digital production partnership

TEST REPORT No

R1017

DPP Compliance Programme
AMWA AS-11 DPP
Product Test Report (See note 5, on next page)

DPP Lab, BBC R&D, Centre House, 56 Wood Lane, W12 7SB, UK

OEM	Vidcheck Ltd
Product (Note 6)	Vidchecker/Vidfixer (Vidchecker capabilities)
Product Version (Note 6)	6.2.7
Test Report Date	17 March 2015

OVERALL TESTING RESULT	**PASS**

HD Test Artifacts Used	
Writer Functionality	**Reader Functionality**
File Conformance Test Suite (F1.2)	File Reader Tests (R1.2, R2.0/2.1/2.2, R3.1)
(Note 1, on next page)	(Note 2, on next page)
F1.2	**R2.2**

Analyser Test Artifacts Used	
MXF Format	**DM Validation**
PART 1 tests A1.1 (MXF)	PART 2 tests A2.1 (MXF)
Documents: See below	Documents: See below
A1.1 (MXF)	**A2.1 (MXF)**

GENERIC FUNCTION CATEGORIES		**Functionality Tested**
File Writers	Products that **write** AS-11 UK DPP HD files. Tests are carried out to determine whether a file written by a device conforms to the AMWA AS-11 UK DPP HD Shim v1.1 as defined by the rules for conformance [available at the link below], as well as the requirements for Descriptive Metadata (DM) http://www.amwa.tv/projects/rules/as-11/	**Tested**
File Readers - R1.2 Players	Products that have the ability to read AS-11 DPP HD files and then **play** the contents of the file to a video and audio monitor. These devices may additionally include the ability to display Timecode, DM and Programme Parting / Segmentation. It is not a requirement that products should have all possible functionality. Products are only tested for the features that they have.	**Not applicable**
File Readers - R1.2 Transcoders	Products that have the ability to read AS-11 DPP HD files and then **transcode** the contents to a different format. Transcoded output files are then tested following the Player testing procedure.	**Not applicable**
File Readers - R2.0, R2.1, R2.2 Analysers	Products that have the ability to read and analyse AS-11 DPP HD files for MXF and DM are tested for their ability to read basic file information. If it also has the capability to play or transcode then this is additionally tested. MXF analysis and DM validation is tested elsewhere.	**Tested**
File Readers - R3.1 Specific Products	Products that have the ability to read AS-11 DPP HD files and then render a subset of audio, video and/or DM content to a form suitable for another use. Examples may include audio only monitoring, PSE measurement, etc.	**Not applicable**
File Analyser - A1.1 (MXF) PART 1 Tests	File Format MXF tests, as per documents: AS-11 UK DPP HD - P1 - MXF Tests for Analysers - A1.1 (MXF) AS-11 UK DPP HD - P3 - Analyser Test Files - A3.1 (FILES) Test files include the set of files testing MXF file format	**Tested**

File Analyser - A2.1 (MXF) PART 2 Tests	File DM Validation tests, as per documents: AS-11 UK DPP HD - P2 - DM Tests - A2.1 (DM) AS-11 UK DPP HD - P3 - Analyser Test Files - A3.1 (FILES) Test files include the set of files testing DM Validation	**Tested**

AMWA CERTIFICATION AUTHORITY
The **AMWA Certification Authority** uses these TEST REPORTS as the basis for awarding Certification. Please see the web page below. http://www.amwa.tv/certification

Template version	v1.2	05 February 2015	Specific Product and Analyser categories
Template version	v1.1	06 February 2015	Release version

NOTES	
Note 1	**Writer Functionality, File Conformance Test Suite:** This identifies the tests carried out on AS-11 DPP **OUTPUTS** of the product and describes the file conformance tests used. This document is available from the DPP Compliance page on the DPP website.
Note 2	**Reader Functionality, File Reader Tests:** This identifies the File Reader Test procedure, including the list of tests carried out by the OEM on their own product, with the results to be noted. This document is available from the DPP Compliance page on the DPP website.
Note 3	**Input media used:** For **Writer** tests this identifies the **INPUT MEDIA** files and / or SDI and metadata sources to be used for the creation of output AS-11 DPP files specified.
Note 4	**Input AS-11 DPP files used:** For **Reader** tests this identifies the a set of AS-11 DPP test files that are used as **INPUTS** to the product.
Note 5	This **Product Test Report** is also known as the **TEST REPORT** for the purposes of applying for AMWA Certification.
Note 6	The test results (and any Certificate ultimately issued) will be tied to the version of the product tested. This means that an actual 'release' of a product must be submitted for testing.
Note 7	Certain faults are classed as 'warnings'; certain faults are classed as 'errors' but result in 'Pass with Conditions' rather than 'Fail'. The overall test result takes the worst case result from individual tests. That is, if any individiual test result is a 'Fail' then the overal test result is a 'Fail'.

TEST PROCEDURE - Overview	
Writer Test Procedure	**Stage 1**: Once signed up to the DPP Compliance Programme, the OEM should send some representative file samples to the DPP lab to be tested. The File Conformance Test Report then shows how they performed against the conformance criteria. Individual tests *may* have one of four outcomes: **PASS**, **WARNING**, **PASS with CONDITIONS**, and **FAIL**. Some tests may just have **PASS** or **FAIL**. If the initial files tested are a 'Fail' then new files will need to be submitted once the product has been updated with a fix for the issue. Once the files are a 'Pass', or 'Pass with Conditions' then the manufacturer can move to step 2 and formally request that the lab test the product at Certification Level. **Stage 2**: The OEM will need to provide the lab with additional information about the product's functionality and operation using the Initial OEM Product Submission Form. The Lab, in discussion with the OEM, will then agree the method(s) by which the product being tested will create files for Certification Level Testing. Once stage 2 testing has been completed and the Product Test Report (showing Pass or Pass with Conditions) is issued to the OEM. They can then go ahead and apply for Certification from the AMWA. Please note: If the device also includes '**Reader**' functionality then this will also require a 'Pass' or 'Pass with Conditions', in order for the Product Test Report to be issued.
Reader Test Procedure	File Reader testing is primarily 'self-serve'. The test procedure may be carried out by the OEM at any time. It principally involves downloading the set of AS-11 UK DPP HD Reader test files and asking the product to read each one, and the OEM recording the results. The ability to do this is assessed by The DPP Test Lab against set criteria which include checks for player functionality, and transcode functionality if present. (This is subject to change as new files and tests are included). A declaration form is to be completed and the results returned to the DPP Lab. Results are verified and if they are a 'Pass' or 'Pass with Conditions' a Product Test Report is issued to the OEM. Please note: If the device also includes '**Writer**' functionality then this will also require a 'Pass' or 'Pass with Conditions', in order for the Product Test Report to be issued.

