an introduction to...

Digital Asset Management for Photographic Collections

presented by

Brent Acie

ACE.Brent@gmail.com

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What It Is
-the big picture-

Digital Asset Management

- is a blanket term used to refer to systems, strategies and tasks for acquiring, renaming, annotating, rating, grouping, cross-referencing, optimizing, recording enhancements and manipulations to, backing up, exporting, cataloguing, archiving, securely storing and the retrieving of digital assets i.e. digital photographs, animations, videos, music and other digital media.

DAM systems

- There are several broad, though not necessarily totally distinct systems, that need to be considered to help determine actual requirements:
  - Library
  - Production
  - Workflow tracking
  - Brand
  - Digital supply chain services.

Library DAM systems

- are predominantly concerned with the archiving and retrieval of a high volume amounts of relatively static media assets. Photos, whether born-digital or hybrid usually fall in to this categories, as do many videos.

Production DAM systems

- are predominantly concerned with the storage, organization and version control of frequently changing digital assets. These are most likely to be in a digital media production environment.

Workflow DAM systems

- are predominantly concerned with the tracking of Digital Assets during production rather than as a final asset in its own right. This usually compliments a Production DAM system, though is primarily concerned with Project Management and reporting.

Brand DAM systems

- are predominantly concerned with the simplification of the re-use/recycling of branding type content within large organizations.

Supply Chain DAM systems

- are predominantly concerned with the transmission or publishing of Digital content i.e. music, videos and games to outside parties such as digital retailers or remote users.

Catalogue or Database?

- A Catalogue IS a Database. The main distinguishing feature is that a catalogue also has a field that holds a media/image proxy, such as a thumbnail. Both are equally searchable across specific fields – usually keywords. Media catalogues are usually relatively low cost, should be easy to install & administer, and ideally scalable to address future needs. They become the hub of the DAM system.

It’s a Battlefield Out There

Waging the War

- Unfortunately, there seem to be quite conflicting points of view in the way images are used and should be catalogued. This usually comes about between several distinct groups:
  - Humans: the layman and usually the end-user
  - Nerds: primarily from an IT background
  - Photographers
  - Librarians
- each has a different perspective, yet when compared carefully, none of them are actually right all the time.

Nerds vs Humans

- puts assets in to a single folder with a hopefully meaningful name

★ ★ ★ ★

- puts assets into a single folder with a hopefully meaningful name initially, and then duplicates into other relevant folders

★ ★

Humans vs Photographers

- puts assets into a single folder initially, and then duplicates into other relevant folders

★ ★

- puts assets into a single folder initially, with shortcuts/aliases to other folders

★ ★ ★ ★

Nerds vs Photographers

- adds assets to an existing folder based upon descriptive folder name

★ ★ ★

- puts new assets into a new folder each time, to allow for effective archiving

★ ★ ★ ★

Nerds vs Humans

- uses a descriptive filename—to a maximum of 31 characters—to hopefully indicate the image content

★ ★ ★

- uses a descriptive filename as long as necessary to hopefully indicate the image content

★ ★

Librarians vs Photographers

- uses a filename indicative of the asset without relevance to the individual image content

★ ★ ★

- uses a descriptive filename of the shoot without relevance to the individual image content

★ ★ ★

Librarians vs Photographers

- uses a single asset number and a single inviolate asset location

★ ★ ★ ★

- changes the filename continually to suit the needs of the job &/or image usage

★ ★

Librarians vs Humans

- sorts assets into a single subject and assigns a single Dewey (or other catalogue system), number

★ ★

- thinks of multiple possible subjects for a single image

★ ★ ★ ★

Librarians vs Humans

- finding an asset location is the end result of a Search query

★ ★

- finding an asset usually generates an interest in what is happening?
  what others come from the same shoot/photographer?
  what other images add to the narrative?

★ ★ ★ ★

Declaring a Truce

- Photographs are very human objects. They should be easy to locate by the end-user in a fairly human friendly fashion. The DAM system, incorporating processes and procedures from Photographers, Librarians and IT should run invisibly in the background, without notice or hindrance.

Setting up DAM systems

Scope

- Many people implementing DAM systems for the first time are surprised (and dismayed?) by just how far-reaching an effect they can have. It is not solely about being able to find digital assets more efficiently. The implementation process will usually expose many other business and technical issues—from file naming conventions to workflow—that have evolved over the years without having been properly discussed, evaluated and approved.

