

 CI Plus LLP		Change Number	039
Title	Compliance rules for Trick Mode and DOT Content; update to sunrise date for CI Plus v1.4		
Summary	Compliance rules for the Trick Mode and DOT Content features of the CI Plus Specification v1.4.2. The sunrise date for CI Plus v1.4 is changed to 15 th September 2017.		

1.	Date of Notice	15 th September 2016	
	Publication Date	15 th September 2016	
	Effective Date	15 th September 2017	
	Directly Affected Documents		
	Device Interim Licence Agreement; CI plus Specification v1.4.2		
	Detailed Change Description		
	<p>Compliance Rules This Change Control Notice introduces compliance rules for the Trick Mode and DOT Content features of the CI plus Specification v1.4.2.</p> <p>The compliance rules are described in exhibit C of the ILA and the corresponding URI mapping table is set out in exhibit E. Both of these updated exhibits are attached to this change notice.</p> <p>All new CI Plus Device Registrations that are certified as compliant with CI Plus Specification version 1.4.2 shall comply with the attached exhibits (Compliance Rules and URI Mapping Table).</p> <p>Sunrise Date for CI plus v1.4 From 15th September 2017 onwards all new CI Plus Device Registrations must comply with CI Plus Specification version 1.4.2.</p>		
2.	CI Plus LLP Change Request Approval/Confirmation:		
	Comments:	Updates to ILA exhibits C and E approved by CI plus Technical and Management Committees. Change to sunrise date approved by CI plus Management Committee.	
	Date	15 th September 2016	Signature CI Plus LLP CI Plus Technical

Exhibit C: Compliance Rules for Host Devices Version 1.5

Note: The terms of this Exhibit C do not apply with respect to Prototypes or Licensed Components.

Licensed Products, must comply with the requirements set forth in this Exhibit and be constructed so as to resist attempts at circumvention of these requirements as specified in Exhibit B, Robustness Rules.

Licensors may approve from time to time additional outputs and/or content protection technologies on a reasonable and non-discriminatory basis and add such provisions to this Exhibit. The Change Control is indicated in Exhibit K of this Licensee Agreement

1.0 Definitions

- 1.1 **“Constrained Image”** means the visual equivalent of not more than 520,000 Pixels per frame (e.g. an image with resolution of 960 horizontal pixels by 540 vertical pixels for a 16:9 aspect ratio). A Constrained Image can be output or displayed using video processing techniques such as line doubling or sharpening to improve the perceived quality of the image.
- 1.2 **“Image Constraint Trigger”** or **“ICT”** means the field as defined in the CI Plus Specification and mapped to outputs as described in Section 2.0 of this Exhibit C.
- 1.3 **“Controlled Content”** means content that has been received over and is interpreted by the CI+ interface with a.) the Encryption Mode Indicator (“EMI”) bits set to a value other than zero, zero (0,0), or b.) content with the Encryption Mode Indicator (“EMI”) bits set to the value zero, zero (0,0) and the RCT bit set to one (1).
- 1.4 **“Uncontrolled Content”** means content that has been received over and is interpreted by the CI Plus interface with the Encryption Mode Indicator (“EMI”) bits set to zero, zero (0,0) and the RCT bit set to zero (0). For avoidance of doubt, clear content passing through the CICAM unprocessed (i.e. in CICAM pass through mode) is also Uncontrolled Content.
- 1.5 **“Computer Monitor Output”** means a connector for an analogue or digital monitor typically found and associated with a Computer Product and which carries uncompressed analogue and/or digital video signals. The term expressly includes those outputs known as VGA, SVGA, XGA and various non-standardized digital monitor connections which have been implemented by manufacturers, and expressly does not include such typical consumer electronics connectors as NTSC, PAL, SECAM, SCART, YPrPb, S-Video and Consumer RGB, whether or not such connectors are found on any Computer Product.
- 1.6 **“High Definition Analogue Form [or] Output”** Definition not applicable anymore since Analog HD sunset (effective September 2012).
- 1.7 **“Standard Definition Analogue Form [or] Output”** means a format or output that is not digital, is NTSC, PAL or SECAM RF, Composite, S-Video, YUV, Y,R-Y,B-Y or RGB and has no more than 480 interlace or progressive

active scan lines in 60Hz field rate mode and 576 interlace or progressive active scanning lines in 50Hz field rate mode. For avoidance of doubt, a Computer Monitor Output is not a Standard Definition Analogue Form [or] Output.

