Metadata Enhanced Workflows

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The Good Old Days are Over

A Simple News Workflow

- Your crews acquired the content
- Your newsroom ran on a fixed schedule – 5, 6, & 11
- Your content had one destination
- Your staff was comprised of many, single-task specialists
Two Big Trends Shaping News Today

Big Trend 1:

New forms of journalists, new sources of news

- **MMJs**: Multi Media Journalists
- **VJs**: Video Journalists
- **MoJos**: Mobile Journalists
- **Preditors**: Producer/Editors
- **Citizen Journalists**
Two Big Trends Shaping News Today

Big Trend 2: Create Once Publish Sooner Publish Everywhere

- Noon, 6PM, 11PM no longer only times people consume news
- TV set no longer the device for consuming news
That Creates an Interesting Flowchart

Lots of Sources
- Smartphones
- Webcams
- Blogs
- Professional ENG
- Professional Journalists
  - Wire services
  - “Newspapers”... even if not on paper
- Graphics

Lots of Destinations
- The Web
- Mobile
- TV
- Satellite
- Cable
- Terrestrial
  - Secondary DTV Channels
- All of the above but on demand rather than “streaming”
Metadata is the key to surviving the overwhelming job of mapping all those sources to all those destinations
Newsrooms are Awash in Metadata

- From the point of view of a video asset, journalism IS metadata
  - Who
  - What
  - Where
  - When
  - Why
Evolving rule-automated workflows to support efficient, flexible, end-to-end media processing based on metadata content

- **Import Rules** - view folders outside of GV STRATUS and instruct transcoders how to acquire and package the content
- **Third party transcoder profiles** - Harmonic ProMedia, Telestream Vantage, Elemental Technologies, Anvato
- **Auto-rule operations** - now include: delete, copy, move, transfer, export, export transcode, import, import transcode, archive, and restore
- **Conform-and-clean workflow** - Automatically conforms and deletes source media to free up storage
  - e.g. Useful to create highlights subclips, or sequences, then conform and clean large source files
- **Export via ASPERA FASP protocol**
Creating Custom Metadata
Mapping “Standard” Metadata
Mapping General Metadata
This process creates eXtensible Stylesheet Language Transformations… XSLT files.

Simply, an XSLT is the instructions for mapping data from one source into another.

A solid metadata based workflow requires a built in XSLT processor for both importing and exporting metadata.
Mapping General Metadata
Digital Publishing at Different Moments

1. Digital First
   Individual news story clips are published as they are completed throughout the day

2. Live Simulcast
   Newscast is simulcast live to the web.

3. As Aired News
   Trusted anchor adds analysis and trust factor to news events
   Newscast is segmented into stories and posted on web ASAP
Challenge – It’s Complicated

Content must be transcoded and sent to digital Content Management System (CMS)

Broadcast Content

Transcode & Send

CMS
Captioning and metadata must be extracted and sent to CMS.
Metadata informs CMS to compose video in page and contains accompanying text.

Web Publishing

Metadata

CMS

& Send

Broadcast Content

Captioning

Digital Application
Challenge – It’s Complicated

Regulatory requirements for CMS to provide captioning

Broadcast Content

Captioning

Metadata

Transcode & Send

Web Publishing

CMS

Digital Application
Challenge – It’s Complicated

Web Publishing

Metadata guides ad decisioning system to avoid objectionable adjacencies

Broadcast Content

CMS

Transcode & Send

Captioning

Metadata

Metadata

Ad insertion and decisioning
This is too complicated for the newsroom.
Journalists should concentrate on journalism
The Solution

It’s Complicated

Hide the complexity from the users
Challenge – Look, No Hands!

Rules & Transcode Control Engines automatically perform the exports that enable the entire workflow.

Ad insertion and decisioning
The Production Staff Only Needs to Know This

Send to iOS App
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Click for more news from wsbtv.com
"As Aired" Means Telling the Whole Story

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This is the prerecorded package
But this tells the whole story
The Manual Way

Human operator plays line cut and jog/shuttles to beginning of story. Marks IN

Human jog/shuttles to end of story. Marks OUT

Production Control Room

Production Automation

GFX

CAM

Switcher

Multi Viewer

Capture

grass valley
A Belden Brand
The Manual Way

Manually created subclips are launched into manual distribution workflow.

Production Automation

GFX
CAM
Switcher
Multi Viewer
Capture

Broadcast Production Workflow

Broadcast Content

Web Publishing

Metadata

Transcode
Captioning

Broadcast Production
Workflow
The template is a preconfigured <MOS> drop of metadata:

- Segment type:
  - Splice
  - Embargo
  - Replacement/insertion
- Script data (text)
- DRM information
- Metadata to be consumed by Web CMS like position of the clip in a web page (top stories, sports, news, etc..)
- Scripts (as in code snippet)
- Link to URLs, etc…

Customers create their own templates

Template is dragged to a line of the NRCS running order
“As Aired” Means Telling the Whole Story

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Automatic Segmentation: Pre-production

- Use content management system to create a Segment Template
- Drag Segment Template bag to NRCS story
- Segment Template flows through to production automation as event triggers
Production automation drives server recording and start of live encoding.

Production automation marks segment in server.

Segments auto-generated in content management system & and published automatically.

SDI Stream is live encoded with HLS marks for downstream insertions, and replacement.
File Delivery

- Automatically segment live newscast
  - Based on production automation cues from segment template data:
    - Splice
    - Ad insert
    - Embargo

Production automation output to server input

Transcribed & Published
Live Streaming (simulcast)

- Live newscast streamed to OVP
- Production automation inserts cues based on segment templates:
  - Splice
  - Ad insert
  - Embargo
- The live newscast may be longer due to ad insertions
Metadata makes the Work Flow

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