

4C Device Key Appendix
to the AACS Red Laser Addendum –
Key Types and Expiration Procedures

This Appendix sets forth the types of 4C Device Keys that are available for use by AACS Red Laser Red Laser Adopters and the circumstances and procedures for expiring 4C Device Keys and 4C Device Key Sets used in AACS Red Laser Recorders. Except as otherwise specified herein, capitalized terms have the meanings set forth in this Appendix, in the AACS Red Laser Addendum, or the AACS Red Laser Adopter Agreement.

1. 4C Device Keys are supplied in the form of a group of 4C Device Keys for use in a single device or a set of devices (such group of keys called, collectively, “4C Device Key Sets”). There are three types of 4C Device Key Sets available for use in AACS Red Laser Licensed Recorders:
 - a. Type A: Type A 4C Device Key Sets are unique per AACS Red Laser Recorder.
 - b. Type B: Type B 4C Device Key Sets may be shared among a limited number of AACS Red Laser Licensed Components or AACS Red Laser Recorders. Implementations are required to be renewable, preferably via user-transparent means such as the download of updated software from a website. In the event a 4C Device Key Set is Expired, Red Laser Adopter shall provide clear information to the end user indicating that renewal is necessary and describing the necessary steps to perform the update. This update shall be made available at no cost to the end user. Red Laser Adopter shall make an update (using a new 4C Device Key Set) ready and available within 2 weeks of notification from the 4C.
 - i. Unconnected Devices: An AACS Red Laser Recorder with Type B 4C Device Key Sets that can be used without the end-user ever making a connection (i.e. an internet connection) that could be used to download updates is considered to be “Unconnected.” If an Unconnected AACS Red Laser Recorder’s Type B 4C Device Key Set is Expired, Red Laser Adopter shall make an update available via download and prompt delivery via physical mail. For Unconnected AACS Red Laser Recorders, a single Type B 4C 4C Device Key Set may be shared by no more than 5,000 instances of an AACS Red Laser Recorder.
 - ii. Connected Devices: An AACS Red Laser Recorder with Type B 4C Device Key Sets that requires the end-user to make a connection at least once in order to obtain or use the AACS Red Laser Recorder is considered to be “Connected.” If a Connected AACS Red Laser Recorder’s 4C Device Key Set is Expired, Red

Laser Adopter shall make an update available via download and at Red Laser Adopter's option prompt delivery via physical mail. For Connected AACS Red Laser Recorders, a single Type B 4C 4C Device Key Set may be shared by no more than 10,000 instances of an AACS Red Laser Recorder.

- c. Type C: Type C 4C Device Key Sets may be shared among any number of Red Laser Licensed Components or Red Laser Licensed Recorders without limit, provided that such Red Laser Licensed Components or Red Laser Licensed Recorders are Managed (as "Managed" is defined in the 4C Adopter Agreement). In the event that 4C notifies Red Laser Adopter that Content Participants will begin distributing CPPM Expiration Information to expire a 4C Device Key Set used by Red Laser Licensed Components or Red Laser Licensed Recorders distributed by Red Laser Adopter, Red Laser Adopter shall make a Periodic Update containing a replacement 4C Device Key Set available on the distribution date identified in such notice, if possible, and in any event no later than four weeks after such notice is given.

The requirements set forth above regarding (a) disabling of Red Laser Licensed Components that are replaced via periodic update (or that are due for such update in the case of Type C 4C 4C Device Key Sets), and (b) enabling of Red Laser Licensed Components and Red Laser Licensed Recorders only after an online connection is made, shall be implemented in such components/products using means that comply with the requirements set forth in Sections 4.2, 4.3 and 5 [to be confirmed when document finalized] of the Red Laser Robustness Rules, as if such disabling and enabling had been characteristics set forth in Section 1.4 of the Red Laser Robustness Rules, and using techniques of obfuscation to disguise and hamper attempts to discover the approaches used. For products utilizing Type B and Type C 4C Device Key Sets, in addition to any requirements stated above, Red Laser Adopter is required to change 4C Device Key Sets in any new product versions. For purposes of this provision, a "new product version" shall mean a product announced to the public as a new version or next generation of a previously marketed product, as well as any situation in which an existing product is updated in a way that alters the implementation of the Security Functions or techniques of obfuscation whether or not there is an announcement to the public of release of a new version or next generation product. This requirement should be read so as to permit Red Laser Adopters to make available interim bug fixes or updates to existing versions of products without a requirement to change the 4C 4C Device Key Set, provided that such fixes or updates do not alter the implementation of the Security Functions (as defined in the Red Laser Robustness Rules).