Analyser Test Procedure	This procedure is concerned with devices whose primary function is File Format Analysis of AS-11 DPP HD files. This functionality, defined in a specific **Test Plan** or **Test Profile**, is assessed in two parts: **Part 1 (MXF Format)** and **Part 2 (DM)**, as described below. A set of test files should be tested and the results captured as described in the **Part 3** document. They include tests that the Analyser should be carrying out in order to meet the required **Certification Level** criteria. The three parts are as follows: **PART 1.** MXF Format Tests for File Analysers **PART 2.** Descriptive Metadata (DM) Validation Tests **PART 3.** File Testing and Reporting (for PART 1 & PART 2) The Analyser test procedure (Parts 1, 2 and 3) may be carried out by the OEM at any time by following the instructions detailed in each document. The range of included tests and capabilities is then assessed by the DPP Compliance Programme against the Certification Level criteria. If these criteria are met then the Analyser will Pass. File Reader functionality should be tested and recorded separately, following the "File Reader Tests for Analysers" instructions, as above. If the device also writes AS-11 DPP HD files then you must complete Writer tests, as above. All tests must 'Pass' or 'Pass with Conditions' in order for a device to qualify for Certification.
Application to AMWA	Once a Product Test Report has been issued by the DPP, an OEM may follow the AMWA procedure to apply for Certification.

PASS or PASS WITH CONDITIONS	
What it means	The capability of version X of product Y to read and / or write AMWA AS-11 UK DPP HD Shim files has been tested by the DPP Compliance Lab and all the tests performed (as referenced in this report) under the specified "realistic" operating conditions have either "Passed" or "Passed with Conditions".
What it DOES NOT mean	a) All files produced by a Writer are always fully conformant to the "AMWA AS-11 UK DPP" Shims b) Files from Writers will always work correctly with Readers c) Files from Writers will never be rejected by UK Broadcasters d) All modes and features of the product have been tested

Overall ANALYSER - PART 1 (MXF) Result (DPP Test Lab review of OEM supplied test results)	PASS

PART 1 - MXF Format Tests for File Analysers
For DPP Compliance Testing of PRODUCT to Certification Level

GENERAL DETAILS		
OEM name	Vidcheck Ltd	
Product name	Vidchecker/Vidfixer	[DPP Lab added]
Product version	6.2.7	[DPP Lab: point release added]
Product Test Plan, or Profile, or Template	AS-11 UK DPP HD v1.1	[DPP standard]
Date of tests	4th March 2015	

OUTPUT TEST ARTIFACTS supplied by the OEM

The following output artifacts were supplied and assessed as part of the test process:
TEST METHOD DECLARATION - Completed by OEM and reproduced below;
Completed MXF File Tests Results for all files in the MXF Format test set, as specified in Part 3 (Results) with all results as expected for a Pass.

DECLARATION

"I confirm that the information in this report has been completed honestly and is an accurate representation of the results obtained. Also, that these results provide a fair assessment of the product's ability to read and work with AS-11 DPP files in a way reasonably expected for a product of this type and functionality, and that these results were achieved when using the product in a configuration which would reasonably be regarded as normal operational use."

OVERALL PROCEDURE (OEM Testing to Certification)

A) OEM to follow instructions below for testing **PART 1 (MXF)**

PART 1 (MXF)

a. The companion requirements for MXF are detailed in **PART 1 (MXF Format Tests for File Analysers)**. Complete all the required sections in this document.

b. Complete the DECLARATION at the end of the document and return the form to the DPP Compliance Programme (CP) to the email below.

c. The **PART 1** document will then be reviewed.

d. The CP will Pass (or Fail) the submitted paperwork.

e. If it is a Pass then the next stage is to test that the product correctly tests MXF files as detailed in PART 1.

f. The OEM will be given a download link for a set of test files for testing the detection of issues for a range of MXF features.

g. The **PART 3: File Testing and Reporting (for PART 1 & PART 2)** document explains how to record test results for PART 1 (MXF) and/or PART 2 (DM) tests.

h. The results of the file testing (Pass or Fail for each file) should be returned.

i. The Results will then be reviewed by the CP to determine if the analyser correctly identified each file as a Pass or Fail.

B) OEM to email the File Testing Results for **P1 (MXF)** and **P2 (DM)** to the DPP: complianceprogramme@digitalproductionpartnership.co.uk

C) The outcome of the review of results for PART 1 and PART 2 will be provided to the OEM. The Test Plan or Test Profile is required to Pass both PART 1 and PART 2 tests.

D) The product also requires "**File Reader Tests for Analysers**" to have been completed. If the device also includes Writer functionality then "**Writer Tests**" should also have been completed. All tests must be a 'Pass' or 'Pass with Conditions' in order for the Product Test Report to be issued.

DOWNLOAD OF TEST FILES

PART 1 - TEST FILES (MXF)

A specific URL will allow you to download **PART 1 (MXF)** test files once the required PART 1 document has been reviewed and passed by the Compliance Programme. You should download all PART 1 test files as we require the device being tested for MXF to assess all files in this set.

FILE TESTING INSTRUCTIONS

1. Select the specific **test plan**, or **profile**, or **tick box** of a specific **version** of your product. This should be what someone buying the product can use operationally. **This is what is being tested.**
2. Test every file in the test set, and record the results for each.
3. The recorded information only has to say whether the test plan/profile declares the file a Pass or a Fail.
4. For ease of assessment by the Compliance Programme, the recorded information for each file should ideally be presented as a ***.csv** file, or simply as a comma separated list. This should be arranged with "*File_name,Result*" and continue in that order. For example:

   File 1,Pass
   File 2,Fail
   File 3,Fail
   File 4,Pass
   File 6,Fail… etc.

5. The list, or csv file should be sent to the DPP along with the other required information, detailed below.

TEST METHOD DECLARATION - Notes

· There are many aspects of a DPP file that need to be tested by an Analyser, and for each of these there are various methods available for testing that particular aspect. For instance, there are many ways to test that an MXF file is OP1a. Each is valid but they involve very different processes and have different meaning. We'd like to disambiguate this situation by clearly defining exactly how ***certain file format tests*** are carried out.

· The information about how features are tested will be more useful to users if they know how a product reports the results of those tests. We're not intending to specify this (the EBU is active in this area) but we think it's useful for users to know what error or warning messages they can expect to see.

· This document includes a list of features and for each one, a list of one or more methods that could constitute a test of that feature. **Please note: This list of features is not exhaustive. We expect Analysers will conduct many more tests than are listed here. The DPP HD File Test Suite gives an indication of the areas of interest.**

All of the features listed in the TEST METHOD DECLARATION Table must be tested using an approved method

· In order to pass Certification Level Testing, a product must carry out at least one of the listed methods for each of the features listed here. If a product uses a different, possibly more advanced or indirect method for testing the feature, then it must be described and subsequently approved by the DPP Compliance Lab.