Why Bother?

- A good photograph with interesting content has an intrinsic value. This worth increases when descriptive metadata is embedded within the file itself. Metadata:
  - makes the image easy to find in catalogues or databases
  - describes the context of the image — its location, time, etc
  - links the image to its creator, rights holder and licensor
  - describes the allowed usages of the image.

Integration

- The DAM system is not a stand alone entity nor its application an isolated activity. It is, and should be, part of a much larger organisational/ departmental routine process:
  - acquisition and accession
  - capture/digitisation
  - documentation and storage
  - copyright and licence permissions/restrictions
  - movement tracking and condition reporting
  - producing copies to suit a range of needs/users.

Legislative Considerations

- Depending upon the nature of the organisation &/or the type of database, legislative considerations and International/ Australian standards may need to be factored in:
  - State Records Act 2000
  - AS ISO 15489.1&2-2002 Records Management
  - Freedom of Information Act 1992
  - Privacy Act 1988
  - Privacy Amendment (Private Sector) Act 2000
  - Public Sector Management Act 1994 (WA).

Internal Policies

- are usually fairly broad in scope. They describe and define the overall framework, big picture, or strategic and operational goals for an organisation/ department – its direction, commitment and goals. These will often require some revision and amendment alongside the development of the DAM system, in particular, to address any Legislative considerations.

Internal Goals

- are more clearly defined and vary with the project:
  - how & what to digitise
  - prioritisation e.g. due to degradation of the original
  - order of digitisation
  - available resources
  - collection management and preservation
  - cost-benefit
  - risk management
  - Access and custodianship
- Goals help determine quality and quantity.

Think Long & Re-evaluate Often

- As digitisation of existing collections is fairly complex and can be expensive, the long-term view should always be adopted. Think about future needs and uses. Re-evaluate this and current practice often to take advantage of technological processes and changes. Aim to:
  - avoid duplication of effort in the future e.g. don't scan just for the web
  - use applicable file formats from the outset
- Avoid cheap short-term solutions.

Quality Management

- A DAM system by definition has Digital Assets. These need to be of sufficiently high and consistent quality to meet their intended usage needs. Common factors are:
  - choose specific equipment for specific needs rather than one-size-fits-all
  - utilise that specific equipment at its optimum rather than the dumbed down out-of-the-box factory presets
  - maintain the digitised Master File quality rather than reducing and compressing to suit artificially imposed storage limitations.

Digitising Equipment

- must itself be of sufficient standard and capability to satisfy the Policy outcomes. The main factors to consider for choice of Digitisation (or Capture) equipment are:
  - Native Resolution
  - Dynamic Range
  - Internal/External Bit Depth
  - Output format
  - build quality i.e. professional/commercial vs consumer
  - training
  - local support

Digitisation Standards

- are more specific still and reflect the recommended technical specifications to maintain quality management. For example:
  - 16bits/channel RGB scan
  - TIFF file with LZW compression as working file
  - ProPhoto RGB colour space
  - PDF/X-3 format for archiving
- they can also codify acceptable ‘image enhancements’ N.B. these can vary considerably between organisations.

Digital Surrogate

- is a term used to refer to the digitised original. They provide broader public access to images than displaying the original and can be a means of managing and accessing collections whilst the original is securely archived in preservation conditions.
- If the initial quality is high enough, copies of this Digital Surrogate are able to be continually repurposed for specific end purposes e.g. poster presentation, web slideshow, etc.

Image Enhancement

- Digital surrogates are faithful reproductions of the original including faults and artefacts. Any image enhancement should reflect and acknowledge this.
- Manipulation in some instances, may be acceptable for Display/Presentation Purposes only.
- All image enhancements and manipulation shall be clearly documented.

Standard Operating Procedures

- These define the day-to-day operational procedures required to meet the Quality Management, Digitising Standards and Internal Policy. They are – or should be – revised frequently to reflect current best practice, and are also an accumulated knowledge base for scenarios outside of the norm. The most common SOPs include:
  - setting up software application preferences
  - determining equipment needs
  - workflow.

Metadata?

- Also know as meta-information, is quite literally ‘data about the data’
- It is a text-based ‘tag’ usually in the form of a description &/or keywords, that allows for text-based searches rather than manually eye balling a collection of images.
- Metadata related activities usually comprise 65 – 80% of a DAM system.

