Digital Asset Management Systems

Warren Singer shares his experience of digital asset management systems

In Q1 of 2012, Cambridge Technical Communicators, conducted a detailed investigation of the digital asset market. We were seeking a suitable solution for our business.

A digital asset management (DAM) system could offer our business an advanced online file management and distribution solution, enabling us to control how our digital assets were stored and made available internally and to our clients.

Modern DAM systems provide sophisticated features such as workflow management, file version management, image manipulation and transformation, which were features we were interested in. We wanted our users to be able to edit content within the system and output files into other formats and sizes. The ability to tag assets with metadata to aid search and retrieval was another feature important to our business.

DAM systems features include: workflow management, file version management, image manipulation and transformation

What were the key features we were seeking?

We identified a number of key features, important for us in any DAM solution.

Centralised storage

DAM systems provide a central online media library, to which access is controlled and from where files can be distributed to users in the required format. Only one version of the asset is maintained in the system, but can be made available in multiple locations.

Users can log in and view files via their web browser, without needing to install any software. Some systems enable users to access assets stored in the DAM from their local network drive. Files are automatically synchronised with the system, without the need to manually upload or download files.

Controlled user access

Administrators can create users and set up permissions, so that users only have access to specific folders or can only do specified actions on a file (for example, download, but not edit).

DAM systems also allow for guest users, who do not need to register for an account but receive an invitation to access specific files or folders, via a link. To save on administrative time, user self-registration can be enabled. Parts of the system can also be made available for public access.

File editing and manipulation

Some DAM systems provide in-built editing functionality, so that users can open and edit a file from within the system, make updates and produce an output file in the required format and size without needing any input from a graphic design agency.

Reporting tools

Most DAM systems provide auditing and reporting tools, to enable administrators to monitor usage of assets in the media library. Administrators can view details of the number of users who have accessed any asset in the system.

Workflow management and collaboration

Advanced DAM systems include features such as workflow management, enabling files on the system to fit into an organisation's existing review and approval process. For example, when a file is uploaded to the system, a message can be sent to a reviewer's group, requesting review and approval, before the file can be set live. Other files can be tagged so that approval is required for download.

Administrator controls what files or areas a user has access to

DIGITAL ASSET MANAGEMENT REPOSITORY

Files stored in one location only

All users have access to the same system
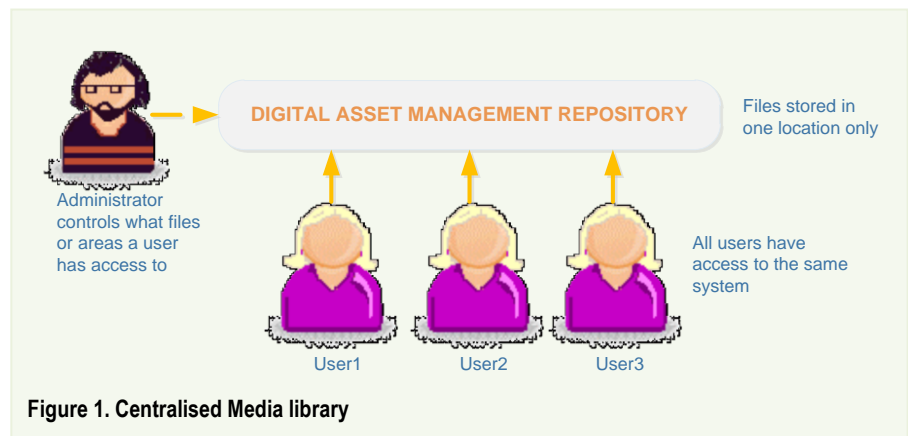
User1   User2   User3

Figure 1. Centralised Media library

Commenting and messaging features within the system enable both users and reviewers to add comments, which are linked to the stored asset(s), aiding collaboration.

Metadata customisation

One of the key benefits of DAM systems is that they enable users to add metadata tags to assets to aid storage and searching. Metadata can include any information about a file, such as keywords, descriptions, version, status, date created or other details that are important to your organisation.

