



DT-P/RM

Geneva, 14 April 2005

Circular Letter PMC/05/01

Call for Vendor Participation in EBU MXF Interoperability Tests

Dear Madam, Dear Sir,

The EBU invites you to submit equipment for participation in the tests described below.

The EBU originally declared its support for the MXF format in EBU Statement D95-2003. Many EBU members expect that products supporting MXF will be essential in facilitating Content exchange and in establishing interoperability between components and applications in IT-based production facilities. It is therefore vitally important that products implementing MXF comply with the relevant standards.

For these reasons, and to reinforce its commitment to the MXF format the EBU Production Management Committee (PMC) has decided to conduct a series of tests to investigate the capability of professional broadcast equipment to inter-work across different manufacturers' implementations of the MXF format. The tests are intended to assist and assure EBU members that are planning to introduce MXF in their production platforms.

Product Requirements for the EBU MXF Interoperability Tests

The tests will consider 625/50 products that implement MXF (Encoding, Decoding, Editing, Player or Storage Applications built into NLEs, Servers, VTRs, etc.).

If a product supports more than simple store, manipulate and forward operations via MXF it will be required to provide SDTI and/or SDI interfaces. If the SDI interfaces do not support embedded audio according to SMPTE 272M, AES/EBU audio interfaces will also need to be provided.

The tests will concern equipment implementing one or more of the following Essence formats:

- SMPTE 381M: MPEG Streams in the MXF Generic Container,
- SMPTE 382M: AES3 and Broadcast Wave Audio in the MXF Generic Container,
- SMPTE 383M: DV-DIF Data in the MXF Generic Container,
- SMPTE 384M: Uncompressed Pictures in the MXF Generic Container and
- SMPTE 386M: Type D-10 Essence Data in the MXF Generic Container

The primary candidates for these tests will be products supporting one or more of the following Operational Patterns. Other Operational Patterns may however also be considered.

- SMPTE 378M: Operational Pattern 1a,
- SMPTE 390M: Operational Pattern Atom,
- SMPTE 391M: Operational Pattern 1b,
- SMPTE 392M: Operational Pattern 2a and
- SMPRE 393M: Operational Pattern 2b.

While it is not a requirement that the products support descriptive Metadata, it should be noted that the EBU is interested in examining products that support descriptive Metadata. Examples of descriptive Metadata may be all or parts of SMPTE 380M: Descriptive Metadata Scheme - 1 (DMS-1).

Provisional Planning and Test Schedule

Test procedures discussion meeting: Thursday, May 12th 2005, Geneva
 Test preparation and setup: Monday 18th and Tuesday 19th July 2005, IRT Munich
 Tests: Wednesday 20th to Thursday 28th July 2005, IRT Munich

Test Items

Figure 1 illustrates a simplified device model in order to show the most important aspects of the MXF interoperability tests. In addition to reading, writing and manipulating MXF files, devices may generally provide real-time interfaces for audio, video and Timecode as well as interfaces to import or export Metadata.

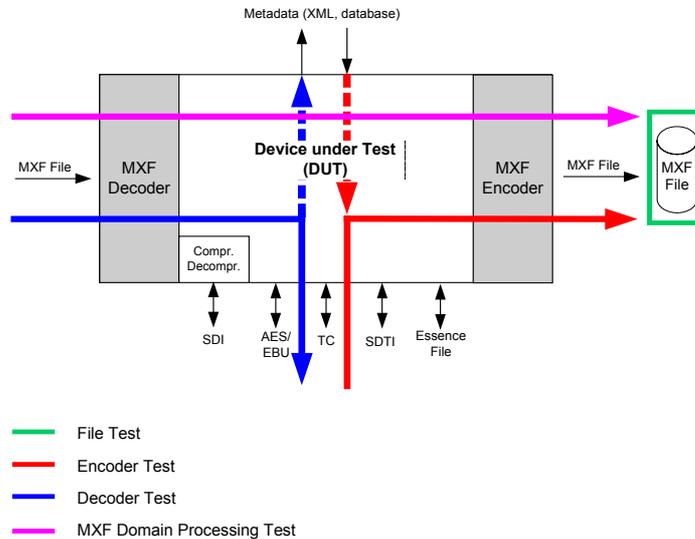


Figure 1: Generic Device Model

a) File Test

- Compliance of MXF files generated by the DUT to SMPTE 377M and the relevant Essence Mapping and Operational Pattern specifications.
- Compliance of the format of the Essence with the relevant bitstream specification. Examples are SMPTE 314M, IEC 61834-2, ISO/IEC 13818-2 or SMPTE 356M.

b) MXF Encoder Test

- Compression system implementation, in particular standards compliance with the bitstream specification and coding range.
- Signal transparency, in particular, for audio.

- Determination of audio/video delay.
- Verification of the time code implementations.
- If available, consistency of descriptive Metadata.

c) MXF Decoder Test

- Completeness and robustness of the MXF decoder with respect to variation of the parameters that fall within its specification (e.g. "OP1a, D10" or "OP1b, DV-DIF and PCM audio in SMPTE 382M"). Typical variations involve the partition multiplex, the existence and distribution of index tables, the existence of the Random Index pack as well as the completeness and the location of header Metadata.
- Compression system implementation, in particular comparison of the output signal to reference decoder outputs.
- Signal transparency, in particular, for audio.
- Determination of audio/video delay.
- Verification of the time code implementations.
- If available, consistency of descriptive Metadata.

d) MXF Domain Processing Test

- Signal transparency, in particular, for audio.
- Determination of audio/video delay.
- Verification of the time code implementations.
- UMID application.
- If available, consistency of descriptive Metadata.

Presentation and publication of the test results

- Discussion of the test results and their interpretation will be done separately with each vendor. (At a vendor's request, subsequent re-tests of systems may be possible before the release of the reports),
- Documentation of the discussed test results will be made separately for each vendor's products.
- After agreement with each individual vendor, publication of test results will be made to EBU members only.

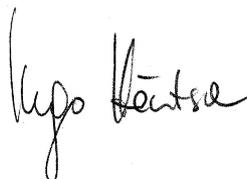
Contacts:

Please contact Roger Miles of the EBU secretariat (miles@ebu.ch, copy to blanc@ebu.ch or fax +41 227474743), to signal your willingness to participate in these tests, stating what product or products you intend to submit and what interfaces/funcionalities your products have.

This contact should be made before May 6th 2005, please.

A meeting to discuss test procedures will be held in Geneva on May 12th 2005. If you agree to participate in these tests you will be invited to this meeting.

Best regards,



Ingo Höntsch

Convenor of the tests,

Chairman of EBU Project Group P/TV-File