1.8 “Secure Storage Product” means a product that ensures that the stored Controlled Content is uniquely cryptographically associated with the original Licensed Product connected to the storage device, so that it can only be accessed by the product in compliance with rules applicable to the stored Controlled Content and is able to withstand “storage cloning attacks”. The product shall be made in compliance with specified robustness requirements to avoid circumvention of such restrictions that are recognized by the Licensor.

1.9 “Secure Storage Licensed Product” means a Licensed Product that is a Secure Storage Product and which fulfils the Robustness Requirements as per this Agreement. Controlled Content shall be stored encrypted in a way to provide no less security than the encryption system used to protect the Controlled Content over the CI+ interface. Any key(s) to provide access to this encrypted content shall be securely stored in the Secure Storage Licensed Product in accordance with the Robustness Requirements as per this agreement.

1.10 “disk / storage cloning” attack is characterized by the following example:

- A first licensed product (Host-1) correctly stores "Copy one generation" content on a hard drive (HD-1).
- A bit-for-bit copy (a "clone") of HD-1 is made (in violation of this license and federal copyright law) on a second hard drive (HD-Clone).
- Content on HD-1 is then “moved” to a second licensed product (Host-2, having HD-2) in accordance with CI+ Compliance Rules for Host Devices, and the content is correctly obliterated from HD-1.
- HD-1 in Host-1 is now replaced with HD-Clone, resulting in two usable copies (one on Host-1 with HD-Clone, and a second on Host-2 with HD-2).
- Further unauthorized copies may be made similarly by making multiple clone disks.

1.11 “Analogue Audio Output” means mono, stereo or multi-channel analogue audio output, by way of e.g. RCA or cinch output jack.

1.12 “RCT” or “Redistribution Control Trigger” means the field or bits, as described in the CI Plus Specification, used to trigger the Encryption Plus Non-assertion (“EPN”) state for protected digital outputs or recordings in the Certified Host Devices when the RCT value of the URI is set to a value of one (1) in combination with the EMI bits set to a value of zero, zero (0,0), which signals the need for redistribution control to be asserted on Controlled Content without the need to assert numeric copy control¹.

¹ RCT may not be set to restrict redistribution except in content that could lawfully be marked Copy One Generation but is instead marked Copy Freely.

- 1.13** “**RL**” or “**Retention Limit**” means the fields or bits, as described in the CI Plus Specification, used to express the internal retention limit on recorded content with EMI bits set to the value one, one (1,1). The default internal retention is 90 minutes, which may be overridden by the Retention Limit.
- 1.14** “**URI**” or “**Usage Rules Information**” is the information, determined by the content provider and/or the content distributor and received from the CICAM, that the host uses to control copy creation, analogue output copy control encoding and to set copy control parameters on Host outputs. Refer to the CI Plus Specification for a definition of the URI syntax.
- 1.15** “**Move**” shall mean a process by which content that is usable by only a first device is effectively rendered unusable by that device and is rendered usable by only one other device or removable media, only in such manner that the content is never simultaneously usable by more than one device or removable media.
- 1.16** “**User Input Event**” means a distinct action of the user on using the user interface controls of the Licensed Product that represents the user’s input.
- 1.17** “**MMI**” means Man Machine Interface as defined in the CI Plus Specification, using either high level MMI, low level MMI, CI+ browser MMI or MHP API interface based applications: any defined CI+ mechanism whereby the module can interact with the user via the host.
- 1.18** “**Host Service Shunning**” means method described in Section 10 of the CI Plus Specification Version 1.3.
- 1.19** “**DOT Content**” means Controlled Content which EMI bit is set to “Copy Never” or “Copy Once”, and Digital Content Token as described in CI Plus Specification is set to “Digital Only Constraint asserted” so as to prohibit analogue and non-secure digital output.
- 1.20** “**Trick Mode Restricted Content**” means Controlled Content which EMI bit is set to “Copy Once”, and Trick Mode Control as described in CI Plus Specification is enabled.
- 1.21** “**Trick Mode Restricted Segment**” means portion of a continuous recording that (i) is continuous by itself, (ii) contains only Trick Mode Restricted Content, (iii) is at the start of the recording or is immediately preceded by non-Trick Mode Restricted Content, and (iv) is at the end of the recording or is immediately followed by non-Trick Mode Restricted Content.