· For each feature, please indicate which of the listed methods is used by the product to test the feature, by typing the method letter(s).. If multiple methods are used, please list all that apply and explain if, and how, their outcomes are combined. Please also tell us how a failure of a particular test will be reported by the product. In the simplest case this will be an error ID of some sort. If the reporting is especially complex, please try to summarise it.

Expected Values

· Our primary interest is in which properties are inspected by a test. However, expected values of properties are also given for information. When values are expressed in hexadecimal form they are prefixed '0x'. 16-byte Universal Labels are also in hexadecimal (without a prefix) with the bytes separated by dots (.). Some values, such as timecodes, may need to be converted to a suitable type for use in MXF.

References to Conformance Rules

- Some features reference a Rule ID from the AMWA AS-11 UK DPP Conformance Rules

http://www.amwa.tv/projects/rules/as-11

which may be of use in providing some context to or explanation of that feature. In some cases the Rules can help to find the ultimate source of the requirement for a particular test.

TEST METHOD DECLARATION - Completed by OEM

Feature 1: Header Partition Status (Rule020)

Method A: Byte 15 of Header Partition Pack Key = `0x04`

Do you test this feature?	Yes
Do you use Method A?	Yes
What error is reported for this test?	**e.g. "Header partition is not closed/complete (it is open/incomplete)"**

Feature 2: MXF Version (Rule000)

Method A: Major Version Property of the Header Partition Pack = `0x0001`
and
Minor Version Property of the Header Partition Pack = `0x0003` or `0x0002`

Method B: Version Property of the Preface = 259 or 258

Do you test this feature?	Yes
Which of the above methods do you use?	A and B
What error is reported for this test?	"Header partition MXF version must be 1.2 or 1.3 but found 1.1." or "Preface MXF version must be 1.2 or 1.3 but found 1.1".

Feature 3: KLV Alignment Grid (Rule050)

Method A: KAG Size Property of all Partition Packs = `0x00000001`

Do you test this feature?	Yes
Do you use Method A?	Yes
What error is reported for this test?	**"KLV alignment grid must be 1, but found 512."**

Feature 4: Operational Pattern (Rule010)

The Operational Pattern is expected to be: OP-1a, streamable, internal essence

Method A: Operational Pattern Property of the Header Partition Pack =
`06.0e.2b.34.04.01.01.01.0d.01.02.01.01.01.09.00`

Method B: Operational Pattern Property of the Preface =
`06.0e.2b.34.04.01.01.01.0d.01.02.01.01.01.09.00`

Do you test this feature?	Yes
Which of the above methods do you use?	A and B
What error is reported for this test?	**"Operational Pattern in header partition pack is not OP-1a ([06.0e.2b.34.04.01.01.02.0d.01.02.01.10.02.00.00])."** **or:** **"Operational Pattern in header preface is OP-1a but non-streaming ([06.0e.2b.34.04.01.01.01.0d.01.02.01.01.01.0d.00])."**

Feature 5: Number of Partitions that contain Essence (Rule100)

Method A: Count the number of Partitions listed in the RIP that have BodySID != 0; ensure there is only 1

Method B: Count the number of Partition Packs that have BodySID != 0; ensure there is only 1

Do you test this feature?	Yes
Which of the above methods do you use?	A and B and additionally we count the number of partitions that contain essence.
What error is reported for this test?	**"Found 24 partition packs with Body SID != 0 (only one allowed)."** **and/or** **"Found 24 Random Index Pack entries with Body SID !=0 (only one allowed)."** **and/or** **"Multiple partitions containing essence elements - only one allowed."**

Feature 6: Essence Containers (Rule200, Rule240)

The Essence Container Labels that should be in the file are:

- MXF-GC AVC Byte Stream With VideoStream-0 SID Frame-wrapped (06.0e.2b.34.04.01.01.0a.0d.01.03.01.02.10.60.01)

and either of:

- MXF-GC Frame-wrapped Broadcast Wave audio data (06.0e.2b.34.04.01.01.01.0d.01.03.01.02.06.01.00)
- MXF-GC Frame-wrapped AES3 audio data (06.0e.2b.34.04.01.01.01.0d.01.03.01.02.06.03.00)

You might look for them in any of the places listed below:

Method A: Essence Containers Batch in the Header Partition Pack
Method B: Essence Containers Batch in the Preface
Method C: Essence Containers Batch in the Body Partition Pack(s) *(if Body Partitions exist)*
Method D: Essence Containers Batch in the Footer Partition Pack

Do you test this feature?	Yes
Which of the above methods do you use?	**A, B, C and D**
What error is reported for this test?	**"Missing essence container labels: body pack, footer pack, header pack and header preface were missing AVC and missing BWAV/AES3."**

Feature 7: Descriptive Metadata Presence

Method A: DMSchemes Batch of the Preface includes all of these:

- AS_11_Core (06.0e.2b.34.04.01.01.01.0d.01.07.01.0b.01.00.00)
- AS_11_Segmentation (06.0e.2b.34.04.01.01.01.0d.01.07.01.0b.02.00.00)
- AS_11_UKDPP (06.0e.2b.34.04.01.01.01.0d.0c.01.01.01.00.00.00)

Do you test this feature?	Yes
Do you use Method A?	**Yes**
What error is reported for this test?	**"Missing Descriptive Metadata scheme(s) from Preface Batch: AS-11 Core, AS-11 Segmentation and UK DPP."**

Feature 8: Number of Picture Tracks in the Material Package (Rule180)

Method A: Count the number of Timeline Tracks in the Material Package that reference Timeline Tracks in the Source Package whose Track Number Property has its first byte equal to 0x15; ensure there is exactly 1

Method B: Count the number of Timeline Tracks in the Material Package that reference a Structural Component whose Data Definition is "Picture Essence Track" (06.0E.2B.34.04.01.01.01.01.03.02.02.01.00.00.00); ensure there is exactly 1

Do you test this feature?	Yes
Which of the above methods do you use?	**B**
What error is reported for this test?	**"Found 2 picture tracks in Material Package (should be 1)."**

Feature 9: Number of Sound Tracks in the Material Package (Rule210)

Method A: Count the number of Timeline Tracks in the Material Package that reference Timeline Tracks in the Source Package whose Track Number Property has its first byte equal to 0x16; ensure there are exactly 4 or exactly 16

Method B: Count the number of Timeline Tracks in the Material Package that reference a Structural Component whose Data Definition is "Sound Essence Track" (06.0E.2B.34.04.01.01.01.01.03.02.02.02.00.00.00); ensure there are exactly 4 or exactly 16

Do you test this feature?	Yes
Which of the above methods do you use?	**B**
What error is reported for this test?	**"Found 8 sound tracks (must be 4 or 16)."**

Feature 10: Sound Track numbering (Rule250)

Method A: Record the Track Number Property of each of the Timeline Tracks in the Material Package that reference Timeline Tracks in the Source Package whose Track Number Property has a first byte equal to 0x16; ensure these are each unique, and between 1 and the number of Track Numbers being considered.

