



INFORMATION VALUE MANAGEMENT™

Managing Media Files in the Enterprise

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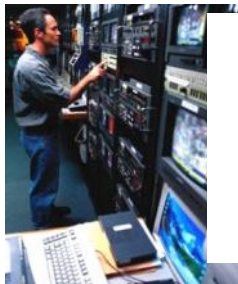
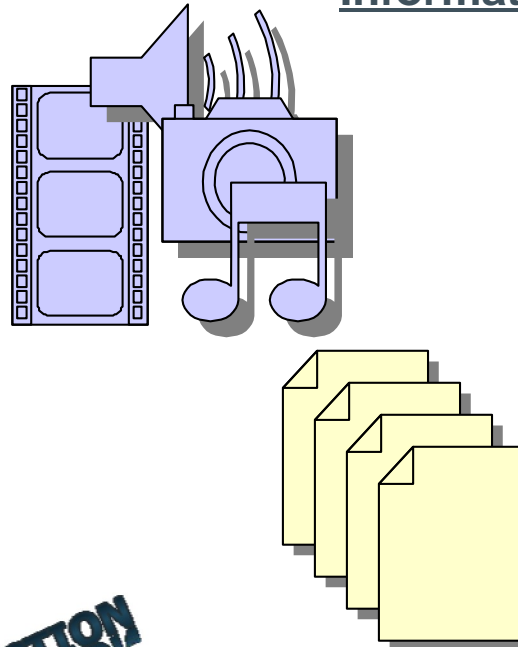


DAM vs. ICM



Digital Asset Management

Thumbnails?
Keywords or phrases?
Project relation?
Rights & permissions?
Media catalog?
Revision number?
Asset routing?
Collaboration?
Archive retrieval?



PRODUCTION

Information Classification & Management

Security information?
Service levels?
Customer confidential data?
Unwanted data?
Legal discovery hold?
Unused & old files?
Archive for future projects?
Storage tier?
Compliance related?



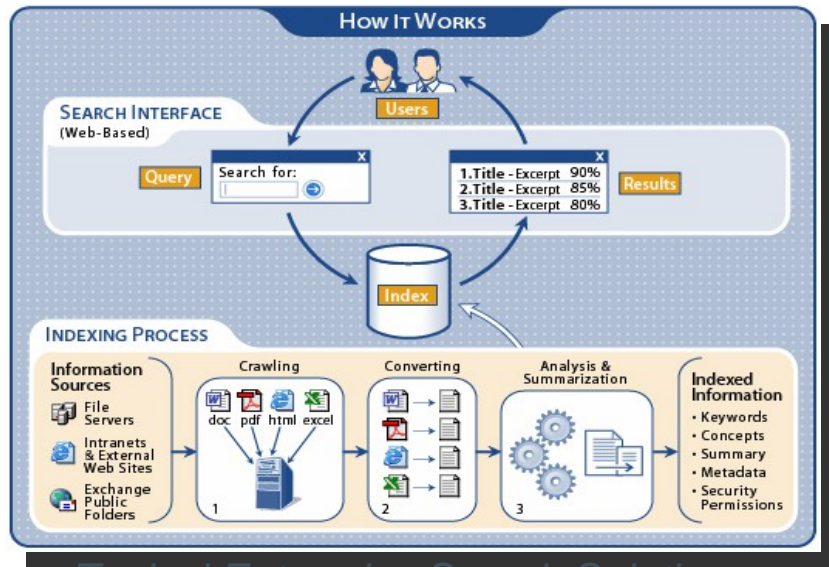
IT

FRCP Legal Discovery



- **Rule 26**
 - Pre-meeting must occur between IT teams at companies involved in a lawsuit
 - Companies must represent where and how data is stored
 - Technology must be in place to provide **access to requested information**
- **Rule 34**
 - Organizations must deliver files & emails in the format requestors define
 - Formats are usually native to retain hidden metadata (which must be extracted)
 - This rule precludes most search solutions that convert or don't **extract metadata**
- **Rule 37**
 - Codifies legal hold standards to ensure automated systems don't delete evidence
 - Companies cannot delete files or emails involved in an ongoing lawsuit
 - Precludes search solutions that don't include **data classification or management**

Why not Search?



Typical Enterprise Search Solution

- Slow indexing (10TB = 2 weeks)
- High overhead (50 to 300%)
- Not storage centric
- No file path metadata parsing
- Limited or no pattern recognition
- No media file metadata extraction
- No file “tagging”
- No policy management
- No file movement or grooming
- No file shortcuts or tracking
- **Can't meet FRCP Legal Discovery Rules**

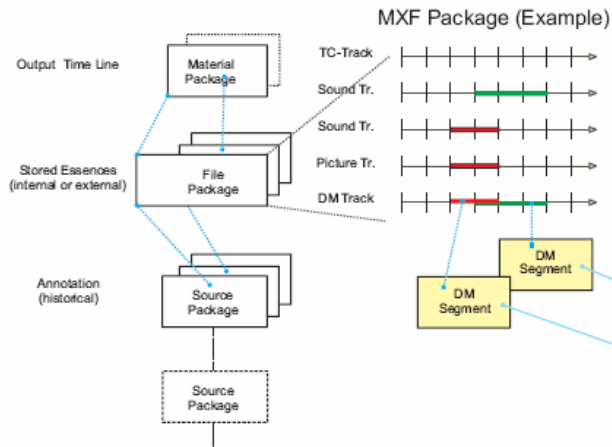
IBM + **YAHOO!** = 500K files max (~1/6 TB) + slow + high overhead

