# OPENED POINTS

The TimecodeLabelSubdescriptor, AS_07_Core_DMS_Framework, AS_07_Core_DMS_Device, AS_07_DMS_Identifier, AS_07_GSP_DMS_Object, AS_07_GSP_BD_DMS_Framework, AS_07_GSP_TD_DMS_Framework, and AS_07_Segmentation_DMS_Framework are using a value of 0x7F for byte 6. According to the ST 377 specification, this should be defined for *Abstract Descriptive Metadata Groups* (see chapter 9.8.4 and table 24).
These samples are using the value 0x53 which looks more adapted (and used by other frameworks).

As the AS_07_GSP_DMS_Object implements table 7 of the RP2057 TextBasedObject, the AS_07_GSP_DMS_Object inherit the *Text Mime Media Type* metadata that is a required one. The sample file have an empty value for binary GSP ; what should be the attended value in this case ?

# NOTE

The « AS-07 Shim parameters and Constraints » section of the AS-07 specification of June 2016 have a typo on the track number definition for timecode track.

# GOLDEN FILES
## SAMPLE #1 - UNCOMPRESSED

## REQUEST
The characteristics for the file #1 are below.

**1. Source item has:**

1.1. VITC with no problems
1.2. Closed captions on line 21 (CEA-608)
1.3. Box has handwritten notes on the back, organization scans, has scan available to embed
1.4. Collections management database record exists, output as XML
1.5. Transferred on SAMMA, XML file with process metadata exists
1.6. Organization provides data for the manifest

**2. File should have:**

2.1. Uncompressed picture essence:
  2.1.1. Raster: NTSC (720*486i59.94).
  2.1.2. Codec: Uncompressed YCbYCr 8-bit.
  2.1.3. Wrapping: SMPTE ST384.
2.2. Audio essence:
  2.2.1. 8 audio tracks (speakers in different language), Mono track, 24bits, 48 000Hz.
  2.2.2. Wrapping: ST382 – Broadcast Wave.
  2.2.3. The property “AS_07_Core_DMS_AudioTrackLayout” in “AS_07_Core_DMS” shall be present.
2.3. Master timecode:
  2.3.1. Present in Material Package, Top Level Source Package, GC System Item
  2.3.2. Labelling Timecode in Header Metadata shall be present (including DateTimeDescriptor and subdescriptor).
2.4. Historical source timecode:
  2.4.1. Present in Top Level Source Package, Low Level Source Package, GC System Item.
  2.4.2. Labelling Timecode in Header Metadata shall be present (including DateTimeDescriptor and subdescriptor).
2.5. Captions still in line 21
2.6. Captions at CEA-608 in ANC packets
  2.6.1. Wrapping: SMPTE ST436 with appropriate essence descriptor.
2.7. Captions converted to Timed Text
  2.7.1. Stored according to the SMPTE ST429-5 (File marked as OP1b).
2.8. TIFF image of box
  2.8.1. Wrapped in GSP as binary data.
  2.8.2. An instance of “AS-07 GSP Binary Data Descriptive Metadata” for non-essence binary data shall be present.
2.9. Collections management XML record:
  2.9.1. Wrapped in GSP as text-based data (SMPTE RP2057).
  2.9.2. Instance of “AS-07 GSP Text-based Data Descriptive Metadata” for non-essence text-based data.
2.10. Manifest embedded:
  2.10.1. Wrapped in GSP as text-based data (SMPTE RP2057).
  2.10.2. Instance of “AS-07 GSP Text-based Data Descriptive Metadata” for non-essence text-based data.