Method B: Record the Track Number Property of each of the Timeline Tracks in the Material Package that reference a Structural Component whose Data Definition is "Sound Essence Track" (06.0E.2B.34.04.01.01.01.01.03.02.02.02.00.00.00); ensure these are each unique, and between 1 and the number of Track Numbers being considered.

Do you test this feature?	Yes
Which of the above methods do you use?	**B**
What error is reported for this test?	**"Sound track numbers are all 0 (must start from 1 and count upwards)." or "Sound track numbers should be unique from 1-8, but found 1, 1, 1, 1, 2, 2, 2 and 2."**

Feature 11: Minimum average (mean) file data rate

Such a test can give an early indication if the file is of an incorrect type, or has been corrupted.

A calculation of mean file data rate based on the total file size as reported by the operating system, divided by the duration, which may be found, in terms of edit units (frames), in the Duration Property of:

Method A: The Timecode Component of the Timecode Track in the Material Package
Method B: The Sequence referenced by the Timecode Track in the Material Package
Method C: The Timecode Component of the Timecode Track in the Source Package
Method D: The Sequence referenced by the Timecode Track in the Source Package
Method E: The Sequence referenced by an (please state which) Essence Track in the Material Package
Method F: The Source Clip referenced by an (please state which) Essence Track in the Material Package
Method G: The Source Clip referenced by an (please state which) Essence Track in the Source Package

Or in the Container Duration Property of:

Method H: The Multiple Descriptor
Method I: The Picture Essence Descriptor
Method J: Any (please state which) of the Sound Essence Descriptors

Or by counting:

Method K: The number of Content Packages using the method described in the "Note" at the foot of Section 8.3 of SMPTE ST 379-2:2010

An analyser must check that the mean file data rate is **at least**:

- 14.799 MB/s for 4 channel sound, and
- 16.533 MB/s for 16 channel sound.

(MB = 10^6 Bytes).

An analyser may also test for a 'maximum' data rate but this is not defined here and not a requirement of these tests.

Do you test this feature?	Yes
Which of the above methods do you use to find file Duration?	**B**
What error is reported for this test?	**"File data rate is 12.345 MB/s, minimum for HD files with 4-channel audio is 14.799 MB/s.""**

Feature 12: Footer Partition presence (Rule000, Rule010)

The Key for a Footer Partition Pack is `06.0e.2b.34.02.05.01.01.0d.01.02.01.01.04.04.00`

Method A: Seek to the byte offset given in the Footer Partition Property of the Header Partition Pack (if it is non-zero), and ensure that the Key found there is that of a Footer Partition Pack

Method B: Seek to the byte offset given by the last Partition listed in the Random Index Pack, and ensure that the Key found there is that of a

Do you test this feature?	Yes
Which of the above methods do you use?	**B, falling back to A if no RIP present (this is the behaviour of libmxf++'s File::readPartitions method)**
What error is reported for this test?	**"Footer partition not present."**

Feature 13: Random Index Pack presence (Rule040)

Method A: Implement the algorithm in Section 12.3 of SMPTE ST 377-1:2011:

```
Seek_to_(MXF_FILE, END_OF_FILE-4);      //go to end of the MXF file
L= read_UInt32(MXF_FILE);               //read the length
If (L < UPPER_LIMIT)                    //check for silly values
{
   Seek_to_(MXF_FILE, END_OF_FILE-L);   //Go to start of Random Index Pack
   RIP= Read_RIP(MXF_FILE);             //Read the Random Index Pack
   RIP_EXISTS= Check_Key(RIP);          //Final check that it was a valid RIP
}
```

Do you test this feature?	Yes
Do you use Method A?	Yes, via libmxf's mxf_read_rip function. This implements the above algorithm with the exception of the "UPPER LIMIT" check.
What error is reported for this test?	**"Can't find Random Index Pack"**

Feature 14: Essence Descriptors

The Properties in the following tables are all mandatory for the Descriptors in question. The allowed values for those Properties are listed. **Please confirm**, for each property, that your product tests for **presence** of the field (P) and validity of the **value** (V).

Picture Essence Descriptors permitted: (Rule200, Rule190)

The MPEG 2 Video Descriptor Key is 06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.51.00

Property	Allowed Values	P	V	Error Reported
Essence Container	MXF-GC AVC Byte Stream With VideoStream-0 SID Frame-wrapped (06.0E.2B.34.04.01.01.0A.0D.01.03.01.02.10.60.01)	Y	Y	"Video essence descriptor Sample Rate must be 25 fps but found 30 fps."
Sample Rate	25-Jan	Y	Y	"Video essence descriptor Sample Rate must be 25 fps but found 30 fps."
Frame Layout	separate_fields (1)	Y	Y	"Video essence descriptor Frame Layout was 2 (must be 1: separate_fields)."
Stored Width	1920	Y	Y	"Video essence descriptor Stored Width was 720 (must be 1920)."
Stored Height	540 **or** 544	Y	Y	"Video essence descriptor Stored Height was 1080 (must be 540 or 544)."
Aspect Ratio	16x9	Y	Y	"Video essence descriptor Aspect Ratio was 0x0 (must be 16x9)."
Active Format Descriptor	9 (0x4c) **or** 10 (0x54) **or** 14 (0x74)	Y	Y	"Video essence descriptor AFD was 8 (must be 9, 10 or 14)."
Video Line Map	21, 584	Y	Y	"Video essence descriptor Video Line Map was [20,584] (must be [21,584])."
Component Depth	10	Y	Y	"Video essence descriptor Component Depth was 8 (must be 10)."
Horizontal Subsampling	2	Y	Y	"Video essence descriptor Horizontal Subsampling was 1 (must be 2)."
Picture Essence Coding	H.264/MPEG-4 AVC High 422 Intra RP2027 Constrained Class 100 1080/50i Coding (06.0E.2B.34.04.01.01.0A.04.01.02.02.01.32.31.02)	Y	Y	"Picture essence descriptor Essence Coding should be "AVC High 422 Intra RP2027 1080/50", but found key [06.0e.2b.34.04.01.01.0a.04.01.02.02.01.32.21.02]."

