the horizon the creation of the same expressions of content on DV-ROM, for example, and then on the web, increases the value of digital properties. In the end, digital assets are valuable intellectual property. Mind your valuables by choosing an asset management solution that works for your requirements!

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Resources: Digital Asset Management Solutions Summaries:

Bulldog Two.Zero from **The Bulldog Group Inc.**, Toronto, Canada, is a media management application built on top of object-relational databases Oracle8™ and Informix Dynamic Server™.

Platforms Server & Client: Mac OS/Windows 95/NT/SGI, SUN;

Phone: 800-382-4345

email: biz@bulldog.ca

URL: <http://www.bulldog.ca>

Product Demo: Available spring '98.

Cinebase from **Cinebase Software, Inc.**, in Los Angeles, California is a comprehensive Digital Media Management System optimized to handle digital objects of any size and support the continuous streaming and synchronization of video and audio.

Platform: Mac OS/Windows NT/SGI

Phone: 310-479-3700

email: cinemktg@cinebase.com

URL: <http://www.cinebase.com>

Product Demo: Guided tour available on website.

Cumulus 4.0 from **Canto Software**, in San Francisco, California is part of the Cumulus Media Management System available in scaleable network server packages that support TCP/IP connections to Mac OS and Windows clients and professional single user versions as — Desktop 4.0, Desktop PLUS 4.0, Network 4.0.

Platform: Mac OS/Windows NT

Phone: 415-905-0300

email: info@canto-software.com

URL: <http://www.canto-software.com>

Product Demo: Guided tour and demo version from website.

Destiny from **Centillion Digital Systems, Inc.**, in Indianapolis, Indiana is digital asset management system providing remote and on-site users the ability to electronically collaborate, organize, access and distribute electronic files using standard browsers via the Internet or client/server technology.

Platform: Mac OS/Windows NT

Phone: 317-262-4896

email: cdsinfo@centilliondata.com

URL: <http://centilliondigital.com>

Product Demo: Customer log-in and demo available on website.

LogExpress from **Alba Editorial, Inc.**, in Charlotte, NC is part of a media management suite of post production products including: Edl Pro, Edl Pro for Audio, EdlExpress and EdlExpress Plus.

Platform: Mac/Win 3.x/Win95/Win NT/SGI

Phone: 704-553 -7117

email: info@albaedit.com

URL: <http://www.albaedit.com>

Product Demo: Download demo from website.

Embark from **Digital Arts & Sciences**, in Alameda, California is collections management software built on relational database. Used by museums, universities and corporations it has capabilities for internal curatorial use, as well as a public face that can be on a network, CD-ROM or web solution.

Platform: Mac OS/Windows NT

Phone: 510-814.7200

email: sales@digital-collections.com

URL: <http://www.digital-collections.com>

Product Demo: Website gateway to a collections management database demo.

Enterprise Server 2.0 from **Magnifi, Inc.** in Cupertino, California, is a powerful enterprise application using knowledge management solutions for locating, indexing, visualizing and retrieving data files of all types distributed across a network.

Platform: Windows NT/Solaris

Phone: 800-301-0040

email: info@magnifi.com

URL: <http://www.magnifi.com>

Product Demo: Evaluation version for qualified companies on website.

FileMaker Pro 4.0 from **FileMaker, Inc.**, in Santa Clara, California provides easy information management from desktop-to-web databases be viewed and modified within web browsers.

Platform: Mac OS/Windows NT

Phone: 800-544-8554

email: : info@filemaker.com

URL: <http://www.filemaker.com>

Product Demo: Templates and examples available on website.

FocalBase from **FocalCorp**, in San Mateo, California, offers a three-tiered product line to satisfy the needs of individual creators (Solo), collaborative work teams (Studio), and huge enterprise-wide production and distribution facilities in advertising, entertainment, publishing, and marketing (Enterprise).

Platform: Mac OS/Windows NT

Phone: 888-FOCAL-99

email: sales@focalbase.com

URL: <http://www.focalbase.com>

Product Demo: Tour on website and downloadable evaluation copy available.

GALERiE from **DALiM** in Bedford, New Hampshire, offers a powerful asset management system for any company that wants to manage images, page layouts, sounds, videos, word processing documents, presentations, or any other type of digital data. It catalogs and automatically indexes valuable files on Macintosh, PC, and UNIX platforms and provides secure control through standard Internet browser technology for local or world-wide publishing, searching, and access.

Platform: Mac OS/Windows NT

Phone: 888-283-2546

email: info@dalim.com

URL: <http://www.dalim.com>

Product Demo: Online guided tour demo available on website.

ImageAXS from **Digital Arts & Sciences**, in Alameda, California, catalogs multimedia files such as photos, images, videos, and sound clips.

Platform: Mac OS/Windows NT

Phone: 510-814-7200

email: sales@digital-collections.com

URL: <http://www.digital-collections.com>

Product Demo: Downloadable demo available on website.

