



Proposed Working Draft - SMPTE ER 2121-3:2019 Business Requirements - Audit of Business Requirements for SMPTE TSP 2121-1:2019

SMPTE ER 2121-2:2018 Interoperable Master Format - TSP Business Requirements		SMPTE TSP 2121-2018 Interoperable Master Format - Application DPP suite of documents		Has the Requirement been met	Additional Notes
ER 2121-2 Reference	Text	TSP 2121-1 or TSP 2121-4 Reference	Text/Table	1 = fully 2 = partially 3 = see additional notes	
3 - 1	Allow the use of ProRes, Jpeg 2000 [and H.264] video codecs as detailed under "Codec Parameters" in Table 1 of Annex A (via separate Specifications for each codec).	TSP 2121-1: 5.1 & 6.4 TSP 2121- 4: 4.1 & 5.3	TSP 2121-1: Tables 1 and 4 TSP 2121- 4: Tables 1 and 2	1	
3 - 2	Maintain high quality image by including minimum data rates requirements for each codec as detailed in Table 2 of Annex A.	TSP 2121-1: 6.4 TSP 2121- 4: 5.3	TSP 2121-1: Table 4 TSP 2121- 4: Table 2	1	
3 - 3	Include the option to allow the use of interlaced for HD SDR video only. Described under "Frame Structure" in Table 1 of Annex A.	TSP2121-4 : 4.1	Table 1	1	Reference to be updated in line with App 2e Amendment
3 - 4	Constrain image parameters to those described in ITU-R BT.2100 – "Image parameter values for high dynamic range television for use in production and international Programme exchange."	TSP 2121-1 5.1, 5.2.1 plus Annex C & D TSP 2121- 4: 4.1	TSP 2121-1: Tables 1,2 and 3 Tables C1 and D1 to D5 TSP 2121-4: Table 1	1	
3 - 5	Include the option to allow the use of the legacy colour space defined as COLOR.3 in SMPTE ST 2067-20 Section 6.	TSP 2121-1: 5.1 TSP 2121-4: 4.1	TSP 2121-1: Table 1 TSP 2121- 4: Table 1	1	
3 - 6	Constrain image parameters of SMPTE RDD 45 and SMPTE ST 2067-21 to those referenced under "Video Parameters" in Table 1 of Annex A .	TSP 2121-1: 5.1, 5.2.1 plus Annex C & D TSP 2121-4: 4.1	Tables 1,2 and 3 Table C1 and D1 to D5 TSP 2121- 4: Table 1	1	TSP 2121-1 NOTE TO BE DELETED IN LINE WITH APP 2E AMENEMENTS HLG as COLOR.8DPP is additional to the Video Parameters defined in SMPTE RDD 45 and SMPTE ST 2067-21. COLOR.8DPP Is therefore defined in SMPTE TSP 2121-1:2018
3 - 7	Constrain the audio parameters of SMPTE ST 2067-2 to those referenced under "Audio Parameters" in Table 1 of A.	TSP 2121-1: 8 TSP 2121-4: 6	<i>The provisions of SMPTE ST 2067-2 2016 shall apply</i>	1	
3 - 8	Enable the use of the following Access Service options described under "Access Service Requirements" in Table 1 of Annex A.	TSP 2121-1: See sub sections 3 - 7 a to c TSP 2121-4: See sub sections 3 - 7 a to c			
3 - 8 a	Captioning/subtitling – IMSC1.0.1, EBU-TT-D, EBU STL, CTA 608 - desired to update to IMSC1.1 when supported.	TSP 2121-1: 10.1 TSP 2121-4: 8.1	<i>The provisions of SMPTE 2067-2:2016 shall apply</i>	2	IMSC 1.0.1 and EBU-TT-D met in full DPP agreed EBU STL should be held over for further discussion and DPP process development if needed CTA 608 (and CTA 709) included as defined in SMPTE ST 2067-2
3 - 8 b	Audio Description (Described Video Service) – either fully rendered mix or dialogue plus control which can be a rendered audio track (left Dialogue, right Control) – it is hoped dialogue and control will be supported in SMPTE ST 2067 at a later date,	TSP 2121-1: 10.1 & 10.2.2 TSP 2121-4: 8.2	Option 1 - One or more fully rendered audio soundfield(s) Option 2 - One or more monaural audio channels (VIN) Option 3 - Described in SMPTE ST 2121-1	1	Option 1 - reference SMPTE ST 2067-8 Option 2 - reference SMPTE ST 428-12/SMPTE ST 2067-8 Option 3 - reference section 10.2.1 with Table 6 and 7
3 - 8 c	Signing service – as an alternate fully rendered video track until alternative options are supported in SMPTE ST 2067.	Not included		3	Currently signed video must be a fully rendered alternative video track. Signing Requirements will be met in the DPP Operational Guidelines documentation.
3 - 9	Allow the inclusion of (and use via OPL or other means) AMWA AS-11 Descriptive metadata, other broadcaster (and online) metadata SMPTE RDD 6 audio metadata and EBU.IO/QC template metadata as listed under "Metadata Requirements" in Table 1 of Annex A	TSP 2121-1: 9 Annex B.1, B.2, B.3 Annex E TSP 2121-4: 9	<i>9. Additional static metadata should be included as assets in a Sidecar Composition Map as defined in SMPTE ST 2067-9:2018.</i>	1	TSP 2121-1: Examples are given in Annex B: Example B1 - AMWA AS-11 UK DPP V.1.1 Example B2 - EBU QC Metadata Example B3 - SMPTE RDD 6 Audio Metadata
3 - 10	Carry CPL and OPL XML files such that all required editorial versions and technical delivery options can be fulfilled. (see notes in Annex B)	TSP 2121-1 11 See sub sections 3 - 9 a to c TSP 2121-4: 9	<i>11. The processing or transformation of compliant packages can be specified by OPLs. Within a given IMP each CPL the conforms to this specification could be referenced by at least one OPL in the same IMP.</i>		