Sound Essence Descriptors permitted: (Rule240, Rule230)

The Wave Audio Essence Descriptor Key is 06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.48.00

or:

The AES3 Audio Essence Descriptor Key is 06.0e.2b.34.02.53.01.01.0d.01.01.01.01.01.47.00

Property	Allowed Values	P	V	Error Reported
Essence Container	MXF-GC Frame-wrapped Broadcast Wave audio data (06.0E.2B.34.04.01.01.01.0D.01.03.01.02.06.01.00) or MXF-GC Frame-wrapped AES3 audio data (06.0E.2B.34.04.01.01.01.0D.01.03.01.02.06.03.00)	Y	Y	"Sound essence container label should be frame-wrapped AES3 or BWAV, but found [06.0e.2b.34.04.01.01.0a.04.01.02.02.01.32.21.02]."
Sample Rate	48000/1 **or** 25/1	Y	Y	"Sound essence descriptor Sample Rate must be 25 or 48000 but found 44100."
Audio Sampling Rate	48000/1	Y	Y	"Sound essence descriptor Audio Sampling Rate was 44100 (must be 48000)."
Channel Count	1	Y	Y	"Sound essence descriptor Channel Count was 4 (must be 1)."
Quantisation Bits	24	Y	Y	"Sound essence descriptor Quantization Bits was 16 (must be 24)."
Average Bytes Per Second	144000	Y	Y	"Sound essence descriptor Average Bytes Per Second was 2304000 (must be 144000)."

Feature 15: Index Table precedes Essence (Rule060)

There are a multitude of sensible methods for this test. Implementing an exhaustive test requires in-depth understanding of the scope of complexity for Essence wrapping and indexing permitted by the specifications. As such, we don't require analysers to implement an exhaustive test. We'd like you to declare what your method is for conducting this test.

As a minimum analysers must ensure that at least one Index Table Segment is before the Essence in the file. When combined with the other tests set out here (Essence is in a single Partition) we consider this to be sufficient.

Do be aware of the some of the pitfalls in this area:

- Checking which Partition the Index Table and Essence reside in (based on the IndexSID and BodySID properties of the Partition Packs) is insufficient. It is valid for the Index Table and Essence to be in the same Partition – an additional check of the order in which they appear would
- Index Table Segments appearing *after* the Essence is not always invalid. It is permitted to repeat an Index Table after the Essence.

Do you test this feature?	Yes
How have you implemented this test?	**Read all KLVs in the file until first GC essence element. Ensure that at least one of them is an index table segment.**
Do you explicitly check that an Index Table Segment appears before the Essence?	**Yes**
What error is reported for this test?	**"No index table prior to essence container."**

Overall ANALYSER - PART 2 (DM) Result (DPP Test Lab review of OEM supplied test results)	PASS

PART 2 - Descriptive Metadata (DM) Validation Tests
For DPP Compliance Testing of PRODUCT to Certification Level

6a Table 1 - GENERAL DETAILS (OEM to complete)		
OEM name	Vidcheck Ltd	
Product name	Vidchecker/Vidfixer	[DPP Lab added]
Product version	6.2.7	
Product Test Plan, or Profile, or Template	AS-11 UK DPP HD v1.1	[DPP standard]
Date of tests	4th March 2015	

6f Output test artifacts supplied by the OEM

The following output artifacts were supplied and assessed as part of the test process:

Completed DM File Tests Results for all files in the DM validation test set, as specified in Part 3 (Results) with all results as expected for a Pass.

DECLARATION

"I confirm that the information in this report has been completed honestly and is an accurate representation of the results obtained. Also, that these results provide a fair assessment of the product's ability to read and work with AS-11 DPP files in a way reasonably expected for a product of this type and functionality, and that these results were achieved when using the product in a configuration which would reasonably be regarded as normal operational use."

OVERALL PROCEDURE (OEM Testing to Certification)

A) OEM to follow instructions below for testing **PART 2 (DM)**

PART 2 (DM)

a. The requirements for Descriptive Metadata testing are described in this document: **PART 2: Descriptive Metadata (DM) Validation Tests**. In particular, Section 5 of the PART 2 document describes the details provided in various files all contained together in a zip file: as_11_ukdpp-dm_conformance-v1.0.0.zip. A download link is provided for this zip file.

b. A download link is also provided for a set of DM test files which are to be used by the Analyser for testing the detection of a range of DM issues.

c. The **PART 3: File Testing and Reporting (for PART 1 & PART 2)** document explains how to record test results for PART 1 (MXF) and/or PART 2 (DM) tests.

d. The results of the file testing (Pass or Fail for each file) should be returned.

e. The Results will then be reviewed by the CP to determine if the analyser correctly identified each file as a Pass or Fail.

B) OEM to email the File Testing Results for **P2 (DM)** to the DPP: complianceprogramme@digitalproductionpartnership.co.uk

C) The outcome of the review of results for PART 1 and PART 2 will be provided to the OEM. The Test Plan or Test Profile is required to Pass both PART 1 and PART 2 tests.

D) The product also requires "**File Reader Tests for Analysers**" to have been completed. If the device also includes Writer functionality then "**Writer Tests**" should also have been completed. All tests must be a 'Pass' or 'Pass with Conditions' in order for the Product Test Report to be issued.

DOWNLOAD OF TEST FILES

PART 2 - TEST FILES (DM)

A specific URL will allow you to download **PART 2 (DM)** test files, as well as a zip folder containing PART 2 information on required DM tests. You should download all PART 2 test files as we require the device being tested for descriptive metadata to assess all files in this set.

FILE TESTING INSTRUCTIONS

1. Select the specific **test plan**, or **profile**, or **tick box** of a specific **version** of your product. This should be what someone buying the product can use operationally. **This is what is being tested.**
2. Test every file in the test set, and record the results for each.
3. The recorded information only has to say whether the test plan/profile declares the file a Pass or a Fail.
4. For ease of assessment by the Compliance Programme, the recorded information for each file should ideally be presented as a ***.csv** file, or simply as a comma separated list. This should be arranged with "*File_name,Result*" and continue in that order. For example:

   File 1,Pass
   File 2,Fail
   File 3,Fail
   File 4,Pass
   File 6,Fail… etc.

5. The list, or csv file should be sent to the DPP along with the other required information, detailed below.

REQUIREMENTS for DESCRIPTIVE METADATA

These instructions refer to the contents of the zip file package:
as_11_ukdpp-dm_conformance-v1.0.0.zip

AS-11 UK DPP Descriptive Metadata Schemes

Introduction

This package describes technical details of the Descriptive Metadata (DM) Schemes to be included in AS-11 UK DPP files. It has been developed as part of the DPP Compliance Programme and supersedes the details published previously -- most importantly it supersedes the details included in the AMWA AS-11 Specification PDF and associated spreadsheet (which are known to contain a number of errors as well as some ambiguities). The details included in this package will be integrated into the AS-11 UK DPP Conformance Rules which are available (currently in draft form) here: http://www.amwa.tv/projects/rules/as-11/

This package focuses on technical details of the DM and does not seek to replace all the useful guidance documents published by the DPP and others on how to manage the DPP metadata as part of the production workflow, how to source values for metadata properties, etc.