2.0 Outputs

Refer to Exhibit E (URI mapping) for URI interpretation when outputting Controlled Content under this Section 2.0.

- 2.1 General.** Licensed Product shall not output Controlled Content to any output, except as permitted in this Section 2.0. For purposes of this Exhibit C, an output shall be deemed to include, but not be limited to, any transmissions to any internal copying, recording, or storage device, but

shall not include internal non-persistent or transitory transmissions that otherwise satisfy these Compliance Rules and the Robustness Rules.

Licensed products are not constrained with regard to the output of Uncontrolled Content by this License Agreement.

For avoidance of doubt: Licensed Products are permitted to implement the instructions provided by the URI bits by ensuring that either:

- i) Controlled Content is only sent to an output or to storage when this offers adequate protection in the context of this Agreement, e.g. depending on the state of the URI bits, resolution or other parameters, or:
- ii) by NOT sending any Controlled Content to an output or storage.

Licensees are recommended to consider how such behaviour is adequately communicated to the end-user.

2.2 Standard Definition Analogue Output. Subject to the requirements of Section 2.7, a Licensed Product shall not pass Controlled Content to an NTSC, YUV, SECAM, PAL, or consumer RGB format analogue output (including an S-video output for the listed formats) unless the Licensed Product generates copy control signals according to the information provided in the EMI bits and APS bits of the URI information in accordance with the Specifications. A Licensed Product may, as follows, pass Controlled Content to an output if it uses the following technologies:

- 2.2.1** For NTSC analogue outputs, however transmitted, the specifications for the Automatic Gain Control and Colorstripe copy control systems (contained in the document entitled "Specification of the Macrovision Copy Protection Process for STB/IRD Products" Revision 7.1.S1, October 1, 1999 or other applicable specification licensed by Macrovision) and the CGMS-A specifications contained in IEC 61880 (for inclusion on Line 20) or in CEA-608-B (for inclusion on Line 21), provided that, except as otherwise expressly provided in Section 2.2.5, all of such technologies must be utilized in order to meet this requirement.
- 2.2.2** For PAL, SECAM or YUV outputs, the appropriate specifications (i) for the Automatic Gain Control copy control system (contained in the document entitled "Specification of the Macrovision Copy Protection Process for STB/IRD Products" Revision 7.1.S1, October 1, 1999 or other applicable specification licensed by Macrovision) and (ii) for the CGMS-A copy control system (contained in IEC 61880 (for inclusion on Line 20) or IEC 61880-2 (for inclusion on Line 41) or in CEA-608-B (for inclusion on Line 21) or in CEA-805 (for inclusion on Line 19, 24 or 41) for YUV (60Hz systems) outputs or in ETS EN 300294 for PAL, SECAM, and YUV (625i/50 systems) outputs) or in IEC 62375 (for inclusion in line 43) for YUV (625p/50 systems) outputs), provided that, except as otherwise expressly provided in Section 2.2.5, both of these technologies must be utilized in order to meet this requirement. (Note; "YUV as used herein means a component video output comprised of a luminance signal (Y) and two color difference signal (U and V) and specifically includes the

following component video signals (Y,Pb,Pr), (Y,Cb,Cr), (Y, Db, Dr), and (Y, B-Y, R-Y).)