Metadata Schema

- Different industries develop different schema to suit their particular needs. These are matrices or tables of data that define the data sets and their relationships. Common ones include:
  - EXIF - Extensible Interchange Format
  - IPTC Core - International Press & Telecommunications Council
  - PLUS - Picture Licensing Universal System
  - VRA – Visual Record Association Core Record
  - DC - Dublin Core.

Metadata Templates

- Each schema has its own particular layout and codified conventions. Unused fields should never be appropriated (hijacked) for alternative use as this may confuse other DAM systems reading or viewing this data.
- Frequently used values can usually be saved off in a template form to readily populate multiple fields at once.

Public vs Private Metadata

- Each schema has a series of, initially empty, fields awaiting a value. Entering data in them is referred to as *populating*. These can usually be read by anyone else who has the string values for each field, that define its location & relationship to the rest of the schema. This is Public metadata.
- Private metadata may be relevant to the organisation only and is difficult —but not impossible—to access externally as the string values are not likely to be publically known.

Metadata within the Catalogue

- Libraries and Art Galleries in particular tend to create databases with metadata entered into the catalogue itself, or even referencing an external document.
- This is abhorrent to most photographers as the catalogue file is too easily corrupted and its metadata is completely independent of the image itself.
- In the event of a damaged catalogue, all the metadata would have to be re-entered again for each image.

Double Redundancy

- A better solution is to directly embed the metadata into the image file itself, then instruct the catalogue to *Extract* it from here to populate its own fields – effectively backing up this metadata in two (2) locations
- Alternatively, for some DAM applications, it is sometimes possible for the software itself to *Embed* its associated metadata back into the original image file.

Controlled Vocabulary

- The language used to describe images needs to be limited and clearly defined for consistency. Corporate Style guides may be of assistance, though they are seldom far reaching enough. Parameters should be codified for:
  - case & capitalisation
  - punctuation, in particular hyphenation
  - common phrases
  - acceptable acronyms.

Keywords

- are usually developed as a hierarchy of association – to indicate relationships. This is usually represented as nesting or a ‘tree’ structure.
  e.g. Geoscience Place Names of Australia
  http://www.ga.gov.au/map/names
- Ideally this should become a Master Keyword list, able to be transferred readily from one application to another and be backed up in a non-proprietary format.

Keyword Synonyms

- Whilst individual internal users of a catalogue tend to learn a specific taxonomy and limit their choice of terms, an end-user is not likely to do so. Synonyms usually need to be considered. These may be able to be added in at several different stages, from at the initial import stage through to running behind the search query – a little like a thesaurus:
  - Australian Pictorial Thesaurus
    http://www.picturethesaurus.gov.au/about.html

Copyright & Moral Rights

- The digitisation of materials will not occur unless the organisation is the copyright holder, or has written permission to do so from the copyright holder.
- Assertions of Copyright and Moral rights shall be acknowledged within the image metadata and credited as and where appropriate.
- Property and Talent releases, Privacy exemptions, etc. are likely to be required for some images.

Image Licences

- are simply a permission from the copyright holder to permit an image to be used in a particular way. These can range from very limited academic type licences i.e. non-commercial, no publication, no advertising, no web use except password protected academic sites, through to broader commercial usage, though (usually) still non-exclusive and non-transferable
- access by end-users to digital copies will comply with all intellectual property legislation.

Cultural Considerations

- Cultural protocols and conventions respecting cultural groups may have a bearing upon image collections and their management.

Summary & Conclusion

Digital Asset Management

- is an entire system from policy to practice.
- Digital Assets are merely information. They are not much more difficult to manage than any other piece of information.
- Although the initial implementation of a DAM system can be onerous, it is relatively simple to maintain once up and running.
- DAM systems make your life easier ☺

Bibliography

- Austerberry, David (2006) *Digital Asset Management, Second Edition* Focal Press. ISBN 0-240-80868-1
- Jacobsen, Jens; Schlenker, Tilman; Edwards, Lisa (2005) *Implementing a Digital Asset Management System: For Animation, Computer Games, and Web Development* Focal Press. ISBN 0-240-80665-4
- Krogh, Peter (2005) *The DAM Book: Digital Asset Management for Photographers* O'Reilly Media. ISBN 0-596-10018-3
- Mauthe, Andreas and Thomas, Peter (2004) *Professional Content Management Systems: Handling Digital Media Assets* Wiley. ISBN 0-470-85542-8

No pixels were harmed in the making of this production.