Package Contents

smpte_metadata_registers_entries

SMPTE are working to publish Types, Groups, Elements and Labels metadata registers as XML. Currently published registers are available here: http://www.smpte-ra.org/

The XML files included in this directory contain draft (as yet unpublished) metadata register entries related to the AS-11 UK DPP descriptive metadata schemes as well as some additional entries to which they refer. The XML schemas used are unlikely to change prior to publication but have not yet been formally ratified. However, they have been designed to represent the required information for each register as set out in the relevant SMPTE standards:

- ST 335:2012
- ST 395:2014
- ST 400:2012
- ST 2003:2012

`as_11_ukdpp--summary_view.html` provides an informative summary of how each DM scheme is composed.

Note that the AS-11 / DPP entries do not currently contain definitions. These are being finalised and will be added shortly (and certainly prior to final publication of the entries by SMPTE).

tests

The files in this directory specify additional constraints on the DM in the form of tests. These are divided into two sub-directories:

- `as_11_ukdpp_tests` -- covers constraints that arise from the AMWA AS-11 specification beyond what is covered by the SMPTE metadata registers entries

- `ukdpp_delivery_spec_tests` -- covers *selected* key constraints that arise from the DPP Broadcast Delivery specification

These additional constraints are expressed here in Python (developed for Python version 2.7). It is hoped that this will be as simple to read and understand as pseudo code, yet will describe logical intent without ambiguity. It also has the benefit of being executable and so forms what could be considered a reference implementation regarding DM validation. Note that the code has been designed to enhance the clarity of the test definitions rather than for efficient or compact code. Practical implementations are likely to use a different approach.

helper_files

Contains files that define classes and functions (using Python) that are used in the definitions of the tests.

Products with a DM Analyser capability taking part in the DPP Compliance Programme

These products are referred to "Analysers" in this documentation.

Analysers are required to check the DM in each analysed MXF file for full conformance with the contents of this package. This includes:

- conformance with the SMTPE metadata registers entries -- see Appendix A
- conformance with the constraints arising from AS-11 -- see Appendix B
- conformance with the selected key constraints arising from the DPP Broadcast Delivery specification -- see Appendix B

General Principles

All Elements / properties that are "present" in an MXF file must be "valid" (and so must pass all the tests specified).
An Element / property is considered to be "present" in the MXF file if its 2-byte tag is present in the relevant KLV

Appendix A -- Testing conformance to the SMTPE metadata registers entries

Each Framework present in the file must be tested for conformance with the SMTPE metadata registers entries provided. This includes checking that:

- every Element in the Framework with `IsOptional==false` is "present" in the Framework's KLV set

- the value of each Element can be decoded as a valid instance of the stated Type (see below for more on Types)

- the stated string length restrictions (`ValueLength`) are not exceeded. In determining the "length" of a string the number of Unicode "code points" that it contains must be counted. Note that in various scenarios "code points" do not equate to what are commonly referred to as "characters" -- converting a list of "code points" into a list of "characters" is not always straightforward. Therefore, the stated limit of "x characters maximum" must be implemented as "x Unicode code points maximum". In the Python framework used in this package (see below for more details), a suitable statement would be `CHECK( len(AS_11_Series_Title) <= 127 )`. Note that this limit is certainly not on the number of bytes used for the value of the Element / property.

- the value of each Element / property with Type `ISO_639_2_Language_Code` is a string constituting a valid ISO 639-2 language code. It is sufficient to check that the string consists of three characters (in practice three Unicode "code points" -- see above) but more comprehensive checking would be beneficial.

Notes:

- The Elements / properties may occur in the KLV set in any order

Appendix B -- Understanding the additional tests specified as Python code

All the tests specified in this package must be performed by an Analyser on the DM in each MXF file analysed. This Appendix describes how the Python variables etc need to be initialised from an MXF file in order for the provided code to function correctly.

For each Element listed in the SMPTE registers entry for both the `DM_AS_11_Core_Framework` and the `DM_AS_11_UKDPP_Framework` define a variable:

- The name of the variable must be set as the `Symbol` of the Element.
- The value of the variable must be `None` (i.e. the special Python object) if the Element / property is considered to be "absent" from the relevant KLV set in the MXF file (see above). Otherwise the value stored in the MXF file must be converted into the relevant Python data type (see below).

Define a variable called `AUDIO_CHANNEL_COUNT` and set its value (integer) to the number of audio channels in the MXF file (note: this is not the same as the number of MXF Sound Tracks in the case of the UK DPP SD Shim).

Define a variable called `FILE_DURATION` and set its value (integer) to the duration of the Material Package (measured in Edit Units). There are numerous ways to determine this value e.g. the duration of the Picture Track in the Material Package could be used. Do NOT use the duration of the Segmentation Track.

Define a variable called `MATERIAL_PACKAGE_TIMECODE_TRACK_START` and set its value (integer) to the `Start Timecode` of the Timecode Track in the Material Package (which is expressed as an integer frame count from 00:00:00:00).

Define a variable called `SEGMENTATION_TRACK` to represent the Segmentation Track. Here we use a much simplified model of the Segmentation Track described in AMWA AS-11, which is an instance of the MXF Timeline Track (DM). It is represented as a Python List of locally defined `DMSegment` and `Filler` objects -- these are added to the Python list in the same order as they appear on the Segmentation Track in the MXF file. These are simple objects each with a `duration` attribute. The DMSegment has an additional `framework` attribute, which is an object of type `DM_AS_11_Segmentation_Framework`. This framework object contains the `AS_11_Part_Number` and `AS_11_Part_Total` elements of the AS-11 Segmentation Framework. These Python Classes are defined in `as_11_ukdpp_dm_classes.py`.

DM accuracy

Descriptive Metadata must accurately describe the content to which it is linked. The file `dm_accuracy.py` includes a set of tests that Analysers must implement, but this list is not exhaustive. Note however, that there are cases where the presence or value of a DM property is deliberately only partially constrained. Where this is the case it will be highlighted and explained with a code comment. It is important that Analysers **do not** implement further logic in these cases as it could hamper interoperability.