- 2.2.3** For 480p progressive scan outputs, the appropriate specification for (i) the Automatic Gain Control copy control system (contained in the document entitled "Specification of the Macrovision AGC Copy Protection Waveforms for Products with 525p and/or 625p YPbPr Progressive Scan Outputs" Revision 1.3 June 30, 2006 or other applicable specification licensed by Macrovision) and (ii) CGMS-A copy control system (contained in, or adapted without material change from, JEITA EIAJ CPR1204-1 (defining the signal waveform carrying the CGMS-A) and IEC61880-2 (defining the bit assignment for CGMS-A)).
- 2.2.4** For 576p progressive scan outputs, the appropriate specification for (i) the Automatic Gain Control copy control system (contained in the document entitled "Specification of the Macrovision AGC Copy Protection Waveforms for Products with 525p and/or 625p YPbPr Progressive Scan Outputs" Revision 1.3 June 30, 2006 or other applicable specification licensed by Macrovision) and (ii) CGMS-A copy control system (contained in, or adapted without material change from, IEC 62375:2004).
- 2.2.5** For SCART connectors, the Automatic Gain Control specifications for the PAL and SECAM signal carried by that connector, provided that the connector must be configured so that the component signal carried by the connector must always be accompanied by a composite signal and such composite signal must provide the only synchronization reference for the component signal.
- 2.2.6** A Licensed Product shall not apply Analogue Protection System (APS) to "Copy One Generation" Controlled Content, but it shall pass through, without alteration, the value of any APS trigger bits (as described in the Specifications) in accordance with the specifications relating to APS contained in (a) IEC 61880 (for inclusion of such value on Line 20) or CEA-608-B (for inclusion of such value on Line 21) for NTSC outputs or (b) ETS EN 300294 for PAL, SECAM and YUV (625i/50 systems) outputs or (c) IEC 61880 (for inclusion on Line 20) or IEC 61880-2 (for inclusion on Line 41) or CEA-608-B (for inclusion of such value on Line 21) or in CEA-805 (for inclusion on Line 19, 24 or 41) for YUV (60Hz systems) or (d) in IEC 62375 (for inclusion in line 43) for YUV (525/60 systems) outputs.
- 2.2.7** The Licensor may amend certain obligations set out in this Section 2.2, or specify alternative means to comply, if Licensor finds that the required technologies are not available on fair, reasonable and non-discriminatory terms.

2.3 High Definition Analogue Outputs. This section is not applicable anymore since Analog HD sunset (effective September 2012).

2.4 Analogue Audio outputs. Licensed Product with any analogue audio outputs shall only output the audio portion of Controlled Content as permitted by this Section 2.4

2.4.1 Analogue Audio Output. The licensed product may pass the audio portion of Controlled Content to mono, stereo and multichannel Analogue Audio Output.

2.5 Digital Outputs. Subject to the requirements of Section 2.7, Licensed Product with any digital outputs shall only output Controlled Content as permitted by this Section 2.5.

2.5.1 DVI/HDMI with HDCP. Licensed Product may output Controlled Content to a DVI/HDMI output in digital form where such output is protected by HDCP, licensed by Digital Content Protection LLC and where HDCP is always active on all DVI and HDMI interfaces.

Licensed Product must pass all validly received HDCP SRM, if any, from CICAM to HDCP function.

Capitalized terms used in this Section, but not otherwise defined in this Exhibit C or the Agreement, shall have the meaning set forth in the HDCP Specification or the HDCP License Agreement. The Licensed products shall not deliberately interfere with SRM that may have been received directly from RF broadcast and make reasonable efforts to avoid such interference.

2.5.2 HDCP Specification Revision 2.0 . Licensed Product may output Controlled Content to any wired or wireless interface including Wi-Fi, Ethernet and USB output in digital form where such output is protected by HDCP Specification Revision 2.0 or higher, licensed by Digital Content Protection LLC and where HDCP Specification Revision 2.0 is always active on all such interfaces. Licensed Product must pass all validly received HDCP revision 2.0 SRM, if any, from CICAM to HDCP revision 2.0 function. Capitalized terms used in this Section, but not otherwise defined in this Exhibit C or the Agreement, shall have the meaning set forth in the HDCP Specification Revision 2.0 or the HDCP Addendum to HDCP License Agreement. The Licensed products shall not deliberately interfere with SRM that may have been received directly from RF broadcast and make reasonable efforts to avoid such interference.

2.5.3 S/PDIF with SCMS. Licensed Product may pass the audio portion of Controlled Content to an output, in digital compressed or uncompressed form over S/PDIF, including TOS-link or coax interfaces, where the output has SCMS active and on. Licensed product shall provide a category code in conjunction to the L-bit and may choose a category code from the list defined in IEC60958-3, section 5.3.2.2.4, table 7

2.5.4 Other digital audio output. Licensed Product may pass the audio portion of Controlled Content over any digital audio output, without any content protection in a compressed or

uncompressed format with the constraint of encoding at 48kHz, 16 bits or less.

