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(Original Signature of Member)

109TH CONGRESS
1ST SESSION

H. R. _____

To require certain analog conversion devices to preserve digital content security measures.

IN THE HOUSE OF REPRESENTATIVES

Mr. SENSENBRENNER (for himself and Mr. CONYERS) introduced the following bill; which was referred to the Committee on

A BILL

To require certain analog conversion devices to preserve digital content security measures.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Digital Transition
5 Content Security Act of 2005”.



1 **TITLE I—REQUIREMENTS FOR**
2 **ANALOG CONVERSION DEVICES**

3 **SEC. 101. PROHIBITIONS.**

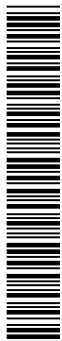
4 No person shall—

5 (1) manufacture, import, offer to the public,
6 provide or otherwise traffic in any—

7 (A) analog video input device that converts
8 into digital form an analog video signal that is
9 received in a covered format, or an analog video
10 signal in a covered format that is read from a
11 prerecorded medium, unless any portions of
12 that device that are designed to access, record,
13 or pass the content of the analog video signal
14 within that device—

15 (i) detect and respond to the rights
16 signaling system with respect to a par-
17 ticular work by conforming the copying
18 and redistributing of that work to the in-
19 formation contained in the rights signaling
20 system for that work in accordance with
21 the compliance rules set forth in section
22 201 and the robustness rules referred to in
23 section 202; and

24 (ii) pass through or properly reinsert
25 and update the CGMS-A portion of the



1 rights signaling system or coding and data
2 pertaining to CGMS-A, and pass through
3 the VEIL portion of the rights signaling
4 system, in accordance with such compli-
5 ance rules and robustness rules; or

6 (B) analog video input device that does not
7 convert into digital form an analog video signal
8 that is received by that device in a covered for-
9 mat, or an analog video signal in a covered for-
10 mat that is read from a prerecorded medium,
11 unless that device—

12 (i) preserves, passes through, or prop-
13 erly reinserts the CGMS-A portion of the
14 rights signaling system or coding and data
15 pertaining to CGMS-A, and passes through
16 the VEIL portion of the rights signaling
17 system, in accordance with the compliance
18 rules set forth in section 201 and the
19 robustness rules referred to in section 202;

20 (ii) outputs the analog video signal in
21 a covered format; or

22 (2) manufacture, import, offer to the public,
23 provide, or otherwise traffic in any technology, prod-
24 uct, service, device, component, or part thereof,
25 that—



1 (A) is primarily designed or produced for
2 the purpose of modifying or causing an analog
3 video input device to no longer conform to the
4 requirements set forth in paragraph (1);

5 (B) has only limited commercially signifi-
6 cant purpose or use other than to modify or
7 cause an analog video input device to no longer
8 conform to the requirements set forth in para-
9 graph (1); or

10 (C) is marketed by that person or another
11 acting in concert with that person with that
12 person's knowledge for use in modifying or
13 causing an analog video input device to no
14 longer conform to the requirements set forth in
15 paragraph (1).

16 **SEC. 102. EXCEPTIONS.**

17 Section 101 shall not apply to a particular product
18 or device that—

19 (1) was legally manufactured and sold as new
20 before the effective date of this title and is subse-
21 quently offered for sale or otherwise trafficked in, if
22 such product or device has not been modified, after
23 such effective date, so that the product, if in compli-
24 ance with section 101 before the modification, is



1 configured so that the product or device is no longer
2 in compliance with that section; or

3 (2) is a device capable solely of displaying pro-
4 grams and cannot be upgraded or readily modified
5 so as to incorporate transmission, redistribution, or
6 recording capabilities.

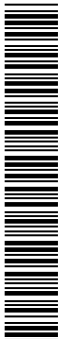
7 **SEC. 103. ENCODING RULES.**

8 No person shall encode a program, or cause a pro-
9 gram to be encoded, using the rights signaling system, un-
10 less such encoding meets the following requirements:

11 (1) The rights signaling system may be encoded
12 so as to prevent or limit copying, redistribution, or
13 both, of prerecorded media, video on demand, pay-
14 per-view, subscription-on-demand, and undefined
15 business models that are comparable to any such de-
16 fined business model.