Shim specific tests

Note that only one of the two Shim specific test files will be relevant for each MXF file: either `as_11_ukdpp_hd_shim_delivery_constraints.py` or `as_11_ukdpp_sd_shim_delivery_constraints.py`

Data Types

UTF16String

Values of Type `UTF16String` are stored as Python Unicode strings. `UTF16String` values are assumed to have been read from the MXF file according to Section 4.3 of SMPTE ST 377-1:2011, terminating before (and discarding) any null character. Note that no other characters appearing before the null character (such as whitespace or non-printable characters) are removed. If an Element / property of type `UTF16String` is considered "present" but the above processing of the value stored in the MXF file results in zero characters in the string, the corresponding variable shall be assigned the value "" i.e. an empty string. Although not required, it may be useful for an Analyser (or other device) to warn a user if a string appears to be "undesirable" -- for example, if it contains leading or trailing whitespace, certain "control code" characters, etc.

Note: `ISO_639_2_Language_Code` is a "rename" (roughly an alias) of the `UTF16String` Type and so must be treated as for `UTF16String` during parsing.

Integers

All signed and unsigned integer types used in MXF are represented here as Python integers.

Note: `PositionType` and `LengthType` are both "renames" of `Int64` and so must be treated as for `Int64` during parsing.

Booleans

The values of MXF Booleans are represented by the Python built-in constants `True` and `False`. Note that in MXF a Boolean is a single byte, which evaluates to True for **all cases** except `0x00` (in which case it evaluates to False).

Record Types (Rational, VersionType, TimeStamp)

Any value of a `Record TypeKind` is represented here as a Python Dictionary. For each `Facet` an item is added to the Python Dictionary with a key equal to that of the `Symbol` of the `Facet`. The value for this key is set to the parsed value of the relevant portion of the Element / property value.

Enumerations (numerous)

All of the `Enumerations` used are integer enumerations. Any value of an `Enumeration` Element / property is stored as a Python integer. For each Type with `TypeKind Enumeration` a variable is defined for each `Facet` of the Type with:

- a name equal to that of the `Facet Symbol`
- a value equal to that of the `Facet Value`

digital production partnership

Overall WRITER Result	PASS

WRITER SUBMISSION FORM - For DPP Compliance Testing of PRODUCT to Certification Level

The OEM is to complete the following sheet and submit it to the DPP Compliance Programme, together with any output files, for testing to be undertaken.

COMPLETING THE FORM	All required information should be detailed below. Please see the notes section below and also comments (In blue) for guidance on what is requied. Please adjust the size of fields as necessary.

GENERAL	OEM Name	Vidcheck Ltd.
	Product Name	Vidchecker/Vidfixer [DPP Lab added]
	Product Version	6.2.7

DEVICE OPERATION	Can the product be used to**Write**AS-11 DPP HD files?	Y
	Can the product be used to**Read**AS-11 DPP HD files?	Y
	Give details of the**range**of**product features**that were used in writing these test files: from inputs used through to ouput being produced; e.g. ingest; transcode; edit metadata. Details for each individual file submitted should be provided in the table below.	AS-11 UK DPP HD file ingest Decode / re-encode baseband with no modificationAS-11 UK DPP HD file output with metadata passthrough
	For these product features, please detail the**capabilities**, the and any restrictions on the capabilities	

CONFIGURATION	Details of product configuration in order to use the features: for example, output settings.	Create minimal template for file re-encode: 1) In the Vidchecker GUI, go to the “Templates” tab and choose “New”. 2) Go to the “General Settings” tab of the new template. 3) Select “Mono Audio Tracks → Join on Input” (necessary for processing multiple-mono audio tracks as per HD spec) 4) Select “Always Output File → Output uncompressed/re-encoded version of the file even if not corrected”. Enter an “Append suffix” of “_copy” to distinguish the output file from the input. 5) At the top of the screen, press “Save” to save the new template 6) Select the “Task Setup” tab at the top of the screen. 7) In the “New Task” section, select the new template (its default name will be “New Template”). 8) Select “Browse” and choose the input MXF file. 9) Press “Start Task” and then select the “Task Monitor” tab to observe the file being processed to completion. 10) The output file will be placed alongside the input file with the “_copy” suffix. 11) Output is the result of decoding and re-encoding the elementary streams, re-multiplexing and copying MXF metadata.
	Sufficient information must be provided to allow a configuration to be replecated by the test lab.	
	If necessary any detailed configuration settings could be attached as an appendix to this report	

AS-11 DPP FILES		List all AS-11 DPP MXF files submitted for testing, with details?					*DPP LAB USE Result: P, C, F*
New file name	Duration of file (hh:mm:ss:ff)	Number and duration of parts (Segmentation)	Number of audio channels	Source of DPP metdata	Source media used (File name or SDI) (DPP or OEM supplied in brackets)	Product features used to produce the file	
VIDCHECK_HD_A.mxf	Approx 14 mins	Single	16	DM present in Input file to be written to output file	File***AS11_DPP_HD_EXAMPLE_1.mxf*** DPP supplied, available from Reader Test set: ftp://apmmdrop:47pokwyz@ftp.kw.bbc.co.uk/dpp_reader_test_files	Select the input AS-11 UK DPP HD file. Modify (or correct) audio and/or video according to standard product features to result in a decode/encode and MXF wrap. Produce output AS-11 UK DPP HD file with Descriptive Metadata unchanged.	**Pass**

NOTES	
Writer Test Procedure	Tests should use the equipment under realistic operational conditions to produce DPP files. The Lab will test that common workflows for the particular equipment under test are capable of producing valid DPP files. We're not out to trick equipment into producing non-conformant files, nor are we interested in testing every possibly configuration a piece of equipment might have. Equipment is not required to produce all allowed variants of AS-11 DPP files. The test Lab is not part of the QA process for product development. We're not testing the equipment's ability to analyse and validate its input. While we encourage OEMs to produce stable equipment that copes well in the presence of faulty input, we're not testing that here. As such, all input artefacts (audiovisual essence, metadata values) will conform to the relevant specifications.
Input artefacts	Different types of equipment will require different types of input.
	Using different input as stimulus will also test different aspects and workflows within the same equipment.
	Inputcontent (files) will be provided by the Lab, as shown above
	Content will be provided in a variety of formats intended to represent likely operational inputs. Not all equipment is expected to utilise all available input artefacts. The variety on offer is designed to support the range of equipment submitted for testing and to excersise the various aspects of that equipment. For instance, a transcoder might behave differently if asked to produce a DPP file from MPEG2 essence, than if asked to do the same from AVC-Intra essence.
	Descriptive metadata (DM) will identify audio track layout and programme segmentation timecodes. The DM does not necessarily match the content of the media.
	SDI
	Equipment may require HD SDI as input. This is sufficiently standardised that it can be sourced locally. All files submitted to the Lab may be used to test other equipment, so content sourced on SDI must be**Royalty Free**.
Output artefacts (DPP files) to be produced	Outputs need to reflect the advertised capabilities of the equipment, and test a range of the (user-configurable, as opposed to developer-configurable) variation allowed by the specification. They should also be representative of real programmes likely to be delivered to broadcasters.