2.5.5 DTCP-IP. Subject to the requirement of section 2.7, a Licensed Product may pass Controlled Content, received through the Service, in digital form where such output is protected by DTCP-IP.

- When so outputting or passing such content to a DTCP-IP output, the Licensed Product is required to:
 - i) map EMI settings from CI+ URI to the DTCP Encryption Mode Indicator; and
 - ii) map URI settings APS, RCT settings as defined in the CI Plus Specification into DTCP Analogue Protection System (APS) signalling, and DTCP Encryption Plus Non-assertion (EPN) signalling in accordance with section 5.7 of the CI Plus Specification Version 1.3.
- Licensed Product must pass all validly received DTCP-IP SRM, if any, from CICAM to DTCP-IP function.
- Capitalized terms used in this Section, but not otherwise defined in this Exhibit B or the Agreement, shall have the meaning set forth in the DTCP specification or the DTCP Adopter Agreement.
- The Licensed products shall not deliberately interfere with SRM that may have been received directly from RF broadcast and make reasonable efforts to avoid such interference.

2.6 Content and Signalling Non-Interference. This Section shall not prohibit a Licensed product from incorporating features not intended for removal or interference of content and signalling (e.g. zooming, scaling, cropping, picture-in-picture, compression, recompression, image overlays, overlap of windows in a graphical user interface, audio mixing and equalization, video mixing and keying, down sampling, up-sampling, and line doubling, or conversion between widely-used formats for the transport, processing and display of audiovisual signals or data, such as between analogue and digital formats and between PAL and NTSC or RGB and YUV formats, or trick play as well as other features as may be added to the foregoing list from time to time.

For this purpose Licensee should take into consideration specifications from DVB and other accredited standards organizations in the domain of Digital TV and consider any relevant information on the CI Plus Website addressing such non-interference requirements.

2.6.1 Watermark Non-Interference. The Licensed products shall not remove or deliberately interfere with watermarking technologies and shall make reasonable efforts to avoid such interference. Licensee shall take reasonable measures against marketing of its Licensed products by Licensee or cooperating with third party marketing of Licensed products as being fit for removing watermarks.

2.6.2 Content Usage Non-Interference. The Licensed products shall not remove or deliberately interfere with data carried in the stream intended for the protection of content, services and/or parental access and shall make reasonable efforts to avoid such interference. Attention is specifically drawn to the new features enabled in CI Plus Specification Version 1.3, Section 5.10, in which playback control is defined. Licensee shall take reasonable measures against marketing of its Licensed Products by Licensee or thirds as being fit for removing such data intended for the protection of content, services and/or parental access.

2.6.3 MMI Non-Interference. The Licensed products shall not remove or deliberately interfere with data or the video representation of the module MMI output to the user. The Licensed product shall not remove or deliberately interfere with user input and data representing User Input Events back to the module. Specifically the Licensed products shall not store pin-codes or other user input data used for authentication or identification purposes for subsequent forwarding as user generated input to the module MMI session, other than as used for legitimate reasons to enable the new features defined in CI Plus Specification Version 1.3, Section 5.11,

2.7 DOT Content. Notwithstanding the terms of Sections 2.2, 2.3 and 2.5, and except as provided in Section 2.4, Licensed Product shall not pass video portion of DOT Content to any output except as permitted by Sections 2.5.1 or 2.5.2 of this Exhibit C. CI Plus LLP shall further permit Licensed Product to permit output of DOT Content to DTCP-IP, once DTCP-IP is capable of supporting the output control equivalent of this Section 2.7.

3.0 Copying, Recording, and Storage of Controlled Content

3.1 General. Licensed Products, including, without limitation, Licensed Products with inherent or integrated copying, recording or storage capability shall not copy, record, or store Controlled Content, except as permitted in this Section. Storage of Controlled Content on removable storage media is not allowed except for scenarios described in Section 3.6 of this Exhibit C.

3.2 Mere Buffer for Display. Licensed Products may store Controlled Content temporarily for the sole purpose of enabling the immediate display of Controlled Content, provided that (a) such storage does not persist after the content has been displayed, and (b) the data is not stored in a way that supports copying, recording, or storage of such data for other purposes, (c) the buffering is limited to a maximum of 10 seconds of video data.