17 (2) The rights signaling system—

18 (A) may not be encoded so as to prevent
19 first generation of copies permitted under title
20 II of pay television transmissions, non-premium
21 subscription television, free conditional access
22 delivery, and undefined business models that
23 are comparable to any such defined business
24 model; but



1 (B) may be encoded so as to prevent or
2 limit further copying or redistribution, or both,
3 of any defined business model or comparable
4 undefined business model referred to in sub-
5 paragraph (A).

6 (3) The rights signaling system—

7 (A) may not be encoded so as to numeri-
8 cally limit copying as permitted under title II of
9 a non-conditional access broadcast transmission
10 and undefined business models that are com-
11 parable to a non-conditional access broadcast
12 transmission; but

13 (B) may be encoded so as to prevent redis-
14 tribution of any such non-conditional access
15 broadcast transmission and comparable unde-
16 fined business models.

17 (4)(A) During the 12-month period beginning
18 on the effective date set forth in section 109, the
19 VEIL portion of the rights signaling system may
20 only be encoded in program formats described in
21 paragraph (1).

22 (B) After the end of that 12-month period, the
23 VEIL portion of the rights signaling system may be
24 encoded in any program format, except that, in any
25 case in which a person encodes a program or causes



1 a program to be encoded with the VEIL portion of
2 the rights signaling system, that person shall also
3 encode the program or cause the program to be en-
4 coded with the CGMS-A portion of the rights sig-
5 naling system.

6 **SEC. 104. TRANSMISSION OF RIGHTS SIGNALING SYSTEM.**

7 Any person making a transmission of a live event or
8 an audiovisual work protected by copyright shall, upon the
9 request of an owner or authorized licensee of the live event
10 or copyrighted work, include in its transmission the rights
11 signaling system for the transmission and shall not, with-
12 out the authorization of such owner or licensee, deactivate
13 or alter the rights signaling system. The rights signaling
14 system shall be applied in accordance with the request,
15 but in no case with encoding restrictions in addition to
16 those required by section 103.

17 **SEC. 105. IMPROVEMENTS TO VEIL.**

18 (a) ADOPTION OF IMPROVEMENTS TO VEIL.—If,
19 upon the petition of any interested party, the Director of
20 the Patent and Trademark Office determines that the
21 VEIL portion of the rights signaling system has become
22 materially ineffective in a way that cannot be adequately
23 remedied by existing technical flexibility in the embedding
24 function of the VEIL portion of the rights signaling sys-
25 tem, then the Director may by rule adopt commercially



1 reasonable improvements to the detection function of the
2 VEIL portion of the rights signaling system in order to
3 maintain the functionality of the rights signaling system
4 under this Act. Any such improvements shall be limited
5 to adjustments or upgrades solely to the same underlying
6 VEIL technology of the existing rights signaling system.
7 The Director shall conduct the rulemaking proceeding
8 under this subsection on an expedited basis.

9 (b) PARTICIPANTS.—In a rulemaking conducted
10 under subsection (a), the Director of the Patent and
11 Trademark Office shall encourage representatives of the
12 film industry, the broadcast, cable, and satellite industry,
13 the information technology industry, and the consumer
14 electronics industry to negotiate in good faith in an effort
15 to reach agreement on the commercially reasonable im-
16 provements to the detection function of the VEIL portion
17 of the rights signaling system to be adopted in the rule.
18 The Director shall ensure that such negotiation process
19 is open and public and that all potentially affected parties
20 are invited to participate in the process through public no-
21 tice. The Director shall cause any agreement for which
22 there is substantial consensus of the parties on all material
23 points to be published and shall take such agreement into
24 account in any final rule adopted.