Customised and rich metadata fields can be added to a file, and included in the search functionality, enabling users to quickly find what they are looking for.

Upload, processing and download

DAM systems provide an online file upload facility, to enable bulk imports. Some systems offer desktop-based file upload applications, which provide an easy means for moving multiple folders containing files into the system. Upload via FTP (file transfer protocol) is also usually supported.

When files are imported into the system, these are then processed. This processing stage is essential: during processing, the system identifies any existing metadata tagging associated with the file, indexes the file for searching, recognises the type of file and decides on this basis the type of thumbnail image to display on the system. For files that are supported by the system, once processed, the content can be viewed and edited.

If a file is in a format that is not supported by the system, it can still be uploaded, stored and downloaded – however, users will not be able to

> **Key features of Digital Asset Management Systems**
> - Asset upload and download
> - Creation of users, user groups and permissions
> - Creation of collections (lightboxes) and folders, with access-controlled permissions
> - Asset review cycles
> - Sub-branding/customisation
> - Built-in asset editing and transformation

view or edit the contents within the system.

When a user needs to download the file, the system is then able to transform and format it to the requested size and format. This feature enables immediate, on-demand image repurposing.

What problems can DAM solve?

Modern DAM systems are designed to address the issues described below.

- **Locating files**: users often have difficulty finding files, as storage and access to these assets may be fractured across the organisation. The file may be on a network drive which they don't have access to or they may not be aware that the file they need exists.
  DAM solution: all files are available on a centralised media library; metadata tagging of assets assists in search and retrieval.
  Most systems provide features such as folders for organising content and lightboxes, which enable users to create a list of selected items.
- **Version control**: a user need to update a document, but realises that they do not have the latest version or that there are multiple versions of the same document floating around.
  DAM solution: only one master file is stored in the system, but can be made available in different locations, in multiple instances. The system notifies the user when duplicate versions are uploaded. Some systems are intelligent enough to detect duplicates based on file metadata and content and not just the file name. Multiple versions of the file can be stored with the master, so that previous version can be accessed.
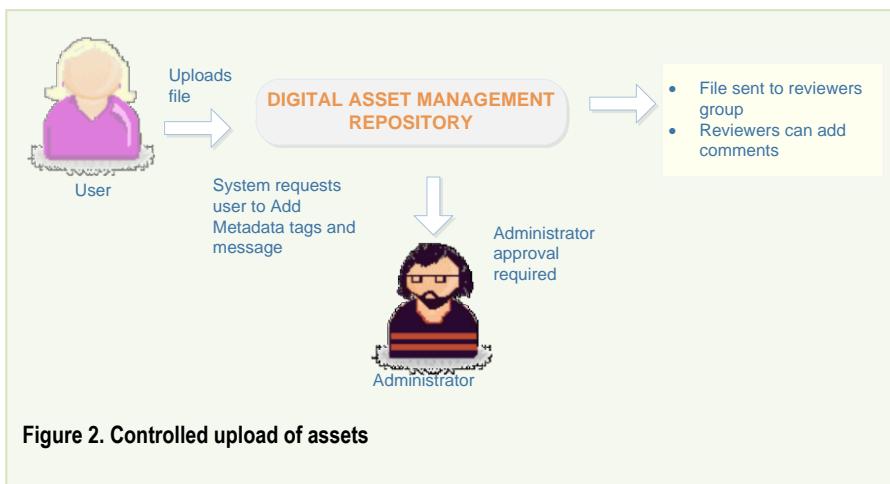- **Distributing files to users**: mail systems quickly get clogged up

Figure 2. Controlled upload of assets

by large files that need to be sent for review. In addition, users may not be able to receive large files from third parties, due to restrictions on mailbox sizes. Files may also need to be resent when the recipient cannot find them.

DAM solution: files can be made available online for collecting and downloading. Users are sent a notification containing a link to a shared folder or lightbox.

