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D3 Preservation File Format

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Abstract

The BBC Archive holds around 315000 D3 tapes. The D3 Preservation Project aims to transfer around 100000 of these tapes to MXF files over a six year period starting November 2007. This paper describes the MXF file format which is used to store the material transferred from D3 tape.

Additional key words: Ingex, LTO, Infax

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1 Introduction

The BBC Archive has around 315000 D3 tapes [1] in the archive, which hold around 362000 programme items. The D3 tape format has become obsolete and in 2007 the D3 Preservation Project was started with the goal to transfer the material from the D3 tapes onto file-based storage.

The goal of the D3 Preservation Project is to preserve the material stored on D3 tapes. The requirements for the file format can be summarized as follows:

The D3 preservation file format should

- be a faithful copy of the data on the D3 tape
- use open standards and follow existing practices
- provide easy access to the data for applications

This white paper describes the MXF [2] file format which is used to store the material transferred from D3 tape.

Section 2 describes the system which was created to transfer the material from D3 tapes to file-based storage. Section 3 gives an overview of the information stored in the file. Section 4 describes the physical structure of the file. Section 5, 6 and 7 describe the details of the essence data, header metadata and index table.

2 D3 Preservation System

The D3 Preservation system was created by BBC Research to transfer the material from D3 tape to files. Figure 1 shows an overview of the system relevant to the creation of the MXF file.

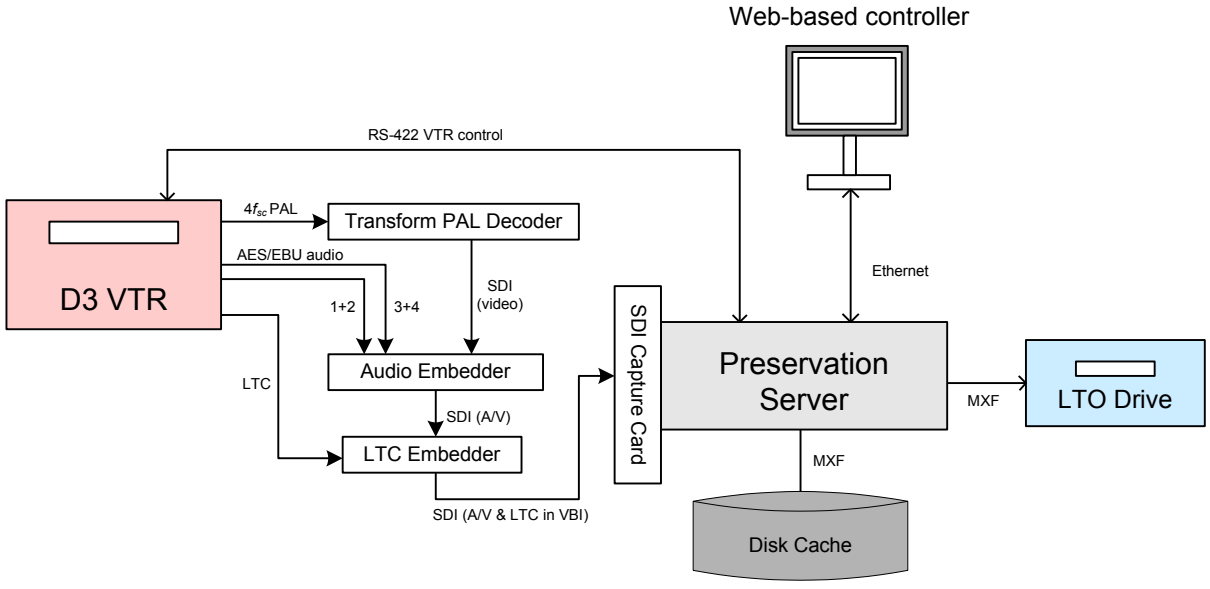

Figure 1 D3 Preservation System

The transfer process is controlled by the operator using a web-based controller. A recording is initiated by the operator by scanning the barcode on the D3 tape, which identifies the source D3 tape to the system, and inserting the D3 tape into the VTR. The preservation server starts the D3 VTR playing using the RS-422 serial port connection and the capture starts.

The D3 VTR outputs a $4f_{sc}$ digital composite PAL signal and the transform PAL decoder converts this signal into a digital component signal. The 4 channels of digital audio data are embedded in the SDI signal after compensating for the delay of the transform PAL decoder. The final step is to embed the LTC alongside the existing VITC in the VBI section of the video image. The cue and timecode analogue audio outputs from the VTR are optional for including in the SDI (via an analogue-to-digital converter) as two additional audio tracks.

An SDI capture card is used to input the data into the server. The essence data is combined with various items of metadata in the MXF file stored on the local disk cache. The disk cache fills with MXF files over time and at a certain point there are enough MXF files for transfer onto an LTO-3 tape [14]. The LTO-3 tape has a data capacity of 400GB. This is equivalent to around 5 hours of content or 10 half-hour D3 programmes for each LTO-3 tape.

The MXF file creation process goes through 4 phases: creating, writing, completing and updating for LTO storage. The MXF file is created after the server starts capturing the SDI signal. The file header is written first and this is followed by the frames of video, audio and timecode data.

The file is completed once the recording stops. Completing a file includes writing a footer section, setting the file duration at various places in the metadata and adding various items of metadata (see section 3 for more information).

At a certain point there are enough MXF files for transfer onto LTO tape. Each MXF file is updated with a new name derived from the LTO spool number plus the index of the file on the LTO tape. The MXF file is also updated with metadata relating to its storage on the LTO tape.

The software code for the preservation server can be found in the Ingex project on Sourceforge [10]. The white paper “File-base production: making it work in practice” [13] described various applications of the Ingex project, including the Ingex Archive [11] sub-project which contains the source code for the D3 preservation server. The libMXF software library [12] and the code in the ingex/libMXF/examples/archive directory is used by Ingex Archive to write and update the MXF file.

3 File Contents

The MXF file is compliant with SMPTE 377M-2004 [2]. It follows the Operational Pattern 1A specified in SMPTE 378M-2004 [3].

The MXF file stores the following essence data from the D3 tape:

- Video: 625 line, 25 fps, 8-bit uncompressed 4:2:2, 720x576, UYVY packed, SMPTE 384M-2005 [4]
- Audio: 4 tracks of 48kHz 20-bit PCM, SMPTE 382M-2007 [5]
    - the cue and/or timecode track are optional
- VITC and LTC at video frame rate, SMPTE 405M-2006 [6] and SMPTE 331M-2004 [7]

The D3 VTR reports tape replay errors over the RS-422 serial port. These errors are either present on the D3 tape or are introduced by the VTR, e.g., dirt on the read head. The position and severity of the errors are recorded in the MXF file. This data allows users to spot transfer errors more easily. This saves time because faulty VTRs are identified earlier and quality check operators waste less time reviewing faulty material that requires a retransfer anyway.

The BBC is required to check for Photosensitive Epilepsy (PSE) [15] failures before transmitting programmes. The server performs PSE analysis during ingest of the D3 tape and this information is stored in the MXF file. The analysis data can then be used to decide whether an archived programme, or section of a programme, is suitable for retransmission.

The BBC Infax database holds information about the programmes stored on D3 tapes. A subset of this information is stored in the MXF file. This information allows the programme to be identified and it also provides a basic description of the programme. There are two Infax data sets stored in the MXF file, one for the originating D3 tape and one for the MXF file stored on an LTO tape. The Infax data set is described in more detail in section 6.

4 File Structure

The MXF file consists of a sequence of key-length-value triplets. The sequence of KLV triplets can be grouped into 3 sections as is illustrated by Figure 2.

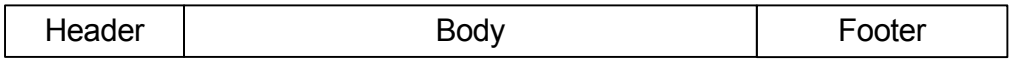

Figure 2 MXF file sections

The structure of the header section is shown in more detail in Figure 3. The header section starts with a header partition pack. The partition pack key includes the status of the header metadata. It starts out as *open* and *incomplete* when writing the file because metadata such as the file duration needs to be filled in (*incomplete*) and it doesn't contain the VTR replay error and PSE analysis failure information (*open*). Once the file is *complete* and has been updated for transfer to an LTO tape the status changes to *open* and *complete*.

Figure 3 Header section

The metadata starts with the primer pack and is followed by the Preface metadata set and the rest of the metadata sets. The index table at the end of the metadata defines the offsets of each element in a frame of essence data. The header section is completed by a fill element which sets the start of the body section at a fixed offset of 0x8000 bytes. This provides space for the header metadata to be extended without requiring the whole file to be rewritten.

The body section of the file contains the frames of interleaved video, audio and timecode essence data.

The structure of the footer section is the same as the header section, except that it doesn't have the trailing fill element and it ends with a random index pack. The D3 VTR replay error and PSE analysis failure data is contained within the footer section. The footer section's metadata status starts as *open* and *complete* after completing the writing of the file because it doesn't yet contain the LTO Infax data set. After updating the file for transfer to the LTO tape the status changes to *closed* and *complete*.

5 Essence Data

The body section illustrated in Figure 4 contains the essence data. It consists of zero or more content packages. A content package holds a frame of interleaved essence data and consists of a system, video and audio item. All the essence data KLV triplets use a 4 byte length.