25 (c) FACTORS.—



1 (1) IN GENERAL.—In determining whether or
2 not to adopt commercially reasonable improvements
3 to the detection function of the VEIL portion of the
4 rights signaling system, including an agreement of
5 the parties as described in subsection (b), the Direc-
6 tor of the Patent and Trademark Office shall con-
7 sider the impact on content owners, content distribu-
8 tors, consumers, manufacturers, and competition
9 generally in all affected markets resulting from the
10 failure to adopt such improvements, as well as from
11 the adoption of such improvements. As part of the
12 determination, the Director shall examine—

13 (A) the licensing terms under which im-
14 provements would be licensed, ensuring that the
15 licensing terms will impose no materially great-
16 er burdens than those terms already established
17 for the VEIL portion of the rights signaling
18 system;

19 (B) the intellectual property rights impli-
20 cated by the improvements; and

21 (C) the effect of the improvements on
22 interoperability of consumer audiovisual prod-
23 ucts (including consumer electronic and infor-
24 mation technology products capable of receiv-
25 ing, displaying, or recording programs).



1 (2) DISCLOSURE OF INTELLECTUAL PROPERTY
2 RIGHTS.—The Director of the Patent and Trade-
3 mark Office shall require those parties participating
4 or filing comments in the process of making a deter-
5 mination under this section to disclose any material
6 intellectual property rights in improvements under
7 consideration.

8 (3) TIMETABLE FOR IMPLEMENTATION.—The
9 Director of the Patent and Trademark Office shall
10 determine the appropriate timetable for implementa-
11 tion of any improvements adopted under this sec-
12 tion, giving due consideration to the generally ac-
13 cepted manufacturing cycle of 18 months in a case
14 involving improvements that require material
15 changes to the design or implementation of detec-
16 tors.

17 (4) PETITIONS FOR RECONSIDERATION.—After
18 issuing a final rule under this section, the Director
19 of the Patent and Trademark Office shall permit
20 and consider petitions for reconsideration of the rule
21 that are filed.

22 **SEC. 106. CIVIL REMEDIES.**

23 (a) CIVIL ACTIONS.—Any person injured by a viola-
24 tion of section 101 may bring a civil action in an appro-



1 p r i a t e United States district court on account of such vio-
2 l a t i o n .

3 (b) POWERS OF THE COURT.—In an action brought
4 u n d e r subsection (a), the court—

5 (1) m a y grant temporary and permanent in-
6 j u n c t i o n s on such terms as it deems reasonable to
7 p r e v e n t or restrain the violation of section 101;

8 (2) a t any time while an action is pending, may
9 o r d e r the impounding, on such terms as it deems
10 r e a s o n a b l e , of any device or product that is in the
11 c u s t o d y or control of the alleged violator and that
12 t h e court has reasonable cause to believe was in-
13 v o l v e d in the violation;

14 (3) m a y award damages under subsection (c);

15 (4) i n its discretion may allow the recovery of
16 c o s t s by or against any party other than the United
17 S t a t e s or an officer thereof;

18 (5) i n its discretion may award reasonable at-
19 t o r n e y ' s fees to the prevailing party; and

20 (6) m a y , as part of a final judgment or decree
21 f i n d i n g a violation, order the remedial modification
22 o r t h e destruction of any device or product involved
23 i n t h e violation that is in the custody or control of
24 t h e violator or has been impounded under paragraph
25 (2).



1 (c) AWARD OF DAMAGES.—

2 (1) IN GENERAL.—Except as otherwise pro-
3 vided in this title, a person committing a violation
4 of section 101 is liable for either—

5 (A) the actual damages and any additional
6 profits of the violator, as provided in paragraph
7 (2); or

8 (B) statutory damages, as provided in
9 paragraph (3).

10 (2) ACTUAL DAMAGES.—The court shall award
11 to the complaining party the actual damages suf-
12 fered by the party as a result of the violation, and
13 any profits of the violator that are attributable to
14 the violation and are not taken into account in com-
15 puting the actual damages, if the complaining party
16 elects such damages at any time before final judg-
17 ment is entered.