- **Access control**: users may be accessing, downloading and working with out-of-date versions or copies of documents or images that are not approved.

  DAM solution: only approved users can upload content; approval can be required for downloading specified content.

- **Reusing content**: documents and graphics need updating or recreating in a different format (for example, for the web) – engaging a creative agency resource is time-consuming and expensive. Often the content must be recreated in the desired size and format.

  DAM solution: content can be edited and produced directly on-demand from within the system– enabling it to be created immediately at no additional cost. Some systems enable administrators to create templates that control what sections of a document can be edited: for example, they can provide users with the option to edit the content and add new images, but not alter the layout, header and footer or styles of the document.

  - **License expiry**: It can be difficult to track when licenses for images expire, resulting in potential financial penalties for license infringement.

  DAM solution: notifications can be sent to users when assets expire. Some systems enable images located within a file to be linked to the source graphic in the system, so that when the image license expires, users of the document are notified.

- **Reformatting and resizing**: Organisation-wide there may be a variety of media supported, from PDFs, to images, video, Word documents, html files and so on.

  DAM solution: from one source file in the system, multiple output formats and sizes can be automatically provided on demand to a user. DAM systems vary in their capability, sophistication and approach to image manipulation and reformatting.

Creative professionals and technical communicators spend an average of 10% of their time on file management

- **Integration with other web systems:** content in one location needs to be copied for use by another application, such as an organisation's website. This creates additional work and review, and issues with version control, duplication and outdated content.

  DAM solution: The DAM system can be integrated into an existing intranet or website – so that the source files are stored in one location only, but displayed wherever required.

- **Customisation and branding**- most systems can be customised to fit into the brand and look and feel of an organisation.

How much can DAM save your organisation?

Significant cost savings across an organisation can be realised when users spend less time locating or recreating assets from scratch. Improved workflow efficiency also results in savings. The ability to edit content and produce on-demand output in the required format can significantly reduce production costs.

According to GISTICS research (see www.gistics.com), about £5,000 per person per year is spent on file management activities which include searching, verification, organisation, back-up and security.

Creative professionals and technical communicators spend an average of 10% of their time on file management – and searching accounts for 30% of that time. DAM systems have been shown to reduce the time spent by users in searching and locating files.

According to a recent survey of Portfolio Server users by Street Smart, DAM users saved 2.69 hours each week on average (with some users saving more than 10 hours each week!). If you add that up across multiple users in an organisation, this can result in significant savings.

What DAM solutions are available?

As part of our research, we short-listed a number of vendors – including Celum, Third Light, Asset Bank and Widen – and then carried out an RFI (request for information) process, which included detailed trial installations and discussions with sales representatives.

Below are details of our vendor comparison.

What features should the solution include?

The features you need will depend on the needs of your organisation. As a minimum, in our review, we considered the following to be core features:

- Bulk upload and download
- Metadata tagging
- Folder organisation and asset management for example, lightboxes (collections of files that have been dragged-and-dropped into a temporary area)
- Workflow management
- Access/permissions administration
- Asset editing and transformation
- Reporting
- Site customisation and branding
- Overall site usability and ease of administration

All of the four vendors we reviewed had these features to a greater or lesser degree.

- **Celum**, based in Austria, is at the top end of the market and has very advanced 3-D image manipulation features and integration, but at a price that was well beyond our reach. Celum cloud is a low-end, cloud-based entry level solution, but lacks the features of their enterprise version.
- **Widen**, based in the USA, has great usability features, their workflow management system is exceptional – however their administrative side is less impressive and they did not seem to offer flexible packages (only a single product and price).
- **AssetBank**, based in the UK, has a good system which is fully customisable. However, in our opinion the site is too much like the early generation photographer's systems.
- **Third Light**, based in Cambridge, UK has the best combination of features and price. Their product is user friendly and has a number of features not available on other systems. This includes sophisticated implementation of

duplicate detection and a fileserver module, which enables users to work on content on a local intranet drive, which is then synchronised with their online DAM system.