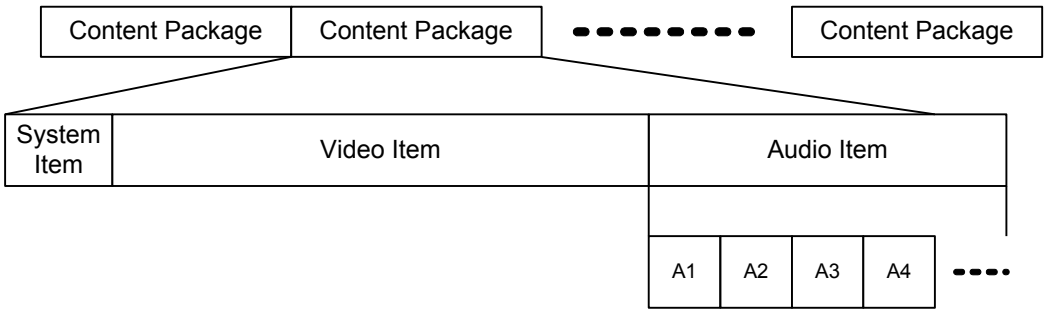

Figure 4 Body section

The system item starts with the element key listed in annex A.2 . The element value starts with the local tag 0x0102 which identifies the *timecode array* item specified in table 2 of SMPTE 405M-2006 [6]. It contains an array of two timecodes, VITC and LTC, which are encoded as specified in section 8.2 of SMPTE 331M-2004 [7]. For example, the system item bytes for a VITC and LTC value equal to 09:58:10:12 are as follows (bytes are shown in hexadecimal notation):

```
Key                : 06.0e.2b.34.02.53.01.01.0d.01.03.01.14.02.01.00
Len                : 83.00.00.1c
Timecode array     : 01.02
Local len          : 00.18
Array len          : 00.00.00.02
Array element len  : 00.00.00.08
VITC element       : 12.10.58.09.00.00.00.00
LTC element        : 12.10.58.09.00.00.00.00
```

The Video Item contains a frame of video data. The item starts with the element key listed in annex A.2 , followed by the element length (720 x 576 x 2 = 829440 bytes) and then the video data:

```
Key                : 06.0e.2b.34.01.02.01.01.0d.01.03.01.15.01.02.01
Len                : 83.0c.a8.00
Video data         : {829440 bytes}
```

The Audio Item contains between 4 and 6 elements of audio data. Each element in the item starts with the element key listed in annex A.2 , followed by the element length (3 x 48000 / 25 = 5760 bytes) and then the audio data:

```
Key                : 06.0e.2b.34.01.02.01.01.0d.01.03.01.16.yy.01.xx
Len                : 83.00.16.80
Audio data         : {5760 bytes}
```

The *yy* byte specifies the number of audio elements in the item. This byte is fixed for all Audio Item elements in the file and is equal to 0x04, 0x05 or 0x06. The *xx* byte specifies the index of the audio element within the Audio Item. The first element has a *xx* value of 0x01, the second 0x02, etc.

6 Header Metadata

The keys for the header metadata sets and items are listed in annex A.3 .

Figure 5 shows the top of the header metadata chain starting with a Preface set which references an Identification and Content Storage set.

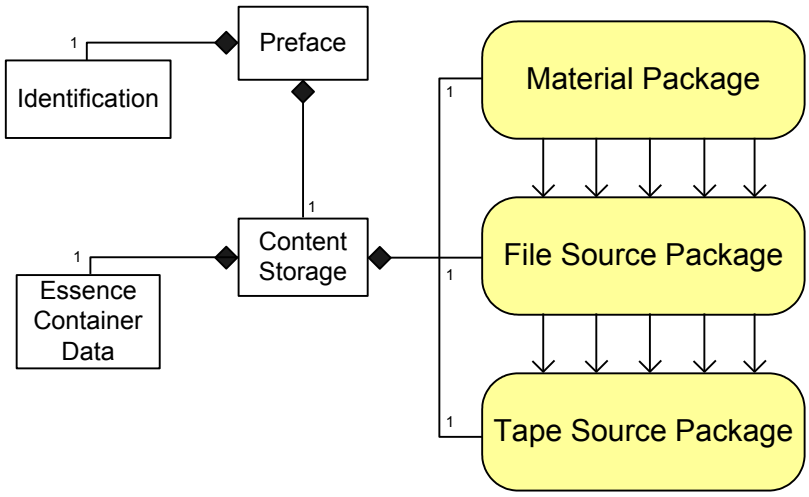

Figure 5 Preface and content storage packages

The Preface set contains two BBC extension items, D3P D3 Error Count and D3P PSE Failure Count, defined in Table 1. These count values are useful when reading a file from an LTO tape because the series of D3 VTR replay errors and PSE analysis failures are recorded in the footer section and are only available once the whole file has been transferred from the tape.

Name	Meaning	Type	UL
D3P D3 Error Count	Total number of D3 VTR replay errors	UInt32	06.0e.2b.34.01.01.01.01.0d.04.01.01.40.01.01.00
D3P PSE Failure Count	Total number of PSE analysis failures	UInt32	06.0e.2b.34.01.01.01.01.0d.04.01.01.40.01.02.00

Table 1 Preface set extension items

The Content Storage references an Essence Container Data set which links the essence data with the index table and file Source Package in the header metadata. The Content Storage also references a Material Package, file Source Package and tape Source Package.

The Material Package describes the playout video, audio and timecode tracks. It references the tracks in the file Source Package which in turn reference the tracks in the tape Source Package.

Figure 6 shows the Material Package sets. The timecode Track, *TC1*, defines a start timecode of 00:00:00:00, i.e. all files have the same playout start timecode. The video Track, *V1*, describes the video data and the Source Clip references the video track in the file Source Package. There are 4 to 6 audio Tracks, *An*, which describe the audio data and the associated Source Clips reference the audio tracks in the file Source Package.

Note: The Material Package timecode is defined to be continuous and therefore the timecode Track references the Timecode Component directly. This encoding is described in Annex C.1 of SMPTE 377M-2004 [2]

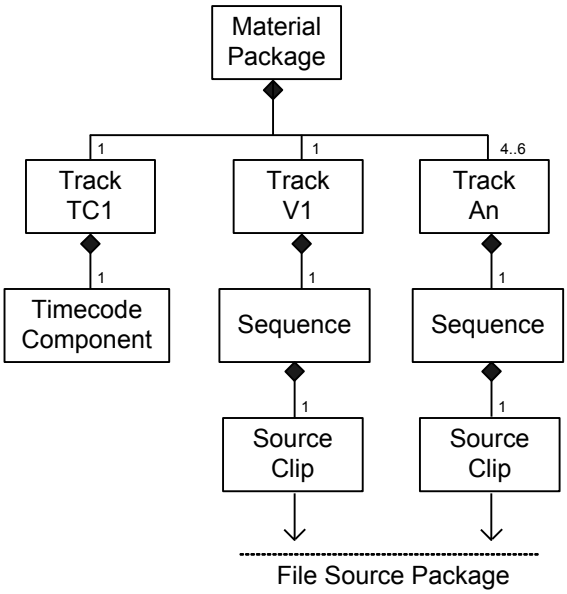

Figure 6 Material Package

The file Source Package shown in Figure 7 contains a Static Track which holds an Infax Framework set for the MXF file stored on an LTO tape.

Table 2 defines the Infax Framework set items. The Infax Framework set contains the descriptive data associated with either the source D3 tape or the MXF file stored on an LTO tape. The information is extracted from the Infax database to create the D3 Infax Framework set. The LTO Infax Framework set contains a modified version of the D3 Infax Framework set items.

The following items are modified to create the LTO Infax Framework set:

- Format is set to 'LTO'
- Spool Status is set to 'M' (Miscellaneous) and indicates it is a dub
- Stock Date is set to the date the MXF file was transferred to LTO
- Text is added to the Spool Descriptor item to identify the source D3 spool number. E.g. 'DUB OF DA 005123'
- Spool Number is set to the LTO spool number. E.g. 'LTA000001'
- Accession Number is set to an empty string

Note: Catalogue Detail is not used because a programme item can be part of more than one catalogue. Accession Number is not used because it can change.

Name	Meaning	Type	UL
D3P Format	The technical code describing the method or recording of this element. E.g. 'LTO', 'D3' (Infax table T_RECORDING, item tech_code)	UTF-16 String	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.01.00
D3P Programme Title	Indicates the series the programme is related to. E.g. 'OLD GREY WHISTLE TEST' (Infax table T_PROGRAMME, item	UTF-16 String	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.02.00

	series_title)		
D3P Episode Title	The title of this programme. E.g. ‘PICK OF THE YEAR’ (Infax table T_PROGRAMME, item core_title)	UTF-16 String	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.03.00
D3P Transmission Date	Earliest transmission date E.g. 1978-01-05 (Infax table T_PROGRAMME, item fst_aptx_date)	Timestamp (date only)	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.04.00
D3P Magazine Prefix	Programmes are identified by a programme number and optionally a magazine prefix, which consists of a letter, ranging from A to Z. E.g. ‘A’ (Infax table T_PROGRAMME, item mag_prefix)	UTF-16 String	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.05.00
D3P Programme Number	A number, which in conjunction with the magazine prefix, uniquely identifies a programme. It never changes and stays with the programme throughout its life. E.g. LNF2073N (Infax table T_PROGRAMME, item prog_num)	UTF-16 String	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.06.00
D3P Spool Status	This is a code to describe the recording status of spool items. E.g. ‘M’ (Infax table T_RECORDING, item rec_status)	UTF-16 String	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.07.00
D3P Stock Date	The date on which this element was recorded onto the spool item. E.g. 2008-04-17 (Infax table T_RECORDING, item rec_date)	Timestamp (Date only)	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.08.00
D3P Spool Descriptor	A free format text containing a technical description of the recording. E.g. ‘PROGRAMME (DUB OF 005123)	UTF-16 String	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.09.00

	(Infax table T_RECORDING, item rec_vt_desc)		
D3P Memo	The catalogue description of the recording. (Infax table T_RECORDING, item rec_cat_desc)	UTF-16 String	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.0a.00
D3P Duration	The amount of material used. This is recorded as duration in number of seconds. E.g. 4145 (Infax table T_RECORDING, item rec_duration)	Int64	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.0b.00
D3P Spool Number	The numeric component of a spool number. The number and prefix form a spool-number which is usually issued when the material is created. The spool number equates to a gap in the short term store. The number on the spool identifies the last current number for the spool. E.g. 'DA 005123' (Infax table T_SPOOL, item spl_prefix and spl_num)	UTF-16 String	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.0c.00
D3P Accession Number	The accession number identifies a number given to an item being added to the library's long term store system. This number equates to a space on a storage shelf and is therefore a reusable storage identifier. E.g. 'DA 018820' (Infax table T_SPOOL, item acc_prefix and acc_num)	UTF-16 String	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.0d.00
D3P Catalogue Detail	A code which allows the user to retrieve catalogue entries by a category. It is a subcatalogue within the catalogue. E.g. 'LONPROG' (Infax table T_CAT_ITEM, item cat_recall)	UTF-16 String	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.0e.00
D3P Production Code	The production code assigned to the programme.	UTF-16 String	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.0f.00