## SOURCE FILES
The following table describes the source files used to create the sample file #1.

| | |
|---|---|
| Sources / Video (with CC in line 21) / Audio | "SourceMediaSamples\nara_AVI_with_Captions\95-ak-30-excerpt.avi" |
| CEA608 | Shall be created from line21. Done. |
| TIFF image (box) | “SourceMediaSamples\nara_AVI_with_Captions\1_in_open_reel_box.tiff” |
| TimedText | “SourceMediaSamples\nara_AVI_with_Captions\SMPTETT.xml” |
| Collections management XML | "SourceMediaSamples\nara_AVI_with_Captions\95-ak-30-excerpt- |

| | |
|---|---|
| | CollectionManagementMetadata.html" |
| Manifest.xml | Created by EVS. |

# FILE DESCRIPTION

This section contains the description of the file #1 (as07_sample1-gf-unc-2.0.mxf).

## GENERAL

- OP-1b frame wrapped.
- The HMD (Header Metadata) is closed & complete.
- An 8K filler is present after the HMD.
- The RIP is present.
- The KAG size is 1.
- The essence is present in a single body partition.
  - The 2014 baseband shim required that all the essence is in a single partition. The new document requires a partitioning at 10 seconds or 1 minute. Could you confirm that the partitioning is required?
- The full index table is present in a body partition before the essence.
- A SMPTE ST436 ancillary data track is present with CEA-608 in CDP (extracted from the line 21 of the video essence).

## VIDEO

- Raster: NTSC (720*486i59.94)
- Codec: Uncompressed YCbYCr 8-bit
- Wrapping: ST384
  - A CDCI descriptor is present.

## AUDIO

- 8 audio tracks (speakers in different language):
  - Mono track
  - 24bits
  - 48000Hz
- Wrapping: ST382 – Broadcast Wave

## ANCILLARY

- Wrapping: ST436 – ancillary data packets
  - The “ANC Packets Descriptor” is present

## TIMECODE

- Master timecode: MP (Material Package), TLSP (Top Level Source Package) of the video, audio and ancillary package, System Item, LLSP (Low Level Source Package).
- VITC historical source timecode in the TLSP of the video, audio and ancillary package, System Item and LLSP.
- Track number are set according to the AS-07 specification (In TLSP, the track number for the master timecode track is 1, track number for historical timecode track is 0)
- The DateTimeDescriptor is present.
  - The ”essence container” property is set to “00.00.00.00.00.00.00.00.00.00.00.00.00.00.00.00”.
- The TimecodeLabelSubDescriptor are presents in the sample file.
  - DateTime Symbol: we use “Master”, “Historical”, “Sys 1”, “Sys 0”.
  - The essence trackID is not present in the Appendix C.4 but is mentioned in chapters 6.4.3.2.1.1 and 6.4.3.2.1.2.
  - Using the ULs now defined in the AS-07 specification of June 2016:

| Item Name | Item UL |
|---|---|

| | |
|---|---|
| TimecodeLabel Subdescriptor | 060e2b34.027f0101.0d0e0101.07040100 |
| DateTime Symbol | 060e2b34.01010101.0d0e0101.07040101 |
| DateTime ChannelID | 060e2b34.01010101.0d0e0101.07040103 |
| DateTime Essence Track Id | 060e2b34.01010101.0d0e0101.07040102 |
| DateTime Description | 060e2b34.01010101.0d0e0101.07040104 |

## DMS-1 AS-07 CORE FRAMEWORK

- An “AS_07_GSP_DMS_Object” is present.
- “AS_07_GSP_DMS_Object”, "AS_07_DMS_Identifier" and "AS_07_Core_DMS_Device" are using the ULs defined in the AS-07 specification of June 2016.

| Item Name | Item UL |
|---|---|
| DMS_AS_07_GSP_DMS_Framework | 060e2b34.04010101.0d010701.07020100 |
| AS_07_DMS_IdentifierRole | 060e2b34.01010101.0d0e0101.07010303 |
| AS_07_DMS_IdentifierType | 060e2b34.01010101.0d0e0101.07010304 |
| AS_07_Core_DMS_Device | 060e2b34.027f0101.0d0e0101.07010200 |
| AS_07_DMS_Identifier | 060e2b34.027f0101.0d0e0101.07010300 |

- The required properties of “AS_07_Core_DMS” are presents.
- The property “AS_07_Core_DMS_AudioTrackLayout” is set to the ‘AS07_AUDIO_LAYOUT_UNKNOWN’ UL.
- AS_07_Core_DMS_PictureFormat is defined to “forbidden”
- AS_07_Core_DMS_ShimName is defined to “SD Baseband shim”.