3.3 Copy No More. Licensed Products shall not copy, record or store Controlled Content that is designated in the EMI bits as having been copied but not to be copied further (“copy no more”), except as permitted in Section 3.2 or 3.5.2 of this Exhibit C.

3.4 Copy Never. Licensed Products, including, without limitation, such a device with integrated recording capability such as a so-called “personal video

recorder,” shall not copy Controlled Content that is designated in the EMI bits as never to be copied (“copy never”) except as permitted in Section 3.2 of this Exhibit C or by the following:

3.4.1 Storage: A Secure Storage Licensed Product may, without further authorization, store content, including for the purpose of pausing, as to which Copy Never control has been asserted for the duration up to the Retention Limit from initial transmission and obliterate or render unusable the stored content after stated period of time (e.g. frame-by-frame, minute-by-minute, megabyte by megabyte, etc.), but in no event shall such unit of data exceed one minute of a Program.

Content that has been stored/paused, shall be stored in a manner which is encrypted in a manner that provides no less security than 128-bit Advanced Encryption Standard (“AES”) and the stored content is securely bound to the Licensed Product doing the recording so that it is not removable in a usable form there from and is not itself subject to further temporary or other recording within the Licensed Product before it is rendered unusable; provided the device is made in compliance with specified robustness requirements to avoid circumvention of such restrictions.

3.4.2 Playback Control. Notwithstanding Section 3.4.1, Secure Storage Licensed Product may store content as to which Copy Never [or Copy No More] control has been asserted in such a way that it can only be played back with authorisation with CICAM in accordance with Section 5.10 of CI Plus Specification Version 1.3.

3.5 Copy One Generation. Licensed Products, including, without limitation, such a device with integrated recording capability such as a so-called “personal video recorder,” shall not copy Controlled Content that is designated in the EMI bits as “copy one generation” or “copy no more”, except as permitted in Section 3.2 of this Exhibit C or by the following:

3.5.1 Secure Storage Licensed Products can make a single copy of “Copy One Generation” Controlled Content. After storage the content shall be designated as “Copy No More”. Permissible output options for “Copy No More” content are defined in section 2.0 of this Exhibit C.

3.5.2 A Licensed Product may move stored Controlled Content or output Controlled Content marked as “Copy No More” to a single output, for the purpose of Move, with content state designated as “Copy One Generation”. Such Moved copy shall be protected by recording methods as permitted under this Section 3.5, or shall be output protected by methods as permitted under Section 2.5 of this Exhibit C. The Licensed Product shall ensure that after a successful Move is confirmed the original Licensed Product recording is rendered non-useable and the moved Controlled Content shall be marked “Copy No More”. Multiple moves consistent with these requirements are not prohibited.

- 3.5.3** Controlled Content that is designated in the EMI bits as “Copy One Generation” may be copied to a removable storage, using any of the technologies in Section 3.6 of this Exhibit C. After copy is made, copy control status shall be changed to “Copy No More”.
- 3.5.4** Notwithstanding Section 3.5.1, Secure Storage Licensed Products may store recording containing one or more Trick Mode Restricted Segments provided that (i) playback from a position in a Trick Mode Restricted Segment is authorized only when all content present in the Trick Mode Restricted Segment before the given position has been already played back at least once and (ii) fast-forward of Trick Mode Restricted Content is only allowed if the content has already been played back at least once.

3.6 Removable Storage

Refer to Exhibit E for URI interpretation when recording Controlled Content under this Section 3.6.

- 3.6.1 AACS.** Controlled content may be stored on a Blu-ray Disc, provided the copy is encrypted using AACS for Blu-ray Disc recordable in accordance with the Advanced Access Content System (AACS) as licensed by AACS LA LLC.
- 3.6.2 CPRM.** Controlled Content may be stored on a DVD that is protected by Content Protection for the Recordable Media (CPRM) as licensed by 4C Entity. The copy protection information will be stored in each RDI pack.
- 3.6.3 VCPS.** Controlled Content may be stored on a DVD that is protected by Video Content Protection System (VCPS) as licensed by Koninklijke Philips Electronics N.V.
- 3.6.4** A Secure Storage Licensed Product may use a user accessible digital interface to store Controlled Content on a Secure Storage Product, if: (a) the Controlled Content is encrypted across the interface, and in storage, with an encryption algorithm that provides no less security than 128-bit AES; (b) the Controlled Content is uniquely cryptographically associated with the original Secure Storage Licensed Product connected to the Secure Storage Product, such that Controlled Content is unusable to any other product or device; (c) the interface and Secure Storage Product, or the system architecture, provides protection from a “disk cloning attack”; (d) no key information is stored on the Secure Storage Product unless encrypted with security no less than AES (128 bit); and (e) the Move, storage and copying of Controlled Content otherwise meets the criteria set forth in the Robustness Rules and the Compliance Rules for Host Devices.

