DPX Metadata Editing

Digitization Process History – A FADGI-defined element designed to summarize data on the digitizing process including signal chain specifics and other elements. The first line documents the source film reel, the second line contains data on the capture process and the third line contains data on the storage of the file. A new line is added when the coding history related to the file is changed.

Possible Values –

- O=format (reversal, print, positive, negative, DPXv1, DPXv2, etc)
- G=gauge (super8mm, 8mm, 16mm, 35mm, etc)
- C=color (color, BW)
- S=sound (silent, composite optical, composite mag, separate optical reel, separate mag reel, etc)
- F=frames per second
- A=aspect ratio
- L=timing, grading (one-light, scene)
- W=bit depth (12-bit, 10-bit, 8-bit, etc)
- R=resolution (2K, 4K, 8K, etc)
- M=color model (RGB Log, etc)
- T=free ASCII text string; contains no commas but semicolons may be used

Example –

1. O=positive, G=16mm, C=color, S=silent, F=24, A=4:3, T=shrinkage
2. O=DPXv1, L=one-light, W=10-bit, R=2K, M=RGB Log, T=Lasergraphics Scanstation; SN123456; in-house,
3. O=DPXv1, W=10-bit, R=2K, M=RGB Log
- Line 1 reads: a 16mm positive color print, with no associated soundtrack, at 24fps and 4:3 aspect ratio (1.375:1). The film had some shrinkage.
- Line 2 reads: film was digitized to a DPX version 1 file. One-light grading was employed. The image is 10-bit at 2K resolution (2048x1556) with RGB Log color model. The film was digitized via a Lasergraphics Scanstation, serial number 123456, an in-house film scanner.
- Line 3 reads: the file is stored as DPXv1, 10-bit 2K RGB log]

Why DPX? – DPX is widely used within Federal Agencies. Agencies, such as NASA, have created large volumes of data (on the order of petabytes) of DPX files. Agencies, such as NARA and NMAAHC, rely on DPX for high resolution masters of films within their collections. It's robust and compatible across all platforms that have been tested within FADGI.

The Project So Far – The FADGI community has analyzed DPX files generated from approximately a dozen systems. Every piece of equipment changes the data within the header slightly. FADGI is first developing guidelines for embedding metadata in DPX headers, including customized use of User Defined Data fields. A draft for public comment will be available by the end of 2016. Next steps might include developing an open source tool, similar to BWF MetaEdit, to allow archivists to edit the data for consistency and longevity. As the project moves forward we'll be seeking input from the archival community. You can see what we're up to at www.digitizationguidelines.gov