## SMPTE TT

- Wrapped in a data essence track based on ST 429-5.
  - It is own top level source package is present.
  - The TimedTextDescriptor is present.
  - Timed text essence container label used as well as timed text essence element used.

## TIFF

- Wrapped in a GSP based on SMPTE ST 410.
- “AS_07_GSP_BD_DMS_Framework” framework present in the file.
- AS_07_DMS_IdentifierValue for Generic Stream Partition is defined with the Generic Stream Partition streamID value.
- The property TextMIMEMediaType of the AS_07_GSP_DMS_Object (from table 7 of the RP 2057:2011) is defined to empty string.

## COLLECTION MANAGEMENT XML

- Wrapped in a GSP as non-essence text based.
- “AS_07_GSP_TD_DMS_Framework” framework present in the file.
- AS_07_DMS_IdentifierValue for Generic Stream Partition is defined with the Generic Stream Partition streamID value.

## MANIFEST

- Wrapped in a GSP as non-essence text based.
- “AS_07_GSP_TD_DMS_Framework” framework present in the file.
- AS_07_DMS_IdentifierValue for Generic Stream Partition is defined with the Generic Stream Partition streamID value.

# SAMPLE #2 – JPEG 2000

## REQUEST

The characteristics requested for the file #2 are below.

**1. Source item has:**

1.1. VITC with no problems
1.2. Intermittent LTC
1.3. Collections management database record exists, output as XML
1.4. Transferred on SAMMA, XML file with process metadata exists
1.5. Organization provides data for the manifest

**2. File should have:**

2.1. Lossless JPEG 2000 picture essence
  2.1.1. Raster: NTSC (720*486i59.94).
  2.1.2. Codec: JPEG 2000 Broadcast Profile Multi tile reversible 7 in Lossless.
  2.1.3. Wrapping: SMPTE ST422 – I1.
2.2. Audio essence
  2.2.1. 8 audio tracks (speakers in different language), Mono track, 24bits, 48 000Hz.
  2.2.2. Wrapping: ST382 – Broadcast Wave.
  2.2.3. The property “AS_07_Core_DMS_AudioTrackLayout” in “AS_07_Core_DMS” shall be present.
2.3. Master timecode:
  2.3.1. Present in Material Package, Top Level Source Package, GC System Item.
  2.3.2. Labelling Timecode in Header Metadata shall be present (including DateTimeDescriptor and subdescriptor).
2.4. Historical source timecode VITC
  2.4.1. Present in Top Level Source Package, Low Level Source Package, GC System Item.
  2.4.2. Labelling Timecode in Header Metadata shall be present (including DateTimeDescriptor and subdescriptor).
2.5. Historical source timecode LTC:
  2.5.1. Present in Top Level Source Package, Low Level Source Package, GC System Item.
  2.5.2. Labelling Timecode in Header Metadata shall be present (including DateTimeDescriptor and subdescriptor).
2.6. Historical source timecode LTC in discontinuities:
  2.6.1. The source file does not contain any discontinuities, we will create some manually.
  2.6.2. Present in Top Level Source Package, Low Level Source Package, GC System Item.
  2.6.3. Labelling Timecode in Header Metadata shall be present (including DateTimeDescriptor and subdescriptor).
2.7. Collections management XML record:
  2.7.1. Wrapped in GSP as text-based data (SMPTE RP2057).
  2.7.2. Instance of “AS-07 GSP Text-based Data Descriptive Metadata” for non-essence text-based data.
2.8. SAMMA XML record:
  2.8.1. Wrapped in GSP as text-based data (SMPTE RP2057).
  2.8.2. Instance of “AS-07 GSP Text-based Data Descriptive Metadata” for non-essence text-based data.
2.9. Manifest embedded:
  2.9.1. Wrapped in GSP as text-based data (SMPTE RP2057).
  2.9.2. Instance of “AS-07 GSP Text-based Data Descriptive Metadata” for non-essence text-based data.

