

DCI Digital Cinema Initiatives, LLC

REVISION TO DCI *DIGITAL CINEMA SYSTEM SPECIFICATION*

COMPLIANCE TEST PLAN, VERSION 1.2

CTP Revision items continue to be evaluated and will be posted after agreement by the DCI membership that the specific CTP Revision needs to modify the DCI *Digital Cinema System Specification, Compliance Test Plan, Version 1.2*. Suggested CTP Revision issues may be emailed to dcinfo@dcimovies.com. Please include "CTP Revision" in the subject line.

DCI DCSS CTP v1.2 REVISION

23 MARCH 2018

Revision Date	Revision Stage Type	CTP v1.2 Page No.	Sections Affected	Problem Description	Revision Description
March 23, 2018	1	1	Introduction	Previously exempt DCSS requirements will now be tested.	Remove the bolded note.

Current "Introduction" bolded note:

Note: For the purpose of the tests defined in this version of the Compliance Test Plan (CTP), DCI have removed errata 72, 95 and 96 from the scope of testing. The requirements of those errata are therefore not tested by this CTP version. Tests for errata 72, 95 and 96 will be specified in a future version of the CTP.

Revised "Introduction":

[The bolded note is removed.]

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23 MARCH 2018

Revision Date	Revision Stage Type	CTP v1.2 Page No.	Sections Affected	Problem Description	Revision Description
March 23, 2018	2	284	7.2.1.	Erratum 72 to DCSS v1.2 (March 7, 2008), the text of which appears in "DCSS v1.2 with Errata as of 30 August 2012" (DCSS Section 9.5.2.4) was not enforced by the CTP. This CTP revision corrects this deficiency.	Replace text as indicated below.

Current Section 7.2.1. Projector Physical Protection, Procedures, item 3.:

3. By physical examination and using documentation provided by the manufacturer, locate the companion SPB's output image essence signal. Verify that:

- a. these signals are not accessible via (i) the removable access covers and doors located in Step 2 and (ii) ventilation holes or other openings; and
- b. access to these signals and circuits would cause permanent and easily visible damage.

Failure of any of these verifications is cause to fail this test.

Revised Section 7.2.1. Projector Physical Protection, Procedures, item 3.:

3. By physical examination and using documentation provided by the manufacturer, locate the companion SPB's output image essence signal, and any projector SPB access opening detection circuits and associated signals. Verify that:

- a. these signals are not accessible via (i) the removable access covers and doors located in Step 2 and (ii) ventilation holes or other openings; and
- b. access to these signals and circuits would cause permanent and easily visible damage.

Failure of any of these verifications is cause to fail this test.

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Revision Date	Revision Stage Type	CTP v1.2 Page No.	Sections Affected	Problem Description	Revision Description
March 23, 2018	1	351	10.4.2.	Additional clarification to assure content decryption takes place only during playback.	Replace text as indicated below.

Current Section 10.4.2.:

10.4.2. Theater System Storage Security

Verify that image and audio essence on storage devices retains the original AES encryption, if present during ingest. It is required that decrypted plaintext (image or audio) essence is never stored on the storage system.

Reference Document ID	Reference Document Section(s)
[DCI-DCSS-1-2]	7.5.3.8

Revised Section 10.4.2.:

10.4.2. Theater System Storage Security

- Verify that image and audio essence on storage devices retains its original AES encryption, if present during ingest.
- Verify that decrypted plaintext (image or audio) essence is never stored on the storage system.
- Verify that with the exception of subtitle essence, encrypted essence files are decrypted only in real-time during playback.

Reference Document ID	Reference Document Section(s)
[DCI-DCSS-1-2]	7.5.3.8, 9.4.1

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DCI DCSS CTP v1.2 REVISION

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Revision Date	Revision Stage Type	CTP v1.2 Page No.	Sections Affected	Problem Description	Revision Description
March 23, 2018	2	363	10.4.59.	The requirements for secure silicon and private key generation and utility have been clarified by errata for DCSS sections 9.5.1 and 9.5.2.2.	Replace CTP text as shown below.

Current Section 10.4.59.:

10.4.59. Private Keys outside Secure Silicon

Verify that device private keys, whether encrypted or not, do not exist outside of the secure silicon device.