D3P Item Number	E.g. 70 Index of the item on the D3 tape containing multiple items E.g. 1	UInt32	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.10.00

Table 2 Infax Framework set

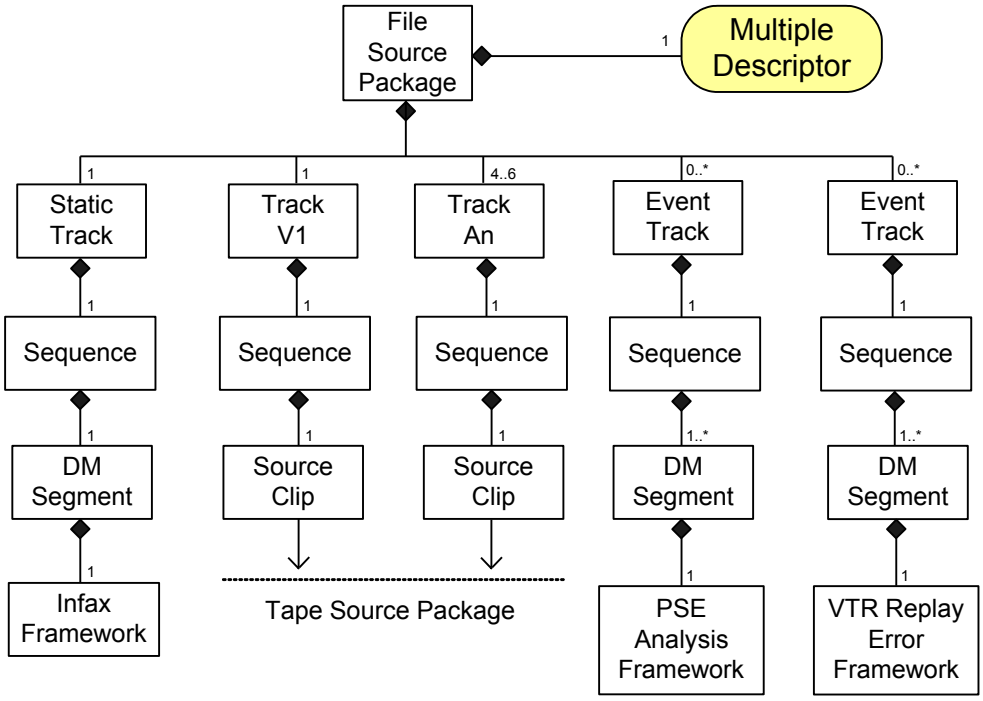

Figure 7 File Source Package

The video and audio Tracks are the same as the Material Package, and they reference the tracks in the tape Source Package.

The footer section's metadata includes a PSE analysis Event Track and a D3 VTR replay error Event Track. These tracks contain a sequence of PSE analysis failure and D3 VTR replay error events. Table 3 defines the items (all optional) in the PSE Analysis Framework set and Table 4 defines the items in the D3 VTR Replay Error Framework set.

The multiplicity shown for the Event Tracks in Figure 7 indicates that there can be more than one of these tracks. Each track is limited to 4095 events because of the limit on the number of sets that can be strong referenced when using the default KLV set encoding. This means that multiple tracks are used to accommodate more than 4095 events.

The Harding FPA software module analyses a video frame for PSE and produces a set of values. Each value corresponds to a particular feature that is known to cause epileptic fits: red flashes, luminance flashes and spatial patterns. An extended warning failure occurs when flashing persists for more than 5 seconds without a red or luminance flash failure.

If any analysis feature value exceeds the threshold of 500 or an extended warning failure occurs then an event is added to the MXF metadata containing a PSE Analysis Framework set.

The programme has failed the PSE analysis test if any values exceed the threshold or an extended warning failure has occurred, i.e. a programme stored in an MXF file, starting at frame *x* and ending at frame *y*, has failed the PSE analysis test if there are any PSE Analysis Framework events from frame x to *y*.

Name	Meaning	Type	UL
D3P Red Flash	The value of the red flash analysis, scaled by a factor of 1000.	Int16	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.02.01.00
D3P Spatial Pattern	The value of the spatial analysis, scaled by a factor of 1000.	Int16	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.02.02.00
D3P Luminance Flash	The value of the luminance flash analysis, scaled by a factor of 1000.	Int16	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.02.03.00
D3P Extended Failure	The extended warning failure flag	Bool	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.02.04.00

Table 3 PSE Analysis Framework set

The D3 VTR reports replay errors through the RS-422 serial port interface. A non-zero error code results in an event in the MXF metadata which contains a D3 Replay Error Framework set with the error code.

Name	Meaning	Type	UL
D3P D3 Error Code	Error code reported by the D3 VTR	UInt8	06.0e.2b.34.01.01.01.01.0d.04.01.01.01.03.01.00

Table 4 D3 VTR Replay Error Framework set

The Panasonic D3 VTR RS-422 protocol specification document [16] describes how the error code can be accessed using the *EXTENDED VTR STATUS DATA* call and what the values mean. The error code indicates the video error level in bits 0-2 and the audio error level in bits 4-6. There are 5 error levels defined in the specification:

Value	Error Level
0	Good
1	Almost good
2	Cannot be determined
3	Unclear
4	No good

Table 5 D3 VTR replay error levels

A detailed description of the audio and video essence data is provided through a Multiple Descriptor set referenced by the file Source Package.

Figure 8 shows the Multiple Descriptor associated with the file Source Package. A Network Locator set is referenced by the Multiple Descriptor and it contains the MXF filename.

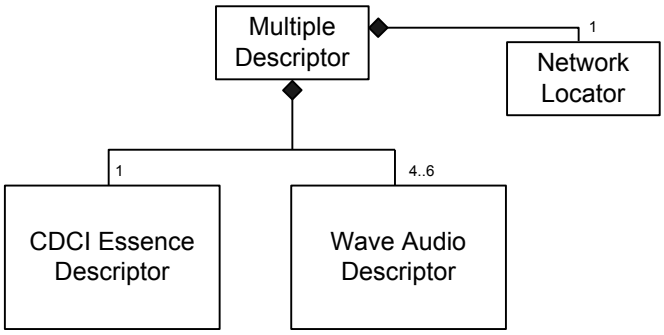

Figure 8 File Source Package Descriptor

The Multiple Descriptor contains a CDCI Descriptor for the video track and Wave Audio Descriptors for each of the audio tracks. Table 6 specifies the values for the items contained within the CDCI Descriptor set and Table 7 specifies the values for the Wave Audio Descriptor set.

Name	Value
Linked Track ID	*video Track ID item value*
Sample Rate	25/1
Container Duration	*file duration*
Essence Container	Frame wrapped uncompressed picture essence container label (see annex A.1)
Frame Layout	3 (Mixed Fields)
Stored Width	720
Stored Height	576
Video Line Map	{23, 336}
Aspect Ratio	4/3
Component Depth	8
Vertical Subsampling	1
Horizontal Subsampling	2

Table 6 CDCI descriptor item values

Name	Value
Linked Track ID	*audio Track ID item value*
Sample Rate	25/1
Container Duration	*file duration*
Essence Container	Frame wrapped Wave sound essence container (see annex A.1)
Audio Sampling Rate	48000/1
Locked	1 (true)
Channel Count	1
Quantization Bits	20
Block Align	3
Average Bits Per Second	144000

Table 7 Wave descriptor item values

The tape Source Package shown in Figure 9 describes the video and audio tracks on the D3 tape. The Tape Descriptor set defines that the Source Package is associated with a tape.

The timecode Track, *TC1*, always defines a start timecode of 00:00:00:00. The Static Track contains an Infax Framework which holds the Infax descriptive items associated with the D3 tape. Table 2 lists the Infax Framework items.

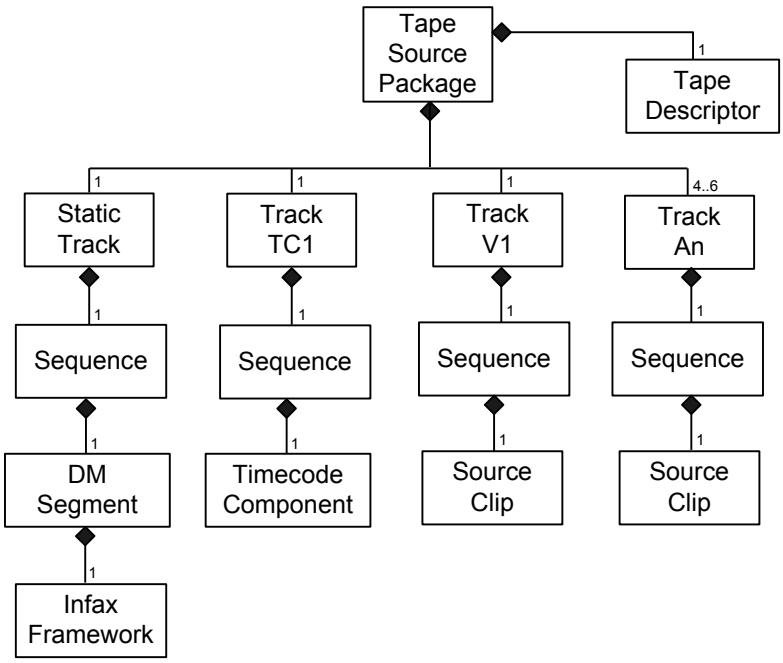

Figure 9 Tape Source Package

Annex 2 provides a text dump of the metadata contained in the footer section of an example D3 MXF file. It shows the metadata set names, item names, item values and strong reference hierarchy.

7 Index Table

The index table is included in the header and footer sections. It defines the duration of the essence data and the offset of each essence data element within the content packages. The index table segment key is listed in Table 10.

Table 8 specifies the values for the index table properties.

Name	Value
Index Edit Rate	25/1
Index Start Position	0
Index Duration	*file duration*
Edit Unit Byte Count	
4 audio tracks	852628
5 audio tracks	858408
6 audio tracks	864188
Index SID	2
Body SID	1
Delta Entry Array	
0	0
1	48
2	829508
3	835288
4	841068
5	846848

6 (optional)	852628
7 (optional)	858408

Table 8 Index Table Segment property values

The edit unit byte count is the size of the content package and its value depends on the number of audio tracks included. The delta entry array defines the offsets of each essence data element in the content package and the last two entries are optional depending on the inclusion of the cue and/or timecode audio track.

