

# DCI Digital Cinema Initiatives, LLC

Errata items are continuing to be evaluated and will be posted after agreement by the DCI membership that the specific erratum needs to modify the DCI Digital Cinema System Specification, v1.0. Suggested erratum issues may be emailed to [dcinfo@dcimovies.com](mailto:dcinfo@dcimovies.com). Please include "Errata" in the subject line.

## DCI SPECIFICATION ERRATA LISTING

16 NOVEMBER 2006

Erratum	Spec 1.0 Page	Section(s) Affected	Description
89	19	Sections 3.3.4.3 and 3.3.4.4	Sections 3.3.4.3 and 3.3.4.4 are deleted.
90	28	Section 5.2.2.9	Following Section 5.2.2.9, a new section 5.2.2.10 is added entitled "Identity". The paragraph of text for this new Section 5.2.2.10 is: "The packaging format is required to support unique and durable identification of assets and metadata using embedded unique identifiers. Throughout this document, the acronym 'UUID' shall mean a type 4 (pseudo-random) Universally Unique Identifier (UUID) as defined in IETF RFC 4122."
91	32	Section 5.3.1.6	Section 5.3.1.6 is revised to read: "Track Files of the same essence type and playback devices are required to support artifact-free splicing at any frame boundary, allowing the assembly of a continuous data stream from multiple Track Files. The playback device is required to perform sample accurate, artifact-free splicing of Sound Track Files, i.e., the playback device must remove any direct current (DC) offset present at the splice point."
92	37-38	Sections 5.4.3.2 through 5.4.3.5	The first bullet points in Sections 5.4.3.2 through 5.4.3.5 are modified to read "UUID" instead of "Unique ID encoded as a UUID".
93	38	Section 5.4.3.4	In Section 5.4.3.4, "Subtitle Track Information if Present (list for each reel)", a new first sentence is added to read: "Any given Subtitle Track File shall have one or more Entry Points within a given composition playlist."
94	39	Section 5.5.3.2	The first bullet, "Unique identification of each file included in the DCP is encoded as urn:UUID.", is replaced with "UUID".
95	45	Sections 7.3.3.1 and 7.3.3.2	The first bullets of Sections 7.3.3.1 and 7.3.3.2 are each changed to read "UUID" instead of "Unique ID encoded as a urn:UUID".
96	90	Section 9.4.3.3	The following is added below the first bullet (Equipment suite preparations): "Informative note – In the case of a fully integrated auditorium suite architecture (i.e., Auditorium 1 of Figure 16), there are no remote SPBs and the KDM's TDL may be empty."

Erratum	Spec 1.0 Page	Section(s) Affected	Description
97	92	Section 9.4.3.5	Item 1. of Section 9.4.3.5 is replaced with: “Receive, store, decrypt and validate signatures on Key Delivery Message(s) (KDMs) per the validity checks of Section 6.1.2 of the KDM specification (SMPTE430-1: D-Cinema Operations – Key Delivery Message) that are targeted at the SM. Constrain issuance of KDM content keys per (9) (below) to the SM’s confirmation that one of the certificates in the signer chain of the associated Composition Play List (CPL) has a thumbprint that matches the ContentAuthenticator element of the KDM, per Section 5.2.4 of said KDM specification.”
98	92	Section 9.4.3.5	The following sentence is added to the end of item 4.: “For encrypted content, validation shall be by cross checking that the associated KDM’s ContentAuthenticator element matches a certificate thumbprint of one of the certificates in the CPL’s signer chain (see item above), and that such certificate indicate only a ‘Content Signer’ (CS) role per Section 5.3.4, ‘Naming and Roles’ of the certificate specification (SMPTE430-2 D-Cinema Operation – Digital Certificate).”
99	93	Section 9.4.3.5	Existing text for item 6 and its footnote 25 is deleted. New text for Item 6. and footnote 25 is “[This item left blank intentionally.]”
100	93	Section 9.4.3.5	Item 7. (a.) is replaced with: “Associate certificate lists with TDLs delivered in KDMs per Section 5.2.5 of the KDM specification (SMPTE430-1: D-Cinema Operations – Key Delivery Message) to support the identification of security devices that are trusted/not trusted.”
101	93	Section 9.4.3.5	Item 8. (e.) is clarified: “(e.g., content and LE keys,” is replaced with “(e.g., content keys and LE keys,”
102	93	Section 9.4.3.5	Item 9. (e.): is changed to read “Specific MDs matching the key type IDs as designated by the KDM, per Section 5.2.8 of the KDM specification (SMPTE430-1: D-Cinema Operations – Key Delivery Message).”
103	94	Section 9.4.3.5	The following sentence is added to the beginning of item 17.: “The SM shall be ‘playout aware’, meaning it shall have real-time knowledge of the occurrence of playout start and end periods.”
104	94	Section 9.4.3.5	The second sentence of item 18. is removed.
105	96	Section 9.4.3.6.1	In item 7., the reference “(see Section 9.7.3 Subtitle Encryption)” is changed to read “(see Section 9.5.2.2 Physical Security of Sensitive Data)”.
106	96	Section 9.4.3.6.2	Item 5. is replaced with: “The LDB shall contain a UTC time reference clock which is battery backed and operative for time stamping log events under powered and un-powered conditions. The LDB shall communicate time information with the SM using standardized Intra-Theater Messaging.”
107	96	Section 9.4.3.6.2	In item 7., the LDB key storage capacity is reduced from “at least 64 key/parameter sets” to read “at least 16 key/parameter sets”.