Imation Media Manager from **Imation Publishing Software Corp.** (formerly Luminous Technology Corporation), in Seattle, Washington, is an open, scaleable media asset management solution. It allows you to catalog and track your text, image, sound, video, layout and other digital media files to streamline your publishing workflow.

Platform: Mac OS/Windows NT

Phone: 800-685-6736

email: info@ips.imation.com

URL: <http://ips.imation.com>

Product Demo: Downloadable demo available on website.

Media Assets 2.0 from **MediaWay**, in Santa Clara, California, is a software system for managing and publishing libraries of images, videos, documents and multimedia on the web.

Platform: Clients for Mac OS/Windows NT

Phone: 800-632-7401

email: info@mediaway.com

URL: <http://www.mediaway.com>

Product Demo: A web version product demo available on website.

MediaBank Digital Asset Management from **Archetype**, in Cambridge, Massachusetts, is a server-based information and media asset management package that archives and tracks images, pages, text, and multi-media files on a network.

Platform: Clients Mac OS/Windows NT/Sun/SGI/RS/6000

Phone: 800-723-2724

email: marketing@atype.com

URL: <http://www.atype.com>

Product Demo: Web Interface demo using standard browser available on website.

MediaKey Digital Library System from **ISLIP Media**, in Pittsburgh, PA, is a complete suite of software and services for constructing digital media libraries in both real-time and offline environments for browsing, searching and exporting video-based media. MediaKey Logger, Builder and Finder are the three key components of the ISLIP solution and integrate speech recognition, image and face matching, and language understanding to enable users to search within the video itself.

Platform: Client: Intel Pentium PC (166 MHz MMX or higher), Windows

95/Windows NT 4.0), Macintosh supported via Netscape and Internet Explorer

browsers. Server: Intel Pentium Pro Server 200 Mhz, Windows NT 4.0

Phone: 412-687-0530

email: info@islip.com

URL: <http://www.islip.com>

Product Demo: A product demo available on website.

Media Management System from **Virage Inc.**, in San Mateo, California, is a customizable, web-based solution consisting of two products-the Video Cataloger, which performs highly intelligent cataloging of video content, and the Media Manager & Browser, which provides distributed access to the assets.

Platform: Windows NT/SGI

Phone: 650-573-3210

email: info@virage.com

URL: <http://www.virage.com>

Product Demo: Technology demo available on website.

MediaSphere from **Cascade Systems**, in Andover, Massachusetts, is a dynamic digital library/archive, content management system designed to meet the demand for a multi-user system that can handle all types of digital objects and is tightly integrated Adobe Acrobat technology. MediaSphere/W3 provides the browsing and research capabilities for companies requiring access via their Intranets or from the Internet.

Platform: Mac OS/Windows NT

Phone: 978-749-7000

email: info@cascadenet.com

URL: <http://www.cascadenet.com>

Product Demo: Technology demo available on website.

MediaVault II from **Storagetek**, in Louisville, Colorado, is a television broadcasting complete storage management solution for broadcasters migrating to digital systems.

Platform: Clients for Mac OS/Windows NT

Phone: 800-STORTEK (800-7867-835)

email: info@stortek.com

URL: <http://www.stortek.com>

Product Demo: Examples available on web site.

Portfolio 3.0 (formerly Fetch) from **Extensis**, in Portland, Oregon, builds visual catalogs automatically with detailed reference information and thumbnail images.

Platform: Mac OS

Phone: 800-796-9798

email: info@extensis.com

URL: <http://www.extensis.com>

Product Demo: Product download available.

Tropix 3.0 from **Alaras Corporation**, in Research Triangle Park, North Carolina, is a flexible and configurable file and image management and processing solution.

Platform: Windows NT/SGI

Phone: 919-544-1228

email: sales@alarascorp.com

URL: <http://www.alarascorp.com>

Product Demo: Sample, workflow and views available on website.

WebWare Access Framework (WAF) from **WebWare Corporation**, in Sausalito, California, is an object-oriented development framework providing the foundation for extranet-based media asset management and automated workflow solutions. Platform: WAF," runs on top of Apple's WebObjects technology
Phone: 415-339-8580
email: info@webwarecorp.com
URL: <http://www.webwarecorp.com>
Product Demo: Sample, workflow and views available on website.

About the Author

Convivial Design is a digital media communications company. The Convivial Studio focuses on content development, interface and interaction design, sound design, time-based media, digital storyboarding, graphics, and writing.

Pat Roberts is the founder of Convivial Design. As producer and director of interactive digital media communications, Ms. Roberts is adept at putting together creative teams and facilitating collaborative efforts between people, products and technology. As a designer she thrives in applying conceptual designs to products. Her special interest is in contributing to breakset products and methodologies and these days that's in telecommunications and connectivity!