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Annex 1

A.1 Labels

Table 9 lists all the labels used in the MXF file.

Name	Label
MXF OP1a SingleItem SinglePackage MultiTrack Stream Internal	06.0e.2b.34.04.01.01.01.0d.01.02.01.01.01.09.00
Multiple wrappings	06.0e.2b.34.04.01.01.03.0d.01.03.01.02.7f.01.00
Frame wrapped uncompressed picture essence container	06.0e.2b.34.04.01.01.01.0d.01.03.01.02.05.01.05
Frame wrapped Wave sound essence container	06.0e.2b.34.04.01.01.01.0d.01.03.01.02.06.01.00
BBC D3 Preservation descriptive scheme	06.0e.2b.34.04.01.01.01.0d.04.01.01.01.01.01.00
Picture essence track	06.0e.2b.34.04.01.01.01.01.03.02.02.01.00.00.00
Sound essence track	06.0e.2b.34.04.01.01.01.01.03.02.02.02.00.00.00
Timecode essence track	06.0e.2b.34.04.01.01.01.01.03.02.01.01.00.00.00
Descriptive metadata track	06.0e.2b.34.04.01.01.01.01.03.02.01.10.00.00.00

Table 9 Labels used in the file

A.2 Structural Element ULs

Table 10 lists the structural element KLV keys used in the file, i.e. all keys other than the metadata set and item keys shown in Table 11.

Name	UL
[1]Header partition pack – *open incomplete*	06.0e.2b.34.02.05.01.01.0d.01.02.01.01.02.01.00
[2]Header partition pack – *open complete*	06.0e.2b.34.02.05.01.01.0d.01.02.01.01.02.03.00
Primer pack	06.0e.2b.34.02.05.01.01.0d.01.02.01.01.05.01.00
Filler	06.0e.2b.34.01.01.01.01.03.01.02.10.01.00.00.00
Index table segment	06.0e.2b.34.02.53.01.01.0d.01.02.01.01.10.01.00
System item element	06.0e.2b.34.02.53.01.01.0d.01.03.01.14.02.01.00
Picture item element	06.0e.2b.34.01.02.01.01.0d.01.03.01.15.01.02.01
[3]Sound item element xx of yy	06.0e.2b.34.01.02.01.01.0d.01.03.01.16.yy.01.xx
[4]Footer partition pack – *open complete*	06.0e.2b.34.02.05.01.01.0d.01.02.01.01.04.03.00
[5]Footer partition pack – *closed complete*	06.0e.2b.34.02.05.01.01.0d.01.02.01.01.04.04.00
Random index pack	06.0e.2b.34.02.05.01.01.0d.01.02.01.01.11.01.00

Table 10 Structural element keys used in the file

[1, 2] *The header partition is initially* open *and* incomplete *when writing the file and becomes* open *and* complete *when the file writing is completed*

[3] *The yy byte is fixed for all audio elements in the file and it equals the number of audio tracks. The xx byte is the index of the audio element within the sound item and it ranges from 0x01 to 0xnn where nn is the number of audio tracks in the file*

[4, 5] *The footer partition is initially* open *and* complete *when writing the file is completed. It becomes* closed *and* complete *when the file is updated for transfer to LTO tape*

A.3 Metadata Set and Item ULs

Table 11 lists all the metadata set and item keys used in the MXF file.

The sets shown in italics are not instantiated directly in the file and are only shown here because some of the items are instantiated as part of sets that are subclasses.

The sets and items shown in bold are BBC extensions.

Set (Class) Name	Parent Class Name	Item Name	UL
Interchange Object			*06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.01.00*
		Instance UID	06.0e.2b.34.01.01.01.01.01.01.15.02.00.00.00.00
Preface	Interchange Object		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.2f.00
		Version	06.0e.2b.34.01.01.01.02.03.01.02.01.05.00.00.00
		Operational Pattern	06.0e.2b.34.01.01.01.05.01.02.02.03.00.00.00.00
		Last Modified Date	06.0e.2b.34.01.01.01.02.07.02.01.10.02.04.00.00
		DM Schemes	06.0e.2b.34.01.01.01.05.01.02.02.10.02.02.00.00
		Essence Containers	06.0e.2b.34.01.01.01.05.01.02.02.10.02.01.00.00
		Identifications	06.0e.2b.34.01.01.01.02.06.01.01.04.06.04.00.00
		Content Storage	06.0e.2b.34.01.01.01.02.06.01.01.04.02.01.00.00
		D3P D3 Error Count	**06.0e.2b.34.01.01.01.01.0d.04.01.01.40.01.01.00**
		D3P PSE Failure Count	**06.0e.2b.34.01.01.01.01.0d.04.01.01.40.01.02.00**
Content Storage	Interchange Object		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.18.00
		Essence Container Data	06.0e.2b.34.01.01.01.02.06.01.01.04.05.02.00.00
		Packages	06.0e.2b.34.01.01.01.02.06.01.01.04.05.01.00.00
Essence Container Data	Interchange Object		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.23.00
		Body SID	06.0e.2b.34.01.01.01.04.01.03.04.04.00.00.00.00
		Index SID	06.0e.2b.34.01.01.01.04.01.03.04.05.00.00.00.00
		Linked Package UID	06.0e.2b.34.01.01.01.02.06.01.01.06.01.00.00.00
Identification	Interchange Object		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.30.00
		This Generation UID	06.0e.2b.34.01.01.01.02.05.20.07.01.01.00.00.00
		Modification Date	06.0e.2b.34.01.01.01.02.07.02.01.10.02.03.00.00
		Company Name	06.0e.2b.34.01.01.01.02.05.20.07.01.02.01.00.00
		Product Name	06.0e.2b.34.01.01.01.02.05.20.07.01.03.01.00.00
		Product UID	06.0e.2b.34.01.01.01.02.05.20.07.01.07.00.00.00
		Toolkit Version	06.0e.2b.34.01.01.01.02.05.20.07.01.0a.00.00.00
		Platform	06.0e.2b.34.01.01.01.02.05.20.07.01.06.01.00.00
		Version String	06.0e.2b.34.01.01.01.02.05.20.07.01.05.01.00.00
Generic Package	Interchange Object		*06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.34.00*
		Package UID	06.0e.2b.34.01.01.01.01.01.01.15.10.00.00.00.00
		Name	06.0e.2b.34.01.01.01.01.01.03.03.02.01.00.00.00
		Package Creation Date	06.0e.2b.34.01.01.01.02.07.02.01.10.01.03.00.00
		Package Modified Date	06.0e.2b.34.01.01.01.02.07.02.01.10.02.05.00.00
		Tracks	06.0e.2b.34.01.01.01.02.06.01.01.04.06.05.00.00

Material Package	Generic Package		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.36.00
Source Package	Generic Package		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.37.00
		Descriptor	06.0e.2b.34.01.01.01.02.06.01.01.04.02.03.00.00
Generic Track	Interchange Object		*06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.38.00*
		Track ID	06.0e.2b.34.01.01.01.02.01.07.01.01.00.00.00.00
		Track Number	06.0e.2b.34.01.01.01.02.01.04.01.03.00.00.00.00
		Track Name	06.0e.2b.34.01.01.01.02.01.07.01.02.01.00.00.00
		Sequence	06.0e.2b.34.01.01.01.02.06.01.01.04.02.04.00.00
Track	Generic Track		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.3b.00
		Edit Rate	06.0e.2b.34.01.01.01.02.05.30.04.05.00.00.00.00
		Origin	06.0e.2b.34.01.01.01.02.07.02.01.03.01.03.00.00
Event Track	Generic Track		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.39.00
		Event Edit Rate	06.0e.2b.34.01.01.01.02.05.30.04.02.00.00.00.00
		Event Origin	06.0e.2b.34.01.01.01.05.07.02.01.03.01.0b.00.00
Static Track	Generic Track		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.3a.00
Structural Component	Interchange Object		*06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.02.00*
		Data Definition	06.0e.2b.34.01.01.01.02.04.07.01.00.00.00.00.00
		Duration	06.0e.2b.34.01.01.01.02.07.02.02.01.01.03.00.00
Segment	Structural Component		*06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.03.00*
Sequence	Segment		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.0f.00
		Structural Components	06.0e.2b.34.01.01.01.02.06.01.01.04.06.09.00.00
Source Clip	Segment		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.11.00
		Source Package ID	06.0e.2b.34.01.01.01.02.06.01.01.03.01.00.00.00
		Source Track ID	06.0e.2b.34.01.01.01.02.06.01.01.03.02.00.00.00
		Start Position	06.0e.2b.34.01.01.01.02.07.02.01.03.01.04.00.00
DM Segment	Segment		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.41.00
		Event Start Position	06.0e.2b.34.01.01.01.02.07.02.01.03.03.03.00.00
		DM Framework	06.0e.2b.34.01.01.01.05.06.01.01.04.02.0c.00.00
Timecode Component	Segment		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.14.00
		Drop Frame	06.0e.2b.34.01.01.01.01.04.04.01.01.05.00.00.00
		Rounded Timecode Base	06.0e.2b.34.01.01.01.02.04.04.01.01.02.06.00.00
		Start Timecode	06.0e.2b.34.01.01.01.02.07.02.01.03.01.05.00.00
Generic Descriptor	Interchange Object		*06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.24.00*
		Locators	06.0e.2b.34.01.01.01.02.06.01.01.04.06.03.00.00
File Descriptor	Generic Descriptor		*06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.25.00*
		Linked Track ID	06.0e.2b.34.01.01.01.05.06.01.01.03.05.00.00.00
		Sample Rate	06.0e.2b.34.01.01.01.01.04.06.01.01.00.00.00.00