Document version	v1.2	9/9/14	Second issue - Overall result panel and column added, layout revised Third issue - notes edited
Document Notes 1) This document is now a third issue and will likely change in the future. This will include the revision of existing tests and addition of new ones.			

OEM	Vidcheck Ltd
Product	Vidchecker/Vidfixer [DPP Lab added]
Version	6.2.7
File	VIDCHECK_HD_A.mxf
File ref	534
Date	11th March 2015

Certification Status

P	**PASS**
W	**PASS with Warning** (For information only. Feedback to OEM)
C	**PASS with Conditional Error** (Certification may include conditional issues to be fixed)
F	**FAIL with Critical Error** (Certification Fail as no critical erros are allowed)

	Fault Description	PASS / FAIL	Test	Tool	Error or Warning Category (refer to accompanying notes) Note	
1		P	Test 1	(1) Media Player checks:		media duration
2		P				audio plays ok
3		P				video plays ok
4		P				qty of audio channels
5		P				a/v in sync and same length
6		P	Test 2	(2) DPP Metadata tool		DPP Metadata Validation
7		P	Test 3	(3) mxf2xml validation	c1-12	Mandated DM is present
8		P			c13-36	DM conditional & mandated values in range
9		P			c37-40	Line-up and Ident T/C in range, part T/Cs
10		P			c41	Timecode timebase is 25 fps
11		P			b61, b87	Exactly 1 audio channel in a track
12		P	Test 4 - 6, 8	All the following:	a1	AVC syntax: SMPTE RP 2027:2011 Class 100
13		P	(Misc)	(4) AQC 1	a2	SPS and PPS location
14		P		(5) AQC 2	a34	Invalid idr_pic_id sequence
15		P		(6) mxf analyser	a3-6	Video essence: frame size, 25 fps, interlaced, 10 bit
16		P		(8) AVCi analysis script	a7	Sound Essence Bytes
17		P			a8	Closed Captions
18		P	Tests 4 - 6	All the following:	a12	MXF Conformance
19		P	(MXF)	(4) AQC 1	a13	Op1a
20		P		(5) AQC 2	a14	Header Partition Status
21	The following is acceptable as it is (a) only a recommendation, and (b) intended for origination, not subsequent processing: WARNING for Information: The Header Metadata is followed by only 8126 bytes of KLV Fill (total length). Desired value: at least 8192 bytes.	W		(6) mxf analyser	a15	KLV Fill following Header Metadata
22		P			a16	Random Index Pack pressence
23		P			a17	KLV Alignment Grid
24		P			a18	Index Table presence
25		P			a19	Index Table location
26		P			a20	Index Table completeness
27		P			a21	Index Table correctness
28		P			a22	Essence Container
29		P			a23	Essence Container Wrapping
30		P			a24	Essence Container Location
31		P			a25	Essence Container Parent Partitions
32		P			a26	Essence Track Referencing
33		P			a27	1 Material Package Picture Track
34		P			a28	Picture Essence Elements Used
35		P			a29	4 or 16 Material Package Sound Tracks
36		P			a30	Sound Essence Elements Used
37		P			a31	Material Package Sound Track Numbers
38		P			a32	1 Material Package Timecode Track
39		P			a33	Footer Presence
40		P	Test 7	All the following:	b1-112	Consolidated Essence Descriptors: Presence and Value
			(Essence Descriptors)	(7) mxfdump, MXFDump		

Overall READER Result (DPP Test Lab review of OEM supplied test results)	PASS

FILE READER TEST results - For DPP Compliance Testing of PRODUCT to Certification Level

6a Table 1 - GENERAL DETAILS (OEM to complete)	
OEM name	Vidcheck Ltd
Product name	Vidchecker/Vidfixer [DPP Lab added]
Product version	6.2.7
Date of tests	09/03/2015

6b Table 2 - PRODUCT DESCRIPTION and CAPABILITIES (OEM to complete)	
Brief description of product / product type	Automated QC tool with optional correction and re-encode
What are its primary functions in relation to AS-11 UK DPP Reader tests? Please list the main ones.	AS-11 UK DPP HD input for structural & descriptive metadata checking AS-11 UK DPP HD input for baseband checking and correction
Does the device read and analyse the MXF file structure of the AS-11 UK DPP file?	Yes
Does the device render both video and audio from the AS-11 DPP file for use by the device?	Yes, rendered internally for testing and re-encoding
Analyser functionality: Does the device report the outputs from MXF format analysis? If so, how is this presented to the user and/or made available?	File format information available in XML and PDF reports, and via the GUI
Analyser functionality: Does the device read AS-11 DM (descriptive metadata) and/or UK DPP DM? If so how is this used and displayed?	AS-11 and UK DPP metadata available in XML and PDF reports
Analyser functionality: Does the device carry out AS-11 UK DPP validation of DM as part of its analyser functionality?	Yes
Analyser functionality: Does the device read AS-11 UK DPP programme segmentation / programme parting? If so how is this used and displayed?	Yes: read for the purpose of validation, but not displayed to user
Player functionality *if present* : Does the device include the ability to render to video on to a display? If so how is this presented to the display?	No, although third-party playback product may be launched from Vidchecker GUI
Player functionality *if present* : Does the device include the ability to decoded audio to outputs suitable for monitoring purposes?	No, although third-party playback product may be launched from Vidchecker GUI
Transcode functionality *if present* : Does the device render the AS-11 DPP video to a different file format (Transcoded) as part of its operation?	No
Transcode functionality *if present* : Does the device render the video and/or audio contents of AS-11 DPP file to a new AS-11 DPP file (modified or 'corrected') as part of its operation?	Yes, a range of audio and video baseband corrections available

6f Output test artifacts supplied by the OEM
The following output artifacts were supplied and assessed as part of the test process: Completed File Reader Tests results for all files in the Reader test set, with all results as expected for a Pass; *.pdf files displaying DM and structural metadata were also supplied for required files in the Reader test set.

DECLARATION	
7 DECLARATION	**The detailed test results for File Reader Tests, and the resulting overall READER result, is based on information provided by the OEM in self testing. When submitting the detailed test results the OEM representative signed the following declaration confirming that they agreed to the statement below. The details were then reviewed by the DPP Test Lab to determine the overall READER result shown at the top of this page.**
"I confirm that the information in this report has been completed honestly and is an accurate representation of the results obtained. Also, that these results provide a fair assessment of the product's ability to read and work with AS-11 DPP files in a way reasonably expected for a product of this type and functionality, and that these results were achieved when using the product in a configuration which would reasonably be regarded as normal operational use."	