3 - 10 a	CPLs must reference SMPTE ST 2067-3:2016	TSP 2121-1: 4 TSP 2121-4: 3	<p>TSP 2121-1: The normative provisions of SMPTE RDD 45 shall apply in addition to those specified herein unless specified otherwise.</p> <p>TSP 2121-4: The normative provisions of SMPTE ST 2067-21:2016 shall apply in addition to those specified herein unless specified otherwise.</p>	1	TSP 2121-1: SMPTE RDD 45 Section 4 references SMPTE ST 2067-2
3 - 10 b	OPL(s) must reference SMPTE ST 2067-101:2014	TSP 2121-1 11 TSP 2121-4: 9	The processing or transformation of compliant packages can be specified by OPLs. Within a given IMP each CPL the conforms to this specification could be referenced by at least one OPL in the same IMP.	3	
3 - 10 c	OPL(s) to create AS-11 V1.1 and AS-11 X series delivery are desirable	TSP 2121-1 11 Annex B.4 TSP 2121-4: 9	As above	3	TSP 2121-1: Requirements for OPLs to "produce" compliant AS-11 output files will be defined in the DPP Operational Documents until SMPTE normative text can be referenced.
3 - 10 d	OPL(s) to create SMPTE ST 2067-21 delivery are desirable	TSP 2121-1 11 TSP 2121-4: 9		3	TSP 2121-1: Requirements for OPLs to "produce" specific SMPTE ST 2067-21 output IMPs will be defined in the DPP Operational Documents until SMPTE normative text can be referenced.
3 - 10 e	OPL(s) able to create a future proposed SMPTE TSP[J2K] and possible TSP[H.264] delivery are desirable	TSP 2121-1 11 TSP 2121-4: 9		3	TSP 2121-1: Requirements for OPLs to "produce" other SMPTE TSP IMPs will be defined in the DPP Operational Documents until SMPTE normative text can be referenced