		Container Duration	06.0e.2b.34.01.01.01.01.04.06.01.02.00.00.00.00
		Essence Container	06.0e.2b.34.01.01.01.02.06.01.01.04.01.02.00.00
Generic Picture Essence Descriptor	File Descriptor		*06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.27.00*
		Aspect Ratio	06.0e.2b.34.01.01.01.01.04.01.01.01.01.00.00.00
		Frame Layout	06.0e.2b.34.01.01.01.01.04.01.03.01.04.00.00.00
		Stored Height	06.0e.2b.34.01.01.01.01.04.01.05.02.01.00.00.00
		Stored Width	06.0e.2b.34.01.01.01.01.04.01.05.02.02.00.00.00
		Video Line Map	06.0e.2b.34.01.01.01.02.04.01.03.02.05.00.00.00
Generic Sound Essence Descriptor	File Descriptor		*06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.42.00*
		Audio Sampling Rate	06.0e.2b.34.01.01.01.05.04.02.03.01.01.01.00.00
		Channel Count	06.0e.2b.34.01.01.01.05.04.02.01.01.04.00.00.00
		Locked	06.0e.2b.34.01.01.01.04.04.02.03.01.04.00.00.00
		Quantization Bits	06.0e.2b.34.01.01.01.04.04.02.03.03.04.00.00.00
Multiple Descriptor	File Descriptor		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.44.00
		Sub Descriptor UIDs	06.0e.2b.34.01.01.01.04.06.01.01.04.06.0b.00.00
CDCI Essence Descriptor	Generic Picture Essence Descriptor		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.28.00
		Component Depth	06.0e.2b.34.01.01.01.02.04.01.05.03.0a.00.00.00
		Horizontal Subsampling	06.0e.2b.34.01.01.01.01.04.01.05.01.05.00.00.00
		Vertical Subsampling	06.0e.2b.34.01.01.01.02.04.01.05.01.10.00.00.00
Wave Audio Descriptor	Generic Sound Essence Descriptor		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.48.00
		Avg Bps	06.0e.2b.34.01.01.01.05.04.02.03.03.05.00.00.00
		Block Align	06.0e.2b.34.01.01.01.05.04.02.03.02.01.00.00.00
Tape Descriptor	Generic Descriptor		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.2e.00
Locator	*Interchange Object*		*06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.31.00*
Network Locator	Locator		06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.32.00
		URL String	06.0e.2b.34.01.01.01.01.01.02.01.01.01.00.00.00
Descriptive Framework	Interchange Object		*06.0e.2b.34.02.53.01.01.0d.01.04.01.00.00.00.00*
D3P D3 Replay Error Framework	Descriptive Framework		**06.0e.2b.34.02.53.01.01.0d.04.01.01.01.03.00.00**
		D3P D3 Error Code	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.03.01.00**
D3P Infax Framework	Descriptive Framework		**06.0e.2b.34.02.53.01.01.0d.04.01.01.01.01.00.00**
		D3P Format	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.01.00**
		D3P Programme Title	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.02.00**
		D3P Episode Title	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.03.00**
		D3P Transmission Date	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.04.00**
		D3P Magazine Prefix	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.05.00**
		D3P Programme	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.06.00**

		Number	
		D3P Spool Status	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.07.00**
		D3P Stock Date	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.08.00**
		D3P Spool Descriptor	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.09.00**
		D3P Memo	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.0a.00**
		D3P Duration	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.0b.00**
		D3P Spool Number	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.0c.00**
		D3P Accession Number	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.0d.00**
		D3P Catalogue Detail	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.0e.00**
		D3P Production Code	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.0f.00**
		D3P Item Number	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.01.10.00**
D3P PSE Analysis Framework	Descriptive Framework		**06.0e.2b.34.02.53.01.01.0d.04.01.01.01.02.00.00**
		D3P Red Flash	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.02.01.00**
		D3P Luminance Flash	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.02.03.00**
		D3P Spatial Pattern	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.02.02.00**
		D3P Extended Failure	**06.0e.2b.34.01.01.01.01.0d.04.01.01.01.02.04.00**

Table 11 Metadata set and item keys used in the file

Annex 2

An example D3 MXF file, *LTA00000101.mxf*, is made available as part of the project on Sourceforge, http://ingex.sourceforge.net/archive. This annex shows a text dump of the metadata in the footer section of the example file. This text dump was produced using mxflib's *mxfdump* tool which can be downloaded from http://mxflib.sourceforge.net.

The example file contains 25 frames of essence data transferred from a D3 tape. The video shows a programme clock with various bits of information and the audio is a tone signal. There are 4 audio tracks. The first frame has a VITC/LTC equal to 00:02:06:22 and the last frame has VITC/LTC equal to 00:02:07:21. An example D3 VTR error is set at frame 0 and an example red flash PSE analysis failure is set at frame 24.

The dump starts with the Preface set and continues with the items within that set and the chain of strong referenced sets. Each indentation increment signifies the next level of containment in the strong reference hierarchy. The value for each item is shown and in some cases a more readable description is used instead.

```
  Preface
    InstanceUID = {3d169e71-a4ee-41a7-a509-83cfd67e962e}
    LastModifiedDate = 2008-04-17 10:04:29.028
    Version = 258
    OperationalPattern = MXF OP1a SingleItem SinglePackage
    EssenceContainers
      EssenceContainer = MXF-GC Generic Essence Multiple Mappings
      EssenceContainer = MXF-GC Uncompressed Pictures
      EssenceContainer = MXF-GC AES-BWF Audio
    DMSchemes
      DMScheme = [060e2b34.0401.0101.0d040101.01010100]
    D3P_D3ErrorCount = 1
    D3P_PSEFailureCount = 1
    Identifications
      Identification = {f50f5f80-81a7-47ed-af4c-ad998dea6fec}
      Identification -> Strong Reference to Identification
        Identification
          InstanceUID = {f50f5f80-81a7-47ed-af4c-ad998dea6fec}
          ThisGenerationUID = {4e2c4154-c0c6-46f0-ab1d-626caa3f87f4}
          CompanyName = BBC
          ProductName = BBC Archive MXF Writer
          VersionString = Version Feb 2008
          ProductUID = {9e2608b1-c9fe-4448-88df-2694cf77599a}
          ModificationDate = 2008-04-17 10:04:29.028
          ToolkitVersion = Major="0", Minor="1", Patch="0", Build="0", Release="VersionUnknown"
          Platform = libMXF (Linux)
    ContentStorage = {e902fa6d-beee-4971-b2f7-19a6941a33b5}
    ContentStorage -> Strong Reference to ContentStorage
      ContentStorage
        InstanceUID = {e902fa6d-beee-4971-b2f7-19a6941a33b5}
        EssenceContainerData
          EssenceContainer = {4d3f8eb4-fc08-45b9-a9d5-e7ac15b2219a}
          EssenceContainer -> Strong Reference to EssenceContainerData
            EssenceContainerData
              InstanceUID = {4d3f8eb4-fc08-45b9-a9d5-e7ac15b2219a}
              LinkedPackageUID = [060a2b34.0101.0105.01010f20],13,00,00,00,{b5aaaff5-594d-422c-83af-
069bffb80adc}
              IndexSID = 2
              BodySID = 1
        Packages
          Package = {93aafee1-37a8-4533-b7b1-a88c9650dfa9}
          Package -> Strong Reference to MaterialPackage
            MaterialPackage
```

```
              InstanceUID = {93aafee1-37a8-4533-b7b1-a88c9650dfa9}
              PackageUID = [060a2b34.0101.0105.01010f20],13,00,00,00,{59e2fab1-929c-457a-9354-
b2d11f4c7508}
              PackageCreationDate = 2008-04-17 10:04:29.028
              PackageModifiedDate = 2008-04-17 10:04:29.028
              Name = D3 preservation DA 005123
              Tracks
                Tracks_Item = {58faa629-62c0-41a0-bab3-16ece620302d}
                Tracks_Item -> Strong Reference to Track
                  Track
                    InstanceUID = {58faa629-62c0-41a0-bab3-16ece620302d}
                    TrackName = TC1
                    TrackID = 1
                    TrackNumber = 0
                    EditRate = 25/1
                    Origin = 0
                    Sequence = {4f727678-172c-4a35-995b-0d14460e3a1f}
                    Sequence -> Strong Reference to TimecodeComponent
                      TimecodeComponent
                        InstanceUID = {4f727678-172c-4a35-995b-0d14460e3a1f}
                        DataDefinition = SMPTE 12M Timecode Track
                        Duration = 25
                        RoundedTimecodeBase = 25
                        DropFrame = 0
                        StartTimecode = 0
                Tracks_Item = {d0a875f4-688f-4542-992b-47bb5308a605}
                Tracks_Item -> Strong Reference to Track
                  Track
                    InstanceUID = {d0a875f4-688f-4542-992b-47bb5308a605}
                    TrackName = V1
                    TrackID = 2
                    TrackNumber = 0
                    EditRate = 25/1
                    Origin = 0
                    Sequence = {a9835344-409e-4b40-bb39-782e2386df9a}
                    Sequence -> Strong Reference to Sequence
                      Sequence
                        InstanceUID = {a9835344-409e-4b40-bb39-782e2386df9a}
                        DataDefinition = Picture Essence Track
                        Duration = 25
                        StructuralComponents
                          StructuralComponent = {c46a3eee-05a5-42d0-9a1d-de6cbe6d2158}
                          StructuralComponent -> Strong Reference to SourceClip
                            SourceClip
                              InstanceUID = {c46a3eee-05a5-42d0-9a1d-de6cbe6d2158}
                              DataDefinition = Picture Essence Track
                              Duration = 25
                              StartPosition = 0
                              SourceTrackID = 1
                              SourcePackageID = [060a2b34.0101.0105.01010f20],13,00,00,00,{b5aaaff5-
594d-422c-83af-069bffb80adc}
                Tracks_Item = {876ad0e3-8bea-46f1-9c02-8592a8d5377b}
                Tracks_Item -> Strong Reference to Track
                  Track
                    InstanceUID = {876ad0e3-8bea-46f1-9c02-8592a8d5377b}
                    TrackName = A1
                    TrackID = 3
                    TrackNumber = 0
                    EditRate = 25/1
                    Origin = 0
                    Sequence = {55319057-a829-4e89-a195-559aed8e7c2f}
                    Sequence -> Strong Reference to Sequence
```

```
                    Sequence
                      InstanceUID = {55319057-a829-4e89-a195-559aed8e7c2f}
                      DataDefinition = Sound Essence Track
                      Duration = 25
                      StructuralComponents
                        StructuralComponent = {c99695d2-07c2-41f1-8b56-67d67118a5f7}
                        StructuralComponent -> Strong Reference to SourceClip
                          SourceClip
                            InstanceUID = {c99695d2-07c2-41f1-8b56-67d67118a5f7}
                            DataDefinition = Sound Essence Track
                            Duration = 25
                            StartPosition = 0
                            SourceTrackID = 2
                            SourcePackageID = [060a2b34.0101.0105.01010f20],13,00,00,00,{b5aaaff5-
594d-422c-83af-069bffb80adc}
                Tracks_Item = {2ab67e1e-1618-40b3-9ee2-9793b0edeeeb}
                Tracks_Item -> Strong Reference to Track
                  Track
                    InstanceUID = {2ab67e1e-1618-40b3-9ee2-9793b0edeeeb}
                    TrackName = A2
                    TrackID = 4
                    TrackNumber = 0
                    EditRate = 25/1
                    Origin = 0
                    Sequence = {17491548-94ff-4ce9-b661-6cb1aff174ab}
                    Sequence -> Strong Reference to Sequence
                      Sequence
                        InstanceUID = {17491548-94ff-4ce9-b661-6cb1aff174ab}
                        DataDefinition = Sound Essence Track
                        Duration = 25
                        StructuralComponents
                          StructuralComponent = {be5d8d36-df7b-459e-b0cd-93cd20e9aa7c}
                          StructuralComponent -> Strong Reference to SourceClip
                            SourceClip
                              InstanceUID = {be5d8d36-df7b-459e-b0cd-93cd20e9aa7c}
                              DataDefinition = Sound Essence Track
                              Duration = 25
                              StartPosition = 0
                              SourceTrackID = 3
                              SourcePackageID = [060a2b34.0101.0105.01010f20],13,00,00,00,{b5aaaff5-
594d-422c-83af-069bffb80adc}
                Tracks_Item = {3725fde2-ac2d-4aa0-9380-6fdcfde2efe9}
                Tracks_Item -> Strong Reference to Track
                  Track
                    InstanceUID = {3725fde2-ac2d-4aa0-9380-6fdcfde2efe9}
                    TrackName = A3
                    TrackID = 5
                    TrackNumber = 0
                    EditRate = 25/1
                    Origin = 0
                    Sequence = {6ffd4d15-a5d4-45d3-8c92-5e662a21b47a}
                    Sequence -> Strong Reference to Sequence
                      Sequence
                        InstanceUID = {6ffd4d15-a5d4-45d3-8c92-5e662a21b47a}
                        DataDefinition = Sound Essence Track
                        Duration = 25
                        StructuralComponents
                          StructuralComponent = {aa063869-118f-4cc6-bdd6-ad7820191196}
                          StructuralComponent -> Strong Reference to SourceClip
                            SourceClip
                              InstanceUID = {aa063869-118f-4cc6-bdd6-ad7820191196}
                              DataDefinition = Sound Essence Track
```

```
                              Duration = 25
                              StartPosition = 0
                              SourceTrackID = 4
                              SourcePackageID = [060a2b34.0101.0105.01010f20],13,00,00,00,{b5aaaff5-
594d-422c-83af-069bffb80adc}
                Tracks_Item = {8ba22cfa-3c92-4a16-8509-a11e2d9f7db9}
                Tracks_Item -> Strong Reference to Track
                  Track
                    InstanceUID = {8ba22cfa-3c92-4a16-8509-a11e2d9f7db9}
                    TrackName = A4
                    TrackID = 6
                    TrackNumber = 0
                    EditRate = 25/1
                    Origin = 0
                    Sequence = {a7b2b207-102e-4ba6-a098-cc26e3669d85}
                    Sequence -> Strong Reference to Sequence
                      Sequence
                        InstanceUID = {a7b2b207-102e-4ba6-a098-cc26e3669d85}
                        DataDefinition = Sound Essence Track
                        Duration = 25
                        StructuralComponents
                          StructuralComponent = {7f738ab2-c19c-4b2f-8799-72d9d1335cb6}
                          StructuralComponent -> Strong Reference to SourceClip
                            SourceClip
                              InstanceUID = {7f738ab2-c19c-4b2f-8799-72d9d1335cb6}
                              DataDefinition = Sound Essence Track
                              Duration = 25
                              StartPosition = 0
                              SourceTrackID = 5
                              SourcePackageID = [060a2b34.0101.0105.01010f20],13,00,00,00,{b5aaaff5-
594d-422c-83af-069bffb80adc}
            Package = {7a955985-4499-4807-b737-8577ff05f3f7}
            Package -> Strong Reference to SourcePackage
              SourcePackage
                InstanceUID = {7a955985-4499-4807-b737-8577ff05f3f7}
                PackageUID = [060a2b34.0101.0105.01010f20],13,00,00,00,{b5aaaff5-594d-422c-83af-
069bffb80adc}
                PackageCreationDate = 2008-04-17 10:04:29.028
                PackageModifiedDate = 2008-04-17 10:04:29.028
                Tracks
                  Tracks_Item = {57325a40-0019-4859-9dce-a1b4c1ff6505}
                  Tracks_Item -> Strong Reference to Track
                    Track
                      InstanceUID = {57325a40-0019-4859-9dce-a1b4c1ff6505}
                      TrackName = V1
                      TrackID = 1
                      TrackNumber = 352387585
                      EditRate = 25/1
                      Origin = 0
                      Sequence = {41efc465-6b05-4123-a1c1-f9ab32d1b446}
                      Sequence -> Strong Reference to Sequence
                        Sequence
                          InstanceUID = {41efc465-6b05-4123-a1c1-f9ab32d1b446}
                          DataDefinition = Picture Essence Track
                          Duration = 25
                          StructuralComponents
                            StructuralComponent = {3306b290-9191-477f-aeea-6cee297d98c9}
                            StructuralComponent -> Strong Reference to SourceClip
                              SourceClip
                                InstanceUID = {3306b290-9191-477f-aeea-6cee297d98c9}
                                DataDefinition = Picture Essence Track
                                Duration = 25
```