3.7 No Waiver. Licensee acknowledges that the provisions of this Section 3.0 are not a waiver or license of any copyright interest or an admission of the existence or non-existence of a copyright interest.

4.0 Change of Version

- 4.1 User accessible menus that change the version of a CI Plus Host back to an earlier version of the CI Plus Specification than the version of the CI Plus Specification used for the Registration of that Host are not permitted
- 4.2 If the Host contains one or more options that change the behaviour of any CI+ resource to that of a higher version of the CI Plus Specification than the version of the CI Plus Specification used for the Registration of that Host, the Host must be compliant to the applicable specifications for every (combination of) settings of all such options.

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Exhibit E: URI Mapping Table
Version 1.4

Main mapping table with columns: Input to CI Plus Host (Use Case, CA controlled, URI), Internal Retention, Trick Mode Control, Microstreaming, CGMS-A, WSS, Image constraints, HDCP, Digital Output (Dot, DTC, DCT, APS, R_M, SCMS), Digital Storage (AACS, CPAM, VCPS).

- Notes
1 Use case #26 is the initial default URI
2 Use case #27 is the final default URI when not received within timeout
3 If the Host receives this value it reverts to the initial default URI and shall revert to the final default URI when no subsequent URI is received within the timeout. Refer to CI Plus Specification, section 5.7
4 Copy No More is an illegal URI for the content provider to send. Copy No More is the use case where the CICAM makes a copy of Copy Once content and changes the URI to Copy No More.
5 A Contented Image can be output or displayed using video processing techniques such as line doubling or sharpening to improve the perceived quality of the image.
6 These Use Cases are Copy Once and allows the Host to either copy the content once using DTCP, AACS, CPAM, and VCPS or output the content on the Analogue interface and control the Copy Once status using the CGMS-A signalling.

Table: If the Host has not made one copy of the content then the content can be output on the analogue interface. Columns: URI, Analogue output, Microstreaming, APS, CGMS, WSS.

Table: If the Host has made a copy of the content then no more copies are allowed. Columns: URI, Analogue output, Microstreaming, APS, CGMS, WSS.

- 7 The Host device which implements CGMS-A must comply with the resolutions specified in Exhibit C.
8 The SCMS signalling in this table is defined for a broadcast category code device; other bit settings exist for different category codes (See Exhibit C).
9 When URI is set to Copy Freely, there is no encryption asserted for DTCP, AACS and CPAM.
10 The Internal Retention limits for Copy Never Content is controlled by i_copy_ctrl_info field in the URI, which may override the default of 90 minutes. See the CI Plus specification, section 5.7 for more detail.
11 The value of the URI i_copy_ctrl_info shall not be propagated by DTCP; the DTCP Retention_State shall be set to the minimum retention time of 90 minutes (0b11).
12 Without an signal from the operator the module may not automatically enable the RCT.
13 *CA controlled* means that there are CA descriptions in the CA_PMT and the selected service is processed by an authenticated CI Plus module.
14 For PAL and SECAM video then WSS copyright information (ETS 300 294) shall always be signalled. A *x* in any bit position indicates that the value may be 0 or 1. Refer to Exhibit C, section 2.2.2.
15 Use case #86 to 81 is an illegal URI and can not be transmitted in URI version 2 or higher and is not available for URI version 1.
16 Refer to clause 2.3 (Exhibit C) for HD Analogue Component Source restrictions.
17 Refer to clause 2.7 (Exhibit C) for permit output of DOT Content to DTCP-IP.
18 R_M = Retention_Move_mode
19 The Trick Mode Control for Copy Once Content is controlled by trick_mode_control_info field in the URI, refer to clause 3.5.4 (Exhibit C) for more detail.