## SOURCE FILES

The following table describes the source files used to create the sample file #2.

| | |
|---|---|
| Sources Video / Audio | "SourceMediaSamples\LC Complete record\419637.mxf" |
| Timecode discontinuities | Timecode discontinuities will be created manually. |
| Collections management XML | "SourceMediaSamples\1899xxx_MAVIS_redacted.xml" |
| SAMMA XML | "SourceMediaSamples\419638_SAMMAdata_redacted.xml" |
| Manifest.xml | Created by EVS. |

# FILE DESCRIPTION

This section contains the description of the file #2 (as07_sample2-gf-jpeg2000-2.0.mxf).

## GENERAL

- OP-1a frame wrapped.
- The HMD (Header Metadata) is closed & complete.
- An 8K filler is present after the HMD.
- The RIP is present.
- The KAG size is 1.
- The essence is present in a single body partition.
  - The 2014 baseband shim required that all the essence is in a single partition. The new document requires a partitioning at 10 seconds or 1 minute. Could you confirm that the partitioning is required?
- The full index table is present in a body partition before the essence.

## VIDEO

- Raster: NTSC (720*486i59.94)
- Codec: JPEG 2000 Broadcast Profile Multi tile reversible 7 in Lossless
- Wrapping: ST422 – I1

## AUDIO

- 8 audio tracks (speakers in different language):
  - Mono track
  - 24bits
  - 48000Hz
- Wrapping: ST382 – Broadcast Wave

## TIMECODE

- Master timecode: MP (Material Package), TLSP (Top Level Source Package) of the video and audio package, System Item, LLSP (Low Level Source Package).
- VITC historical source timecode with discontinuities in the TLSP of the video and audio package, System Item and LLSP.
- LTC historical source timecode with discontinuities in the TLSP of the video and audio package, System Item and LLSP.
- Track number are set according to the AS-07 specification.
- The DateTimeDescriptor is present.
  - The ”essence container” property is set to “00.00.00.00.00.00.00.00.00.00.00.00.00.00.00.00”.
- The TimecodeLabelSubDescriptor are presents in the sample file.
  - DateTime Symbol: we use “Master”, “Historical”, “Sys 1”, “Sys 0”.
  - The essence trackID is not present in the Appendix C.4 but is mentioned in chapters 6.4.3.2.1.1 and 6.4.3.2.1.2.
  - Using the ULs now defined in the AS-07 specification of June 2016:

| Item Name | Item UL |
|---|---|
| TimecodeLabel Subdescriptor | 060e2b34.027f0101.0d0e0101.07040100 |
| DateTime Symbol | 060e2b34.01010101.0d0e0101.07040101 |
| DateTime ChannelID | 060e2b34.01010101.0d0e0101.07040103 |
| DateTime Essence Track Id | 060e2b34.01010101.0d0e0101.07040102 |
| DateTime Description | 060e2b34.01010101.0d0e0101.07040104 |

## DMS-1 AS-07 CORE FRAMEWORK

- An “AS_07_GSP_DMS_Object” is present.
- “AS_07_GSP_DMS_Object”, "AS_07_DMS_Identifier" and "AS_07_Core_DMS_Device" are using the ULs defined in the AS-07 specification of June 2016.