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                              SourceTrackID = 1
                              StartPosition = 0
                              SourcePackageID = [060a2b34.0101.0105.01010f20],13,00,00,00,{b6a10faa-
14fe-4384-a848-cdf3f7c06151}
                  Tracks_Item = {f7a0bb83-0e28-46cc-b924-d08c7b8a4a3a}
                  Tracks_Item -> Strong Reference to Track
                    Track
                      InstanceUID = {f7a0bb83-0e28-46cc-b924-d08c7b8a4a3a}
                      TrackName = A1
                      TrackID = 2
                      TrackNumber = 369361153
                      EditRate = 25/1
                      Origin = 0
                      Sequence = {18844eb4-ecab-4c77-b993-4f8e37a9c9d9}
                      Sequence -> Strong Reference to Sequence
                        Sequence
                          InstanceUID = {18844eb4-ecab-4c77-b993-4f8e37a9c9d9}
                          DataDefinition = Sound Essence Track
                          Duration = 25
                          StructuralComponents
                            StructuralComponent = {8fab6388-8b4e-4bff-b9da-6194855ae669}
                            StructuralComponent -> Strong Reference to SourceClip
                              SourceClip
                                InstanceUID = {8fab6388-8b4e-4bff-b9da-6194855ae669}
                                DataDefinition = Sound Essence Track
                                Duration = 25
                                SourceTrackID = 2
                                StartPosition = 0
                                SourcePackageID = [060a2b34.0101.0105.01010f20],13,00,00,00,{b6a10faa-
14fe-4384-a848-cdf3f7c06151}
                  Tracks_Item = {fb1067ee-630e-4791-ac2e-d0c673660fd6}
                  Tracks_Item -> Strong Reference to Track
                    Track
                      InstanceUID = {fb1067ee-630e-4791-ac2e-d0c673660fd6}
                      TrackName = A2
                      TrackID = 3
                      TrackNumber = 369361154
                      EditRate = 25/1
                      Origin = 0
                      Sequence = {712cb24d-d24b-4afb-9070-048098f1ab93}
                      Sequence -> Strong Reference to Sequence
                        Sequence
                          InstanceUID = {712cb24d-d24b-4afb-9070-048098f1ab93}
                          DataDefinition = Sound Essence Track
                          Duration = 25
                          StructuralComponents
                            StructuralComponent = {c2eb528b-896f-4d55-bc5d-fd2e183dbe59}
                            StructuralComponent -> Strong Reference to SourceClip
                              SourceClip
                                InstanceUID = {c2eb528b-896f-4d55-bc5d-fd2e183dbe59}
                                DataDefinition = Sound Essence Track
                                Duration = 25
                                SourceTrackID = 3
                                StartPosition = 0
                                SourcePackageID = [060a2b34.0101.0105.01010f20],13,00,00,00,{b6a10faa-
14fe-4384-a848-cdf3f7c06151}
                  Tracks_Item = {cbcc4af0-595a-4db5-b1c8-db2e1824350c}
                  Tracks_Item -> Strong Reference to Track
                    Track
                      InstanceUID = {cbcc4af0-595a-4db5-b1c8-db2e1824350c}
                      TrackName = A3
                      TrackID = 4
```

```
                    TrackNumber = 369361155
                    EditRate = 25/1
                    Origin = 0
                    Sequence = {f4f57204-c4b6-4a3f-a93d-d4e07babe708}
                    Sequence -> Strong Reference to Sequence
                      Sequence
                        InstanceUID = {f4f57204-c4b6-4a3f-a93d-d4e07babe708}
                        DataDefinition = Sound Essence Track
                        Duration = 25
                        StructuralComponents
                          StructuralComponent = {5bdda320-86d4-4ce0-8093-dc2febe7dacd}
                          StructuralComponent -> Strong Reference to SourceClip
                            SourceClip
                              InstanceUID = {5bdda320-86d4-4ce0-8093-dc2febe7dacd}
                              DataDefinition = Sound Essence Track
                              Duration = 25
                              SourceTrackID = 4
                              StartPosition = 0
                              SourcePackageID = [060a2b34.0101.0105.01010f20],13,00,00,00,{b6a10faa-
14fe-4384-a848-cdf3f7c06151}
                Tracks_Item = {da957f2c-38fe-47df-942c-40d7f08ad22a}
                Tracks_Item -> Strong Reference to Track
                  Track
                    InstanceUID = {da957f2c-38fe-47df-942c-40d7f08ad22a}
                    TrackName = A4
                    TrackID = 5
                    TrackNumber = 369361156
                    EditRate = 25/1
                    Origin = 0
                    Sequence = {34fe3ae9-a859-4f48-b52f-d65573ee82d3}
                    Sequence -> Strong Reference to Sequence
                      Sequence
                        InstanceUID = {34fe3ae9-a859-4f48-b52f-d65573ee82d3}
                        DataDefinition = Sound Essence Track
                        Duration = 25
                        StructuralComponents
                          StructuralComponent = {2847132d-043b-4dfa-92ca-fbafdf17637f}
                          StructuralComponent -> Strong Reference to SourceClip
                            SourceClip
                              InstanceUID = {2847132d-043b-4dfa-92ca-fbafdf17637f}
                              DataDefinition = Sound Essence Track
                              Duration = 25
                              SourceTrackID = 5
                              StartPosition = 0
                              SourcePackageID = [060a2b34.0101.0105.01010f20],13,00,00,00,{b6a10faa-
14fe-4384-a848-cdf3f7c06151}
                Tracks_Item = {2438de0f-cbe1-4b44-ac60-9315b507264c}
                Tracks_Item -> Strong Reference to StaticTrack
                  StaticTrack
                    InstanceUID = {2438de0f-cbe1-4b44-ac60-9315b507264c}
                    TrackName = DM1
                    TrackID = 6
                    TrackNumber = 0
                    Sequence = {59352e62-7ab9-486a-8f0b-06595b58e324}
                    Sequence -> Strong Reference to Sequence
                      Sequence
                        InstanceUID = {59352e62-7ab9-486a-8f0b-06595b58e324}
                        DataDefinition = Descriptive Metadata Track
                        StructuralComponents
                          StructuralComponent = {c5e71515-1bb9-4a60-9c58-4db3a777c452}
                          StructuralComponent -> Strong Reference to DMSegment
                            DMSegment
```