How easy is it to set up a DAM system?

Most vendors offer multiple options. The first decision to make is deciding whether you want to install the solution on an in-house server or have it hosted and run by a third party or by the vendor. Each of these options has advantages and disadvantages.

- **Installed on a server**– this is the preferred option for large organisations that want full control over their system. The benefits are faster access to assets in the media library (as installed onsite and close to users), plus costs are up-front – they only need to pay a one-off

Caption/Description	Windmill in the Netherlands with tulips
Keywords	agriculture, europe, flowers, holland, netherlands, panoramic, sky, sun, tourism, windmill
Copyright Notice	© Copyright Third Light Ltd.
Date Created	Tue 19th Jun 2007
Special Instructions	This is a copyrighted image. This photograph is used for display and example purposes in your IMS demonstration site, and may not be reproduced for any purpose. Reproducing this image may incur liabilites for which Third Light accept no responsibility however caused.
Last Changed	Tue 17th Apr 2012
Upload Date	Tue 17th Apr 2012
Expiry Date	Fri 17th Apr 2015
File location	Client 1 › Images › windmill.jpg
File size	2.1 MB
Est. TIFF size	5.9 MB
Reference	10160680403

Figure 3. Metadata descriptions displayed in asset preview

license fee and annual subscription, which is more cost-effective for large numbers of users and large database sizes. Third Light and Celum offer installed solutions.

- **Hosted** – this is often a preferred option for small and medium sized organisations, who don't want the overhead involved in installing the software in-house. The vendor may provide a hosting option, and will install and manage your system on one of their systems, for an annual or monthly subscription. Alternatively, you could use a third party hosting service provider. The benefits are less technical administration overhead and quicker time to get the system up and running. Most hosted solutions are plug-and-play – installed by the vendor and set up on your behalf. All the vendors we reviewed offered hosted solutions.
- **Cloud-based**– this is an alternative to hosted. Vendors such as Widen and Third Light offer cloud-based solutions through Amazon cloud.

What type of prices are available?

Most vendors offer a choice of entry level, mid-range and enterprise solutions.

Costs may be calculated on a monthly or annual basis. Most solutions require an initial installation and setup fee, and purchase of a one-off license if installed on your own servers. Add to this your annual maintenance fees, hosting and subscription costs.

Entry level costs depend on the number of users you need to support and the size of your asset library.

Small, hosted solutions offer the cheapest option and start from around £15 per month for a single user and limited storage and options.

Mid-tier systems supporting multiple users and 50-100GB data have entry level products in the range of £1,300 - £10,000 per annum. These can be either hosted, cloud-based or installed on your own systems.

Fully customised enterprise solutions with unlimited users and storage range from £10,000 - £45,000. These are generally installed onsite within an organisation, although some large customers also prefer a hosted option.

Refer to Table 1 for a summary comparison of vendors.

References and further reading

AssetBank, www.assetbank.co.uk

Celum, www.celum.com

DAM Learning Center, www.damlearningcenter.com

Third Light, www.thirdlight.com

Widen, www.widen.com

GISTICS www.gistics.com and http://dambestpractices.com

Street Smart Survey: http://www.damlearningcenter.com/street-smarts/how-much-time-does-digital-asset-management-save-you/

Feature	Widen	Celum	AssetBank	Third Light
Bulk upload and download	√√√	√√	√√	√√√
Metadata tagging	√√	√√	√√	√√√
Folder organisation and asset management	√√	√√	√	√√
Workflow management	√√	√√	√	√
Access/permissions administration	√√	√√	√√	√√√
Asset editing and transformation	√√√	√√√	√	√√
Reporting	√√	√√	√√	√√
Site customisation and branding	√√	√√√	√√√	√√√
Overall site usability and ease of administration	√√√	√√	√√	√√√
Duplicate detection	-	-	-	√
Synchronisation with local network drive	-	-	-	√
Cost and flexibility	√	√	√√	√√√

Table1. Vendor comparison