| Item Name | Item UL |
|---|---|
| DMS_AS_07_GSP_DMS_Framework | 060e2b34.04010101.0d010701.07020100 |
| AS_07_DMS_IdentifierRole | 060e2b34.01010101.0d0e0101.07010303 |
| AS_07_DMS_IdentifierType | 060e2b34.01010101.0d0e0101.07010304 |
| AS_07_Core_DMS_Device | 060e2b34.027f0101.0d0e0101.07010200 |
| AS_07_DMS_Identifier | 060e2b34.027f0101.0d0e0101.07010300 |

- The required properties of “AS_07_Core_DMS” are presents.
- The property “AS_07_Core_DMS_AudioTrackLayout” is set to the ‘AS07_AUDIO_LAYOUT_UNKNOWN’ UL.
- AS_07_Core_DMS_PictureFormat is defined to “forbidden”
- AS_07_Core_DMS_ShimName is defined to “SD Baseband shim”.

## SAMMA XML

- Wrapped in a GSP as non-essence text based.
- “AS_07_GSP_TD_DMS_Framework” framework present in the file.
- AS_07_DMS_IdentifierValue for Generic Stream Partition is defined with the Generic Stream Partition streamID value.

## COLLECTION MANAGEMENT XML

- Wrapped in a GSP as non-essence text based.
- “AS_07_GSP_TD_DMS_Framework” framework present in the file.
- AS_07_DMS_IdentifierValue for Generic Stream Partition is defined with the Generic Stream Partition streamID value.

## MANIFEST

- Wrapped in a GSP as non-essence text based.
- “AS_07_GSP_TD_DMS_Framework” framework present in the file.
- AS_07_DMS_IdentifierValue for Generic Stream Partition is defined with the Generic Stream Partition streamID value.

# SILVER FILES

## SAMPLE #3 – JPEG 2000 PROFILE 2

### REQUEST

- Based on the golden JPEG 2000 file #2
- ISO 15444-1:2004 JPEG 2000 instead of ISO 15444-1:2004/AMD3

### FILE DESCRIPTION

The file #3 (as07_sample3-sf-jpeg2000-2.0.mxf) has the same description as the golden file #2 except it contains Profile 2 JPEG 2000 coding (The picture essence coding in the CDCI descriptor is different than the golden file #2).

# COPPER FILES

## SAMPLE #4 – NO MANIFEST

### REQUEST

- Based on the golden Uncompressed file #1
- No manifest file

### FILE DESCRIPTION

The file #4 (as07_sample4-cf-unc-2.0.mxf) has the same description as the golden file #1 except it does not contain the manifest: there is no GSP present to store the manifest as well as the associate descriptive static track in this file.

## SAMPLE #5 - INVALID PARTITIONNING

### REQUEST

- Based on the golden JPEG 2000 file #2
- Essence in the header partition and the Index table in the footer

### FILE DESCRIPTION

Here are the differences between the sample #2 and the sample #5 (as07_sample5-cf-jpeg2000-2.0.mxf):

- Essences are in the header partition
- The essence is not partitioned over multiple partitions.
- The complete index table is in the footer partition (Index Table Segments that compose one Complete Index Table follow Essence Container Segments that they index).

# LEAD FILES

## SAMPLE #6 – INVALID TIMECODE

### REQUEST

- Based on the golden JPEG 2000 file #2
- Typical timecode implementations (without RDD 48 constraints: only 1 timecode in MP, in SP and one occurrence in the system item).
- ST385 system item

### FILE DESCRIPTION

Here are the differences between the sample #2 and the sample #6 (as07_sample6-lf-jpeg2000-2.0.mxf):

- The Master Package, Top Level Source Package and Low Level source package only contains one timecode track.
- The track number of each timecode track is set to 0.
- SMPTE ST 385 system items are present.

## SAMPLE # 7 – NO RIP

### REQUEST

- Based on the golden Uncompressed file #1
- No RIP

### FILE DESCRIPTION

The file #7 (as07_sample7-lf-unc-2.0.mxf) has the same description as the golden file #1 except it does not contain the random index pack (RIP) at the end of the file.