```
                              InstanceUID = {c5e71515-1bb9-4a60-9c58-4db3a777c452}
                              DataDefinition = Descriptive Metadata Track
                              DMFramework = {c0841d5a-5145-47b4-a109-7308c8d72005}
                              DMFramework -> Strong Reference to D3P_InfaxFramework
                                D3P_InfaxFramework
                                  InstanceUID = {c0841d5a-5145-47b4-a109-7308c8d72005}
                                  D3P_ItemNumber = 1
                                  D3P_Format = LTO
                                  D3P_ProgrammeTitle = THE OLD GREY WHISTLE TEST
                                  D3P_EpisodeTitle = PICK OF THE YEAR
                                  D3P_TransmissionDate = 1978-01-05 0:00:00.000
                                  D3P_ProgrammeNumber = LNF2073N
                                  D3P_ProductionCode = 3
                                  D3P_SpoolStatus = M
                                  D3P_StockDate = 2008-04-17 0:00:00.000
                                  D3P_SpoolDescriptor = PROGRAMME (DUB OF DA 005123)
                                  D3P_Memo = NO ISSUE WITHOUT REFERENCE TO ARCHIVE SELECTOR,HEAD OF
T.V. L. & A. OR ENQ.SERV.LIBRARIAN
                                  D3P_Duration = 4145
                                  D3P_SpoolNumber = LTA000001
                    Tracks_Item = {bc4233d4-b33e-4a00-bc52-c51a19a7052a}
                    Tracks_Item -> Strong Reference to EventTrack
                      EventTrack
                        InstanceUID = {bc4233d4-b33e-4a00-bc52-c51a19a7052a}
                        TrackName = PSE Failures
                        TrackID = 7
                        TrackNumber = 0
                        EventEditRate = 25/1
                        EventOrigin = 0
                        Sequence = {b74e04f2-9ad6-43eb-80e7-3ff7080204b4}
                        Sequence -> Strong Reference to Sequence
                          Sequence
                            InstanceUID = {b74e04f2-9ad6-43eb-80e7-3ff7080204b4}
                            DataDefinition = Descriptive Metadata Track
                            StructuralComponents
                              StructuralComponent = {bf1ca976-698b-4dba-ab26-6494d6d19e2f}
                              StructuralComponent -> Strong Reference to DMSegment
                                DMSegment
                                  InstanceUID = {bf1ca976-698b-4dba-ab26-6494d6d19e2f}
                                  DataDefinition = Descriptive Metadata Track
                                  EventStartPosition = 24
                                  Duration = 1
                                  DMFramework = {1c450f2f-3a92-4936-82c6-05e74bb4b367}
                                  DMFramework -> Strong Reference to D3P_PSEAnalysisFramework
                                    D3P_PSEAnalysisFramework
                                      InstanceUID = {1c450f2f-3a92-4936-82c6-05e74bb4b367}
                                      D3P_RedFlash = 3000
                                      D3P_SpatialPattern = 0
                                      D3P_LuminanceFlash = 0
                                      D3P_ExtendedFailure = 0
                    Tracks_Item = {ef0d1c74-8423-4065-8981-6450bbd8bbb2}
                    Tracks_Item -> Strong Reference to EventTrack
                      EventTrack
                        InstanceUID = {ef0d1c74-8423-4065-8981-6450bbd8bbb2}
                        TrackName = D3 VTR Errors
                        TrackID = 8
                        TrackNumber = 0
                        EventEditRate = 25/1
                        EventOrigin = 0
                        Sequence = {3d9198e6-6bab-441c-af33-36e61e37507a}
                        Sequence -> Strong Reference to Sequence
                          Sequence
```

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            InstanceUID = {3d9198e6-6bab-441c-af33-36e61e37507a}
            DataDefinition = Descriptive Metadata Track
            StructuralComponents
              StructuralComponent = {c8c8b952-e707-4ca4-a639-cf0b6ff3d9fa}
              StructuralComponent -> Strong Reference to DMSegment
                DMSegment
                  InstanceUID = {c8c8b952-e707-4ca4-a639-cf0b6ff3d9fa}
                  DataDefinition = Descriptive Metadata Track
                  EventStartPosition = 0
                  Duration = 1
                  DMFramework = {ed69d2c2-0e19-4caf-9aa3-6b5504834b25}
                  DMFramework -> Strong Reference to D3P_D3ReplayErrorFramework
                    D3P_D3ReplayErrorFramework
                      InstanceUID = {ed69d2c2-0e19-4caf-9aa3-6b5504834b25}
                      D3P_D3ErrorCode = 4
Descriptor = {c8c67595-8cb2-46a8-bda4-105c6b128971}
Descriptor -> Strong Reference to MultipleDescriptor
  MultipleDescriptor
    InstanceUID = {c8c67595-8cb2-46a8-bda4-105c6b128971}
    SampleRate = 25/1
    EssenceContainer = MXF-GC Generic Essence Multiple Mappings
    Locators
      Locator = {c7d42178-de93-4681-a4e0-47c4c6beb398}
      Locator -> Strong Reference to NetworkLocator
        NetworkLocator
          InstanceUID = {c7d42178-de93-4681-a4e0-47c4c6beb398}
          URLString = LTA00000101.mxf
    SubDescriptorUIDs
      SubDescriptorUID = {08df7a2f-2097-4245-b519-98eed15db27f}
      SubDescriptorUID -> Strong Reference to CDCIEssenceDescriptor
        CDCIEssenceDescriptor
          InstanceUID = {08df7a2f-2097-4245-b519-98eed15db27f}
          LinkedTrackID = 1
          SampleRate = 25/1
          EssenceContainer = MXF-GC Uncompressed Pictures
          FrameLayout = 3
          StoredHeight = 576
          StoredWidth = 720
          VideoLineMap
            VideoLineMapEntry = 23
            VideoLineMapEntry = 336
          AspectRatio = 4/3
          ComponentDepth = 8
          HorizontalSubsampling = 2
          VerticalSubsampling = 1
          ContainerDuration = 25
      SubDescriptorUID = {7d943e9c-19ab-430d-8930-6a94c050eac6}
      SubDescriptorUID -> Strong Reference to WaveAudioDescriptor
        WaveAudioDescriptor
          InstanceUID = {7d943e9c-19ab-430d-8930-6a94c050eac6}
          LinkedTrackID = 2
          SampleRate = 25/1
          EssenceContainer = MXF-GC AES-BWF Audio
          AudioSamplingRate = 48000/1
          Locked = 1
          ChannelCount = 1
          QuantizationBits = 20
          BlockAlign = 3
          AvgBps = 144000
          ContainerDuration = 25
      SubDescriptorUID = {afb138b4-9703-45bc-a538-e62e7702e88a}
      SubDescriptorUID -> Strong Reference to WaveAudioDescriptor
```

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                    WaveAudioDescriptor
                      InstanceUID = {afb138b4-9703-45bc-a538-e62e7702e88a}
                      LinkedTrackID = 3
                      SampleRate = 25/1
                      EssenceContainer = MXF-GC AES-BWF Audio
                      AudioSamplingRate = 48000/1
                      Locked = 1
                      ChannelCount = 1
                      QuantizationBits = 20
                      BlockAlign = 3
                      AvgBps = 144000
                      ContainerDuration = 25
                  SubDescriptorUID = {20b4ccd8-7e39-4e7c-840f-428f4e07ffc3}
                  SubDescriptorUID -> Strong Reference to WaveAudioDescriptor
                    WaveAudioDescriptor
                      InstanceUID = {20b4ccd8-7e39-4e7c-840f-428f4e07ffc3}
                      LinkedTrackID = 4
                      SampleRate = 25/1
                      EssenceContainer = MXF-GC AES-BWF Audio
                      AudioSamplingRate = 48000/1
                      Locked = 1
                      ChannelCount = 1
                      QuantizationBits = 20
                      BlockAlign = 3
                      AvgBps = 144000
                      ContainerDuration = 25
                  SubDescriptorUID = {388346e0-07ea-4369-9da6-207f346a05c7}
                  SubDescriptorUID -> Strong Reference to WaveAudioDescriptor
                    WaveAudioDescriptor
                      InstanceUID = {388346e0-07ea-4369-9da6-207f346a05c7}
                      LinkedTrackID = 5
                      SampleRate = 25/1
                      EssenceContainer = MXF-GC AES-BWF Audio
                      AudioSamplingRate = 48000/1
                      Locked = 1
                      ChannelCount = 1
                      QuantizationBits = 20
                      BlockAlign = 3
                      AvgBps = 144000
                      ContainerDuration = 25
                ContainerDuration = 25
          Package = {2e5fdce2-2443-4b80-90df-790a38e26406}
          Package -> Strong Reference to SourcePackage
            SourcePackage
              InstanceUID = {2e5fdce2-2443-4b80-90df-790a38e26406}
              PackageUID = [060a2b34.0101.0105.01010f20],13,00,00,00,{b6a10faa-14fe-4384-a848-
cdf3f7c06151}
              PackageCreationDate = 2008-04-17 10:04:29.028
              PackageModifiedDate = 2008-04-17 10:04:29.028
              Name = DA 005123
              Tracks
                Tracks_Item = {12db3054-6637-4b2f-9c47-ac024c1262b1}
                Tracks_Item -> Strong Reference to Track
                  Track
                    InstanceUID = {12db3054-6637-4b2f-9c47-ac024c1262b1}
                    TrackID = 1
                    TrackName = V1
                    TrackNumber = 1
                    EditRate = 25/1
                    Origin = 0
                    Sequence = {c4536ee2-d703-48a8-ba3a-5164c530fb84}
                    Sequence -> Strong Reference to Sequence
```

