Cumulus Support for Video Metadata

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Agenda

1. Who is Canto, what is Cumulus?
2. Metadata for videos
3. Assets and metadata in Cumulus
Who is Canto?

- Independent software vendor
- Founded in 1990 in Berlin
- More than 60 employees
- Located in San Francisco, Berlin, and Gießen
- Vendor of the Digital Asset Management solutions “Cumulus” and “Flight”
- Over 2,500 active customers
- Over 60 strategic partners
What is Cumulus?

- Digital Asset Management product
- Started in 1992
- Extremely versatile DAM system with lots of configuration and customization options
- Web client for asset management
- Publishing portal for asset distribution
- Connections into cloud services for distribution
- Integrations into 26 other systems
- Support for video cloud streaming providers
- Workflow capabilities
- Lots of APIs incl. RESTful web service
- Available hosted and on premise
Types of Metadata Used for Videos

Technical Metadata
- Information about how the video data is stored

Descriptive Metadata
- Additional information that describes what is shown in the video

Workflow Metadata
- Information used when people are working with the video

Usage Statistics Metadata
- Statistics about where and how the video was used
Technical Metadata

Generic (applies to all types of files)
- File name, data size, creation, modification date
- Creating software, vendor, version, platform
- Capture date, encoded date, tagged date

Video Specific Metadata
- Container format, duration
- Video codec, width, height, bit rate, format, pixel aspect ratio
- Audio codec, bit rate, sampling rate, sample size, channel mode
- Subtitles, language

Automatically available by the file format
Descriptive Metadata

- Title, description, keywords, abstract / summary, genre
- Author, writer, director, producer, performers, contributor, publisher
- Copyright notice, contact information (Web URL)
- Target Audience
- Location
- Requirements

Entered by users
Workflow Metadata

Status for Approval Workflow

- Indicate the next workflow step
- Indicate whether this video is ready publishing
- Color Label

Comments

- Global comments about the whole video
- Comments on specific parts of the video
- Rating

Controlled by software or entered by users stored outside of the video
Usage Statistics Metadata

Publishing
- Who has licensed this video for which purpose, conditions
- Where was this video published (e.g. YouTube, Vimeo, SlideShare)

Video Analytics
- Who was watching this video
- When did he/she start, end, where did she/he come from, complete, repeated, abandoned views
- Location of the user
- Platform, device
- Average bitrates, startup time, errors, dropped frames, network speed

Automatically captured by publishing software stored outside of the video
Assets and Metadata in Cumulus
## Video File Formats Supported by Cumulus

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Video Metadata Standards Supported by Cumulus

Microsoft WMV Metadata
- 38 properties

Apple QuickTime Metadata
- 17 properties

XMP Number of properties by schema:
- 54 XMP
- 52 EXIF
- 43 PLUS LDF
- 38 IPTC Ext
- 15 XMP MediaManagement

- 13 IPTC Core
- 7 XMP Rights
- 6 DublinCore
- 3 EXIF Aux
- 1 XMP Resource Event
Assets and Metadata in Cumulus

Separating assets from metadata
- Asset content is stored at some location with information in the database pointing to it
- Metadata is stored in a database for organizing and searching
- The asset location reference is also just metadata

Metadata handling
- The database needs to be prepared to include fields for storing metadata
- Cumulus automatically reads metadata while importing assets
- Metadata can later be modified in the database by users or software
- Some metadata can be written back into assets (currently not into videos)
Setting up Metadata Fields

- Each field is identified internally by GUID
- Pick a field from any module (e.g. IPTC Filter) or configure custom field
- String fields support content in multiple languages
- Change indexing to make it available for sorting and searching
- Optionally user editable, mandatory
- Automatic values by field formula based on other field values
- Permission-based access per user
- Metadata values routed in/out
Thank you!

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