Google = 300K files max (~1/10 TB) + slow + high overhead

- **MXF**
 - Material Exchange Format
 - Wrapper format encapsulates and describes one or more “clips” of Essence
 - Essence “clips” may be pictures, sound, data or some combination thereof
 - Contains rich metadata that can be extracted and queried
- **EXIF**
 - Exchangeable Image File Format
 - Also: Int’l Press Telecom Council (IPTC) and Adobe’s Extensible Metadata Platform (XMP)
 - Metadata captured and stored with pictures by most digital cameras
 - Includes exposure time, flash use, subject distance, etc.
 - Most photo software can read, edit, extract and convert EXIF information
- **Video & Graphics Files**
 - JPEG, MPEG, TIFF, GIF, PNG, etc. all contain metadata
 - Metadata can be extracted, categorized and used for search queries
 - PNG metadata Example:
 - Author, Bits Per Pixel, Chromaticity Blue X , Color Type, Compression Method, Copyright, Creation Time, Description, Dimensions, Disclaimer, Filter Method, Interlace Method, Width, etc.

MXF

Logical model

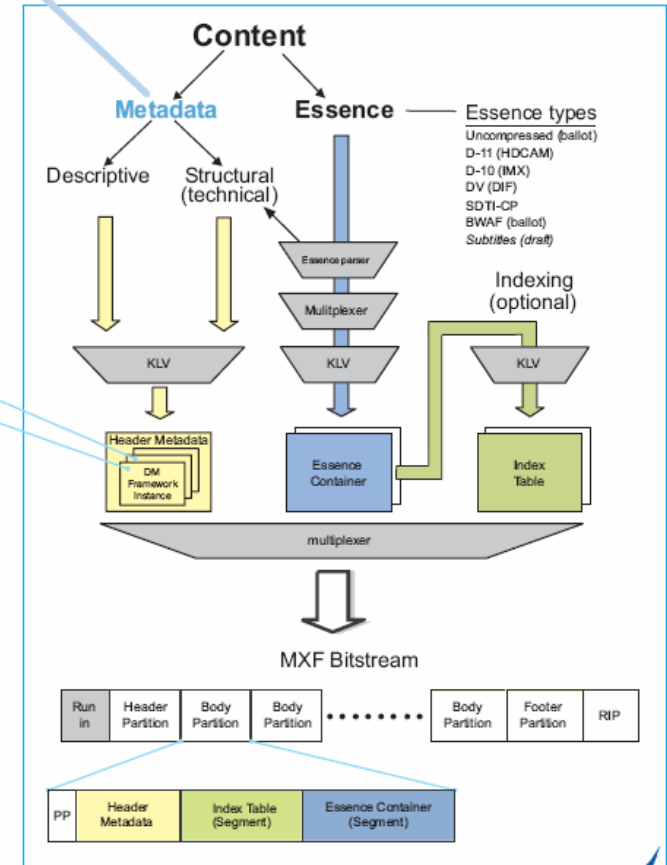


Metadata

Descriptive Metadata (DM): MXF can carry Metadata as KLV (e.g. DMS-1) or as other Data (e.g. XML).
 An XML instance may be encoded as a single KLV package. An example could be a description in P-META..
 Descriptive Metadata can be associated at any level of the material: the whole programme, a single clip, a single frame, etc.

Building an MXF file

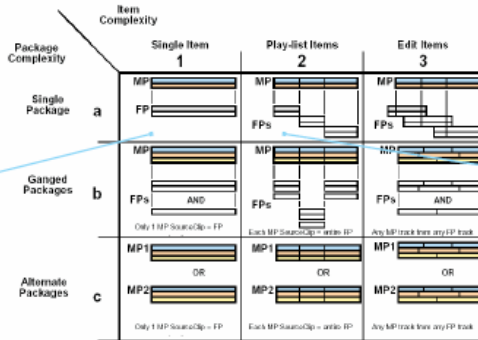
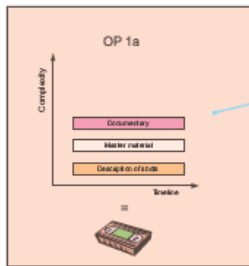
An MXF file consists of Essence and Metadata. The diagram below illustrates the building blocks of a generic method to generate an MXF file.



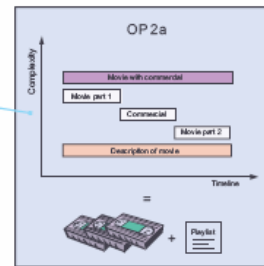
Operational Pattern

Operational pattern constrain MXF to certain application environments. An OP affects the number of items and packages present in the file.

Example



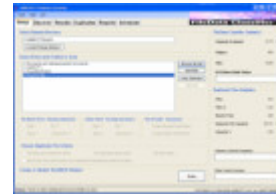
Example



Media File ICM Solution



**SCAN
DISCOVER**



*Agent-less scanning of
CIFS & NFS media files*



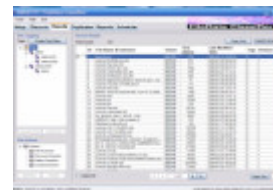
**QUERY
EXTRACT**



*Extract metadata
from media files*

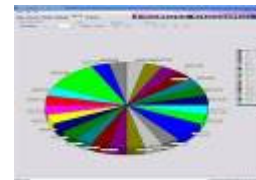


**CLASSIFY
TAG**



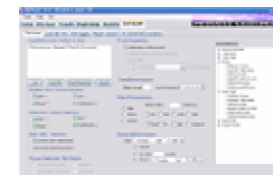
*Custom Tag **Media Files***

REPORT



Create fast, customizable reports

MANAGE



*Automate Scheduling
Extraction
Tagging
Reporting
File Movement
Shortcuts*