```
                    Sequence
                      InstanceUID = {c4536ee2-d703-48a8-ba3a-5164c530fb84}
                      DataDefinition = Picture Essence Track
                      Duration = 10800000
                      StructuralComponents
                        StructuralComponent = {b44f2d68-098f-42fa-a445-738934d8dd58}
                        StructuralComponent -> Strong Reference to SourceClip
                          SourceClip
                            InstanceUID = {b44f2d68-098f-42fa-a445-738934d8dd58}
                            DataDefinition = Picture Essence Track
                            Duration = 10800000
                            StartPosition = 0
                            SourcePackageID =
[00000000.0000.0000.00000000],00,00,00,00,[00000000.0000.0000.00000000.00000000]
                            SourceTrackID = 0
                Tracks_Item = {707ec4d0-474f-4da4-aad0-8f9271689e3e}
                Tracks_Item -> Strong Reference to Track
                  Track
                    InstanceUID = {707ec4d0-474f-4da4-aad0-8f9271689e3e}
                    TrackID = 2
                    TrackName = A1
                    TrackNumber = 1
                    EditRate = 25/1
                    Origin = 0
                    Sequence = {fe4bf7b3-8654-4d24-a245-6c923e168cea}
                    Sequence -> Strong Reference to Sequence
                      Sequence
                        InstanceUID = {fe4bf7b3-8654-4d24-a245-6c923e168cea}
                        DataDefinition = Sound Essence Track
                        Duration = 10800000
                        StructuralComponents
                          StructuralComponent = {a67fb584-0b83-4695-b56a-bf4f9f19c498}
                          StructuralComponent -> Strong Reference to SourceClip
                            SourceClip
                              InstanceUID = {a67fb584-0b83-4695-b56a-bf4f9f19c498}
                              DataDefinition = Sound Essence Track
                              Duration = 10800000
                              StartPosition = 0
                              SourcePackageID =
[00000000.0000.0000.00000000],00,00,00,00,[00000000.0000.0000.00000000.00000000]
                              SourceTrackID = 0
                Tracks_Item = {1d66fb63-cd00-4694-b04c-9370d524138b}
                Tracks_Item -> Strong Reference to Track
                  Track
                    InstanceUID = {1d66fb63-cd00-4694-b04c-9370d524138b}
                    TrackID = 3
                    TrackName = A2
                    TrackNumber = 2
                    EditRate = 25/1
                    Origin = 0
                    Sequence = {38dd3b67-26c0-46ee-a149-c3362547a8c8}
                    Sequence -> Strong Reference to Sequence
                      Sequence
                        InstanceUID = {38dd3b67-26c0-46ee-a149-c3362547a8c8}
                        DataDefinition = Sound Essence Track
                        Duration = 10800000
                        StructuralComponents
                          StructuralComponent = {4c75e584-91a2-4736-9465-7cf05f4d5c89}
                          StructuralComponent -> Strong Reference to SourceClip
                            SourceClip
                              InstanceUID = {4c75e584-91a2-4736-9465-7cf05f4d5c89}
                              DataDefinition = Sound Essence Track
```

```
                              Duration = 10800000
                              StartPosition = 0
                              SourcePackageID =
[00000000.0000.0000.00000000],00,00,00,00,[00000000.0000.0000.00000000.00000000]
                              SourceTrackID = 0
                  Tracks_Item = {07d21bf7-a914-457f-a005-c87ab85091f5}
                  Tracks_Item -> Strong Reference to Track
                    Track
                      InstanceUID = {07d21bf7-a914-457f-a005-c87ab85091f5}
                      TrackID = 4
                      TrackName = A3
                      TrackNumber = 3
                      EditRate = 25/1
                      Origin = 0
                      Sequence = {f76d9737-7092-4324-9cf6-7310a86500cb}
                      Sequence -> Strong Reference to Sequence
                        Sequence
                          InstanceUID = {f76d9737-7092-4324-9cf6-7310a86500cb}
                          DataDefinition = Sound Essence Track
                          Duration = 10800000
                          StructuralComponents
                            StructuralComponent = {6a134bd1-6400-4cb1-99bd-f2877b3b7c1f}
                            StructuralComponent -> Strong Reference to SourceClip
                              SourceClip
                                InstanceUID = {6a134bd1-6400-4cb1-99bd-f2877b3b7c1f}
                                DataDefinition = Sound Essence Track
                                Duration = 10800000
                                StartPosition = 0
                                SourcePackageID =
[00000000.0000.0000.00000000],00,00,00,00,[00000000.0000.0000.00000000.00000000]
                                SourceTrackID = 0
                  Tracks_Item = {6ae2c9e4-ba47-47d7-a6aa-6372d39ddf26}
                  Tracks_Item -> Strong Reference to Track
                    Track
                      InstanceUID = {6ae2c9e4-ba47-47d7-a6aa-6372d39ddf26}
                      TrackID = 5
                      TrackName = A4
                      TrackNumber = 4
                      EditRate = 25/1
                      Origin = 0
                      Sequence = {179feb4f-09fd-4f34-9bf2-88d77e74a433}
                      Sequence -> Strong Reference to Sequence
                        Sequence
                          InstanceUID = {179feb4f-09fd-4f34-9bf2-88d77e74a433}
                          DataDefinition = Sound Essence Track
                          Duration = 10800000
                          StructuralComponents
                            StructuralComponent = {89afbfaf-d272-4bc6-9d11-f431e6d1d247}
                            StructuralComponent -> Strong Reference to SourceClip
                              SourceClip
                                InstanceUID = {89afbfaf-d272-4bc6-9d11-f431e6d1d247}
                                DataDefinition = Sound Essence Track
                                Duration = 10800000
                                StartPosition = 0
                                SourcePackageID =
[00000000.0000.0000.00000000],00,00,00,00,[00000000.0000.0000.00000000.00000000]
                                SourceTrackID = 0
                  Tracks_Item = {bf2530d9-2a45-4a82-977d-c48d286e90b2}
                  Tracks_Item -> Strong Reference to Track
                    Track
                      InstanceUID = {bf2530d9-2a45-4a82-977d-c48d286e90b2}
                      TrackID = 6
```

```
                    TrackNumber = 0
                    TrackName = T1
                    EditRate = 25/1
                    Origin = 0
                    Sequence = {3b5cb1b7-b39e-4504-9c86-b234608e9030}
                    Sequence -> Strong Reference to Sequence
                      Sequence
                        InstanceUID = {3b5cb1b7-b39e-4504-9c86-b234608e9030}
                        DataDefinition = SMPTE 12M Timecode Track
                        Duration = 10800000
                        StructuralComponents
                          StructuralComponent = {303e54a3-d9b6-443a-ab79-677ccd0ea5b9}
                          StructuralComponent -> Strong Reference to TimecodeComponent
                            TimecodeComponent
                              InstanceUID = {303e54a3-d9b6-443a-ab79-677ccd0ea5b9}
                              DataDefinition = SMPTE 12M Timecode Track
                              Duration = 10800000
                              RoundedTimecodeBase = 25
                              DropFrame = 0
                              StartTimecode = 0
                  Tracks_Item = {56a878ce-9346-4575-b0aa-58dca8dce61e}
                  Tracks_Item -> Strong Reference to StaticTrack
                    StaticTrack
                      InstanceUID = {56a878ce-9346-4575-b0aa-58dca8dce61e}
                      TrackName = DM1
                      TrackID = 7
                      TrackNumber = 0
                      Sequence = {430ac26a-e844-4c3a-afa9-421a77cd3523}
                      Sequence -> Strong Reference to Sequence
                        Sequence
                          InstanceUID = {430ac26a-e844-4c3a-afa9-421a77cd3523}
                          DataDefinition = Descriptive Metadata Track
                          StructuralComponents
                            StructuralComponent = {1d6c06cd-0560-4e12-9482-ae6b9985f9e5}
                            StructuralComponent -> Strong Reference to DMSegment
                              DMSegment
                                InstanceUID = {1d6c06cd-0560-4e12-9482-ae6b9985f9e5}
                                DataDefinition = Descriptive Metadata Track
                                DMFramework = {ae27e218-bfef-4f4a-a7bf-4ddef5e947bc}
                                DMFramework -> Strong Reference to D3P_InfaxFramework
                                  D3P_InfaxFramework
                                    InstanceUID = {ae27e218-bfef-4f4a-a7bf-4ddef5e947bc}
                                    D3P_Format = D3
                                    D3P_ProgrammeTitle = THE OLD GREY WHISTLE TEST
                                    D3P_EpisodeTitle = PICK OF THE YEAR
                                    D3P_TransmissionDate = 1978-01-05 0:00:00.000
                                    D3P_ProgrammeNumber = LNF2073N
                                    D3P_ProductionCode = 3
                                    D3P_SpoolStatus = M
                                    D3P_StockDate = 1994-03-22 0:00:00.000
                                    D3P_SpoolDescriptor = PROGRAMME (DUB OF 919968)
                                    D3P_Memo = NO ISSUE WITHOUT REFERENCE TO ARCHIVE SELECTOR,HEAD OF
T.V. L. & A. OR ENQ.SERV.LIBRARIAN
                                    D3P_Duration = 4145
                                    D3P_SpoolNumber = DA 005123
                                    D3P_ItemNumber = 1
              Descriptor = {f6ee7a2a-1bb8-4254-98bd-987ae27fbc62}
              Descriptor -> Strong Reference to TapeDescriptor
                TapeDescriptor
```

```
InstanceUID = {f6ee7a2a-1bb8-4254-98bd-987ae27fbc62}
```