

**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                      | Prime Focus Technologies |
| Product (Note 6)         | CLEARTM Media ERP        |
| Product Version (Note 6) | As of test report date   |
| Test Report Date         | 08 February 2017         |

|                               |             |
|-------------------------------|-------------|
| <b>OVERALL TESTING RESULT</b> | <b>PASS</b> |
|-------------------------------|-------------|

| HD Test Artifacts Used                                       |   |
|--|---|
| Writer Functionality   | Reader Functionality  |
| File Conformance Test Suite (F1.3)<br>(Note 1, on next page) | File Reader Tests (R1.3, R2.0 to 2.3, R3.1)<br>(Note 2, on next page) |

|             |             |
|-------------|-------------|
| <b>F1.3</b> | <b>R1.3</b> |
|-------------|-------------|

| Analyser Test Artifacts Used                       |   |
|--|---|
| MXF Format   | DM Validation                                     |
| PART 1 tests<br>A1.1 (MXF)<br>Documents: See below | PART 2 tests<br>A2.1 (DM)<br>Documents: See below |

|                   |                  |
|-------------------|------------------|
| <b>A1.1 (MXF)</b> | <b>A2.1 (DM)</b> |
|-------------------|------------------|

| GENERIC FUNCTION CATEGORIES                            |  | Functionality Tested  |
|--|--|-----------------------|
| <b>File Writers</b>                                    | Products that <b>write</b> 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)<br><a href="http://www.amwa.tv/projects/rules/as-11/">http://www.amwa.tv/projects/rules/as-11/</a> | <b>Not applicable</b> |
| <b>File Readers - R1.3 Players</b>                     | Products that have the ability to read AS-11 DPP HD files and then <b>play</b> 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.             | <b>Tested</b>         |
| <b>File Readers - R1.3 Transcoders</b>                 | Products that have the ability to read AS-11 DPP HD files and then <b>transcode</b> the contents to a different format. Transcoded output files are then tested following the Player testing procedure.  | <b>Tested</b>         |
| <b>File Readers - R2.0, R2.1, R2.2, R2.3 Analysers</b> | 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.   | <b>Not applicable</b> |
| <b>File Readers - R3.1 Specific Products</b>           | 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.   | <b>Not applicable</b> |
| <b>File Analyser - A1.1 (MXF) PART 1 Tests</b>         | File Format MXF tests, as per documents:<br>AS-11 UK DPP HD - P1 - MXF Tests for Analysers - A1.1 (MXF)<br>AS-11 UK DPP HD - P3 - Analyser Test Files - A3.1 (FILES)<br>Test files include the set of files testing MXF file format  | <b>Not applicable</b> |

|   |  |                       |
|---|--|-----------------------|
| <b>File Analyser - A2.1 (DM)</b><br><b>PART 2 Tests</b> | File DM Validation tests, as per documents:<br>AS-11 UK DPP HD - P2 - DM Tests - A2.1 (DM)<br>AS-11 UK DPP HD - P3 - Analyser Test Files - A3.1 (FILES)<br>Test files include the set of files testing DM Validation | <b>Not applicable</b> |
|---|--|-----------------------|

|   |
|---|
| <b>AMWA CERTIFICATION AUTHORITY</b>   |
| The <b>AMWA Certification Authority</b> uses these TEST REPORTS as the basis for awarding Certification. Please see the web page below. |
| <a href="http://www.amwa.tv/certification">http://www.amwa.tv/certification</a>   |

|                  |      |                  |  |
|------------------|------|------------------|--|
| Template version | v1.4 | 25 October 2016  | Generic Test Report                      |
| Template version | v1.2 | 05 February 2015 | Specific Product and Analyser categories |
| Template version | v1.1 | 06 February 2015 | Release version                          |

| NOTES         |   |
|---------------|---|
| <b>Note 1</b> | <b>Writer Functionality, File Conformance Test Suite:</b> This identifies the tests carried out on AS-11 DPP <b>OUTPUTS</b> of the product and describes the file conformance tests used. This document is available from the DPP Compliance page on the DPP website.   |
| <b>Note 2</b> | <b>Reader Functionality, File Reader Tests:</b> 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.                                |
| <b>Note 3</b> | <b>Input media used:</b> For <b>Writer</b> tests this identifies the <b>INPUT MEDIA</b> files and / or SDI and metadata sources to be used for the creation of output AS-11 DPP files specified.  |
| <b>Note 4</b> | <b>Input AS-11 DPP files used:</b> For <b>Reader</b> tests this identifies the a set of AS-11 DPP test files that are used as <b>INPUTS</b> to the product.   |
| <b>Note 5</b> | This <b>Product Test Report</b> is also known as the <b>TEST REPORT</b> for the purposes of applying for AMWA Certification.  |
| <b>Note 6</b> | 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.   |
| <b>Note 7</b> | 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 individual test result is a 'Fail' then the overall test result is a 'Fail'. |