2. Circumstances Warranting Expiration. 4C, at its own initiative or that of any Red Laser Adopter, or Eligible Content Participant, may Expire a 4C Device Key Set when it determines, based on the facts presented to it, that (1) a 4C Device Key Set has been cloned such that the same 4C Device Key Set is found in more than one device or product other than in a product merely implementing Type B or C 4C Device Key Sets; (2) a 4C Device Key has been made public, lost, stolen, intercepted or otherwise misdirected or disclosed in violation of this Agreement; or (3) 4C is directed to Expire a 4C Device Key by the National Security Agency, court order, or other competent government authority. Without limiting the foregoing, 4C shall not Expire a 4C Device Key Set (a) based on Red Laser Adopter's breach of the AACS Adopter Agreement (including the Red Laser Addendum and this Appendix), other than where Red Laser Adopter has cloned or made public a 4C Device Key Set or such 4C Device Key Set has otherwise been disclosed in violation of this Agreement; or (b) to disable products or devices other than in the circumstances provided in (1)-(3) of this section, above.
3. Key Expiration Process
 - a. Consultation with Affected Red Laser Adopter. In the event 4C receives a request to Expire a 4C Device Key Set based on a sworn affidavit from an Eligible Content Participant or a Fellow Red Laser Adopter that (i) a 4C Device Key Set sought to be Expired has been made public, lost, stolen, intercepted, or otherwise misdirected or disclosed in violation of this agreement; or (ii) a 4C Device Key Set has been cloned such that the same 4C Device Key Set is found in more than one device or product (the "Expiration Criteria") 4C shall promptly provide the affected Red Laser Adopter with a copy of such affidavit and request its consent to Expire the applicable 4C Device Key Set. Red Laser Adopter shall respond to 4C's request within fifteen (15) days of receiving notice in accordance with the notice procedures of this Agreement and shall not unreasonably withhold its consent to Expire a 4C Device Key Set. Should Red Laser Adopter reasonably believe that neither of the Expiration Criteria have been met, Red Laser Adopter shall so inform 4C, providing reasons why the affidavit did not provide facts that would satisfy the Expiration Criteria and supplying any additional facts in its own sworn affidavit that establish why the Expiration Criteria have not been met, and shall thereafter promptly submit to arbitration in accordance with the procedures set forth in Section 3.c.
 - b. Red Laser Adopter Request for Expiration. Red Laser Adopter licensed under Section 2.3 may seek Expiration by providing proof in a sworn affidavit of facts indicating that a particular 4C Device Key Set should be Expired because a 4C Device Key Set has been made public, lost, stolen, intercepted or otherwise misdirected or disclosed in violation of this agreement, or that a 4C Device Key or 4C Device Key Set has been cloned such that the same 4C Device Key or 4C Device Key Set is found

in more than one device or Production/Sale Licensed Product Set. Such Red Laser Adopter affidavit shall be sufficiently detailed that 4C can determine solely on the basis of such affidavit whether the facts averred are sufficient to satisfy the Expiration Criteria.

c. Procedures for Expiration

- i. Upon receipt of a sworn affidavit from a Fellow Red Laser Adopter or Eligible Content Participant as provided above and in the Content Participant Agreement, 4C shall review it in light of the Expiration Criteria and, in accordance with 4C's procedures, promptly determine whether Expiration is warranted.
 1. If 4C determines that either or both of the Expiration Criteria are met by the affidavit, 4C shall promptly provide the affected Red Laser Adopter with a copy of the affidavit and request its consent to Expire the applicable 4C Device Keys. If the Red Laser Adopter consents, 4C shall take steps to Expire the applicable CPPM 4C Device Keys by promptly delivering or causing to be delivered to all Content Participants relevant Expiration Information and shall take steps to Expire the applicable CPRM 4C Device Keys by promptly delivering or causing to be delivered to all Red Laser Adopters relevant Expiration Information.
 2. If (A) 4C determines that neither of the Expiration Criteria are met; or (B) the affected Red Laser Adopter (x) objects to 4C's request to Expire or (y) does not respond to 4C's request to Expire within fifteen (15) days, the matter shall be submitted to arbitration. At such arbitration the party or parties seeking Expiration shall bear the burden of proof to demonstrate by a preponderance of the evidence that the Expiration Criteria have been met
 3. Any arbitration pursuant to this section 9.5 shall be conducted in accordance with the following procedures:
 - a. There shall be a sole arbitrator who shall be selected by the American Arbitration Association from its National Panel of Commercial Arbitrators.
 - b. The arbitration shall be conducted in New York, N.Y. in accordance with the International Arbitration Rules of the American Arbitration Association. The arbitration shall be conducted in English.

- c. The arbitrator may conduct the arbitration in such manner as it shall deem appropriate, including the imposition of time limits that it considers reasonable for each phase of the proceeding, but with due regard for the need to act, and make a final determination, in an expeditious manner.
- d. The arbitrator shall permit and facilitate such limited discovery as he or she shall determine is reasonably necessary, taking into account the needs of the parties and the desirability of making discovery as expeditious and cost-effective as possible.
- e. The parties and the arbitrator shall treat the arbitration proceedings, any related discovery, documents and other evidence submitted to, and the decision of, the arbitrator as Confidential Information. In addition, and as necessary, the arbitrator may issue orders to protect the confidentiality of proprietary information, trade secrets and other sensitive information disclosed in discovery or otherwise during the arbitration.
- f. The arbitrator is empowered solely to determine whether either of the Expiration Criteria have been met. Any such determination shall be final and binding on the parties, except that whether the arbitrator exceeded his or her authority in determining the remedy, or otherwise, shall be fully reviewable by a court of competent jurisdiction. Judgment upon any award shall be entered in a court of competent jurisdiction.
- g. The arbitrator shall be compensated at his or her hourly rate, determined at the time of appointment, for all time spent in connection with the arbitration, and shall be reimbursed for reasonable travel and other expenses. The arbitrator shall determine all costs of the arbitration, including his or her fees and expenses, the costs of expert advice and other assistance engaged by the arbitrator, the cost of a transcript and the costs of meeting and hearing facilities. The arbitrator shall assess the losing party or parties the costs of the arbitration set forth in this subsection (g).

4. If the arbitrator has found that an expiration criterion has been met, then 4C shall expire the affected 4C Device Key Set.