Reference Document ID	Reference Document Section(s)
[DCI-DCSS-1-2]	9.5.2.2

Revised Section 10.4.59.:

10.4.59. Type 1 SPB RSA Private Keys

- Verify that RSA private keys in a Type 1 SPB which constitute the subject of any certificate having an SM or LS role are (1) generated within the secure silicon device, (2) whether encrypted or not do not exist outside of the secure silicon device and (3) are not accessible to any process external to the secure silicon device.
- Verify that the entropy source (seed) used in the generation of the above RSA keys (1) is fully contained within the MB's type 1 SPB and is not dependent on or influenced by any parameter or value external to the SPB, (2) does not enable the export of any information about the seed from the SPB.
- Verify that the CipherValue elements of the KDM's AuthenticatedPrivate element are decrypted by and within the secure silicon device.

Reference Document ID	Reference Document Section(s)
[DCI-DCSS-1-2]	9.5.1, 9.5.2.2

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DCI DCSS CTP v1.2 REVISION

23 MARCH 2018

Revision Date	Revision Stage Type	CTP v1.2 Page No.	Sections Affected	Problem Description	Revision Description
March 23, 2018	2	366	10.4.72.	Erratum 96 to DCSS v1.2 (March 7, 2008), the text of which appears in "DCSS v1.2 with Errata as of 30 August 2012" (DCSS Section 9.5.2.2) was not enforced by the CTP. This CTP revision corrects this deficiency.	Replace text as indicated below.

Current Section 10.4.72.:

10.4.72. SPB Secure Silicon Requirements

Verify that Secure Processing Block (SPB):

1. Is of the type designed to resist physical and logical attacks, and ensure that a physical attack destroys Critical Security Parameters (CSPs) prior to exposure.
2. Is of the type that provides CSP protection in both powered and unpowered states.
3. Meets "secure silicon" level of protection per [FIPS-140-2] level 3 row (area) 5: "physical security requirements".

Reference Document ID	Reference Document Section(s)
[DCI-DCSS-1-2]	9.5.2.2

Revised Section 10.4.72.:

10.4.72. SPB Secure Silicon Requirements

Verify that the SPB's Secure Silicon device meets FIPS 140-2 level 3 area (row) five (physical security) requirements as defined for FIPS 140-2 'single-chip cryptographic modules.'

Failure of this verification is cause to fail this test.

Reference Document ID	Reference Document Section(s)
[DCI-DCSS-1-2]	9.5.2.2

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DCI DCSS CTP v1.2 REVISION

23 MARCH 2018

Revision Date	Revision Stage Type	CTP v1.2 Page No.	Sections Affected	Problem Description	Revision Description
March 23, 2018	2	368	10.4.81.	Confirms that IMB-unique functionality is not included in the OMB.	Add new test as indicated below.

New Section 10.4.81. following Section 10.4.80. (removing "Page Intentionally Left Blank"):

10.4.81. Constrained OMB Processing Capability

Verify that an OMB does *not*:

- Process or generate any Auditorium Security Messages (ASM) or use "port 1173",
- Support link encryption,
- Attempt to authenticate other SPBs,
- Attempt to interface or communicate with any other SPB (projector, LDB, LD/LE or other MB), except to accept non-security messaging.

Reference Document ID	Reference Document Section(s)
[DCI-DCSS-1-2]	9.4.3.6.3 #5, 9.4.3.6.4.

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March 23, 2018	1	368	10.4.82.	Confirms KDM-borne keys are not exported from the MB.	Add new test as indicated below.

New Section 10.4.82. following Section 10.4.81.:

10.4.82. Export of KDM-Borne Keys

Verify that under no circumstances does the SM export any KDM-borne key from the SM's SPB.

Reference Document ID	Reference Document Section(s)
[DCI-DCSS-1-2]	9.4.3.5 #9d

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March 23, 2018	2	368	10.4.83.	Confirms that Auxiliary Data is decrypted within a MB using the MDX1 KeyType	Add new test as indicated below.

New Section 10.4.83. following Section 10.4.82.:

10.4.83. Encrypted Auxiliary Data Processing

If the MB under test can decrypt Auxiliary Data as defined by SMPTE ST429-14: D-Cinema Packaging – Aux Data Track File:

- Verify that each such decryption takes place only within the MB, and uses only an MDX1 KeyType that is delivered within a KDM.
- Verify that the MB does not process the MDX2 KeyType.

Reference Document ID	Reference Document Section(s)
[DCI-DCSS-1-2]	9.4.2.7, 9.4.3.6.4.