| TEST PROCEDURE - Overview    |   |
|------------------------------|---|
| <b>Writer Test Procedure</b> | <p><b>Stage 1:</b> 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 <i>may</i> have one of four outcomes: <b>PASS</b>, <b>WARNING</b>, <b>PASS with CONDITIONS</b>, and <b>FAIL</b>. Some tests may just have <b>PASS</b> or <b>FAIL</b>. 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.</p> <p><b>Stage 2:</b> 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 '<b>Reader</b>' functionality then this will also require a 'Pass' or 'Pass with Conditions', in order for the Product Test Report to be issued.</p> |
| <b>Reader Test Procedure</b> | 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 ' <b>Writer</b> ' functionality then this will also require a 'Pass' or 'Pass with Conditions', in order for the Product Test Report to be issued.  |

|                                 |  |
|---------------------------------|--|
| <b>Analysers Test Procedure</b> | <p>This procedure is concerned with devices whose primary function is File Format Analysis of AS-11 DPP HD files.</p> <p>This functionality, defined in a specific <b>Test Plan</b> or <b>Test Profile</b>, is assessed in two parts: <b>Part 1 (MXF Format)</b> and <b>Part 2 (DM)</b>, as described below. A set of test files should be tested and the results captured as described in the <b>Part 3</b> document. They include tests that the Analyser should be carrying out in order to meet the required <b>Certification Level</b> criteria. The three parts are as follows:</p> <p><b>PART 1.</b> MXF Format Tests for File Analysers<br/> <b>PART 2.</b> Descriptive Metadata (DM) Validation Tests<br/> <b>PART 3.</b> File Testing and Reporting (for PART 1 &amp; PART 2)</p> <p>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.</p> <p>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.</p> |
| <b>Application to AMWA</b>      | <p>Once a Product Test Report has been issued by the DPP, an OEM may follow the AMWA procedure to apply for Certification.</p>   |

| <b>PASS or PASS WITH CONDITIONS</b> |   |
|-------------------------------------|---|
| <b>What it means</b>                | <p>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”.</p>  |
| <b>What it DOES NOT mean</b>        | <ul style="list-style-type: none"> <li>a) All files produced by a Writer are always fully conformant to the “AMWA AS-11 UK DPP” Shims</li> <li>b) Files from Writers will always work correctly with Readers</li> <li>c) Files from Writers will never be rejected by UK Broadcasters</li> <li>d) All modes and features of the product have been tested</li> </ul> |

|  |             |
|--|-------------|
| <b>Overall READER Result</b><br>(DPP Test Lab review of OEM supplied test results) | <b>PASS</b> |
|--|-------------|

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

| 6a Table 1 - GENERAL DETAILS (OEM to complete) |                          |
|--|--------------------------|
| OEM name                                       | Prime Focus Technologies |
| Product name                                   | CLEAR™ Media ERP         |
| Product version                                | As of test date          |
| Date of tests                                  | 08/02/2017               |

| 6b Table 2 - PRODUCT DESCRIPTION and CAPABILITIES (OEM to complete)  |  |
|--|--|
| Brief description of product / product type  | Cloud-enabled Media ERP Suite; Manage content across geographies; Orchestrate workflows to manage ingest, metadata, editing, transcode, QC, Archive; Collaboration; Packaging & Distribution |
| What are its primary functions in relation to AS-11 UK DPP Reader tests? Please list the main ones.                      | i) Ingest of AS-11 DPP file and extract metadata<br>ii) Generate low-res Proxy that can be played back from any remote location<br>iii) Playback hi-res file on Broadcast monitor            |
| Does the device render both video and audio from the AS-11 DPP file for use by the device?                               | Yes  |
| Player functionality: Does the device render to video on to a display? If so how is this presented to the display?       | Yes.<br>i) On Computer Monitor using Web browser<br>ii) On Broadcaster Monitor using BlackMagic, AJA, etc.   |
| Player functionality: Is audio decoded to outputs suitable for monitoring purposes?                                      | Yes  |
| Transcode functionality: Does the device render the AS-11 DPP video to a different file format as part of its operation? | Yes  |
| Does the device perform a partial file read of video and/or audio?   | Yes  |
| Is there a display of media Timecode?  | Yes  |
| Does the device read AS-11 DM (descriptive metadata) and/or UK DPP DM? If so how is this used and displayed?             | No   |
| Is there any display of programme segmentation / programme parting?  | No   |
| Does the product have the capability to jog, shuttle and jump to a new T/C?  | Yes  |

| 6e NOTES (OEM to complete if there are any other relevant details)   |
|--|
| We (Prime Focus Tech) are in the process of adding the capability to read Descriptive Metadata from Header Partition of AS-11 DPP compliant MXF files. This metadata will be available in the Player view along with other Asset metadata. |

| 6f Output test artifacts supplied by the OEM   |
|--|
| The following output artifacts were supplied and assessed as part of the test process:<br>Completed File Reader Tests results for all files in the Reader test set, with all results as expected for a Pass; |

| DECLARATION   |  |
|---------------|--|
| 7 DECLARATION | <p>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.</p> <p>“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.”</p> |