Erratum	Spec 1.0 Page	Section(s) Affected	Description
108	97	Section 9.4.3.6.4	Item 3. is replaced with: “The Audio Media Block shall contain a UTC time reference clock which is battery backed and operative for time stamping log events under powered and un-powered conditions. The Audio Media Block shall communicate time information with the SM using standardized Intra-Theater Messaging.”
109	99	Section 9.4.3.7	The following note is added before the opening paragraph: “Note: Nothing in this section shall require that the user interfaces of the SMS or TMS use UTC. It is envisioned that these will use local time.”
110	99	Section 9.4.3.7	A new bullet is added after the opening paragraph (i.e., between the first two paragraphs): <ul style="list-style-type: none"> <li>• “All security transactions conferring date-time information (e.g., KDM time window) shall be UTC.”</li> </ul>
111	99	Section 9.4.3.7	The second bullet is replaced with the following text (the footnote being preserved): “Each Image Media Block (IMB) SM clock shall be set by the SM vendor to within one second of UTC using a reference time standard (such as WWV). The clock shall be tamper-proof and thereafter may not be offset from UTC or otherwise reset. <sup>26</sup> ”
112	103	Section 9.4.5.2.4	This sentence is added to the end of the third bullet: “In addition, the security data and related information that is the subject of these ITM categories shall be communicated in standardized ITMs.”
113	104	Section 9.4.5.3.1.1	The two bullet notes for the StartSuite command (below Table 16) are replaced with: <ul style="list-style-type: none"> <li>• “This RRP shall identify to the SM the remote SPBs that are in the suite with which TLS sessions are to be initiated.</li> <li>• This command should be designed to inform the SM to initiate (‘StartSuite’) or terminate (‘StopSuite’) auditorium TLS sessions.”</li> </ul>
114	107	Section 9.4.5.3.2.1	In the third sentence of the opening paragraph, the QuerySPB command periodicity is changed from “at least every five (5) seconds” to read “at least every thirty (30) seconds”.
115	119	Section 9.4.6.3.6	In the first sentence of the fourth paragraph, the portion of the sentence “it is recommended that a CompositionID (e.g., UUID) be placed in the Content node.” is changed to “it is recommended that a composition identifier (i.e., the CPL UUID) be placed in the Content node.”
116	122	Section 9.5.1	In the second sentence of the first paragraph, the portion of the sentence “(see Section 9.8.1.3 Naming and Roles)” is changed to “(see Section 5.3.4 Naming and Roles in SMPTE430-2 D-Cinema Operation – Digital Certificate)”
117	122	Section 9.5.1	In the first sentence of the second paragraph, the portion of the sentence “device UUID (if available)” is replaced with “UUID”.

Erratum	Spec 1.0 Page	Section(s) Affected	Description
118	123	Section 9.5.2.1	For the second bullet (“Tamper resistant”), the sub-bullet is changed to read: “SPB type 1 shall be tamper resistant, and SPB type 2 secure silicon shall be tamper resistant.”
119	123	Section 9.5.2.1	For the third bullet (“Tamper detecting and responsive”), the first sub-bullet is changed to read: “SPB type 1 shall be tamper responsive, and SPB type 2 secure silicon shall be tamper responsive.”
120	124	Section 9.5.2.3	A fourth bullet is added: “All type 1 SPBs shall be issued a new private/public key pair and certificate upon any repair or renewal process that requires opening of the SPB perimeter. (Note that Section 9.7.6 precludes maintaining records of private key information.)”
121	125	Section 9.5.2.4	A fourth bullet is added: “Projector SPB access doors or panels shall be lockable using pick-resistant mechanical locks employing physical or logical keys, or shall be protected with tamper-evident seals (e.g., evidence tape or holographic seals).”
122	128	Section 9.5.2.6	The following clarifying sentence is added in parentheses at the end of item 7.: “(TLS secrets associated with the SMS end point of the SMS-SM TLS connection are not considered CSPs.)”
123	136 - 153	Sections 9.8 through 9.8.3.4	The entirety of Section 9.8 (Section 9.8 through Section 9.8.3.4) is deleted, and replaced with the following text: “9.8 Digital Certificate, Extra-Theater Messages (ETM), and Key Delivery Messages (KDM) Requirements The following Society of Motion Picture and Television Engineers (SMPTE) published standards shall be utilized: <ol style="list-style-type: none"> <li>1. SMPTE430-1: D-Cinema Operations- Key Delivery Message (SMPTE3383B),</li> <li>2. SMPTE430-2 D-Cinema Operation- Digital Certificate (SMPTE3384B), and</li> <li>3. SMPTE430-3 D-Cinema Operations- Generic Extra-Theater Message Format (SMPTE3385B).</li> </ol> Note: Portions of the SMPTE standards are incomplete with respect to many behavior requirements, the subjects of which are typically addressed by SMPTE as “ <i>Informative notes</i> .” Other sections of this DCI Specification identify normative requirements that shall take precedence over SMPTE “ <i>Informative notes</i> .””