18 (3) STATUTORY DAMAGES.—At any time before
19 final judgment is entered, a complaining party may
20 elect to recover an award of statutory damages for
21 each violation of section 101 in the sum of not less
22 than \$200 or more than \$2,500 per device, product,
23 component, offer, or performance of service, as the
24 court considers just.



1 (4) REPEATED VIOLATIONS.—In any case in
2 which the injured party sustains the burden of prov-
3 ing, and the court finds, that a person has violated
4 section 101 within three years after a final judgment
5 was entered against the person for another such vio-
6 lation, the court may increase the award of damages
7 up to triple the amount that would otherwise be
8 awarded, as the court considers just.

9 (5) INNOCENT VIOLATIONS.—

10 (A) IN GENERAL.—The court in its discre-
11 tion may reduce or remit the total award of
12 damages in any case in which the violator sus-
13 tains the burden of proving, and the court
14 finds, that the violator was not aware and had
15 no reason to believe that its acts constituted a
16 violation.

17 (B) NONPROFIT LIBRARY, ARCHIVES, EDU-
18 CATIONAL INSTITUTIONS, OR PUBLIC BROAD-
19 CASTING ENTITIES.—

20 (i) IN GENERAL.—In the case of a
21 nonprofit library, archives, educational in-
22 stitution, or public broadcasting entity, the
23 court shall remit damages in any case in
24 which the library, archives, educational in-
25 stitution, or public broadcasting entity sus-



1 tains the burden of proving, and the court
2 finds, that the library, archives, edu-
3 cational institution, or public broadcasting
4 entity was not aware and had no reason to
5 believe that its acts constituted a violation.

6 (ii) DEFINITION.—In this subpara-
7 graph, the term “public broadcasting enti-
8 ty” has the meaning given that term in
9 section 118(g) of title 17, United States
10 Code.

11 **SEC. 107. CRIMINAL OFFENSES AND PENALTIES.**

12 (a) IN GENERAL.—Any person who violates section
13 101 willfully and for purposes of commercial advantage
14 or private financial gain—

15 (1) shall be fined not more than \$500,000 or
16 imprisoned for not more than 5 years, or both, for
17 the first offense; and

18 (2) shall be fined not more than \$1,000,000 or
19 imprisoned for not more than 10 years, or both, for
20 any subsequent offense.

21 (b) LIMITATION FOR NONPROFIT LIBRARY, AR-
22 CHIVES, EDUCATIONAL INSTITUTION, OR PUBLIC BROAD-
23 CASTING ENTITY.—Subsection (a) shall not apply to a
24 nonprofit library, archives, educational institution, or pub-



1 lic broadcasting entity (as defined in section 118(g) of title
2 17, United States Code).

3 (c) STATUTE OF LIMITATIONS.—A criminal pro-
4 ceeding under this section shall be barred unless such pro-
5 ceeding is commenced within 5 years after the cause of
6 action arises.

7 **SEC. 108. DEFINITIONS.**

8 In this title:

9 (1) ANALOG VIDEO INPUT DEVICE.—The term
10 “analog video input device” means a hardware de-
11 vice, other than a professional device, and any asso-
12 ciated firmware or software, that is designed—

13 (A) to receive an analog video signal in a
14 covered format or to read an analog signal in
15 a covered format from a prerecorded medium;
16 and

17 (B) to record or digitize such signal, or to
18 alter such signal in a way that affects the state
19 or passage of the rights signaling system if
20 present in such signal.

21 (2) COMMERCIAL ADVERTISING MESSAGES.—
22 The term “commercial advertising messages” means,
23 with respect to any service, program, or schedule or
24 group of programs, commercial advertising messages
25 other than—



1 (A) advertising relating to the service itself
2 or the programming contained therein; or

3 (B) advertising which is displayed concu-
4 rrently with the display of any part of any such
5 program, including station identification logos,
6 frames, and banners.

7 (3) COMPARABLE.—The term “comparable”
8 means, when used in connection with a defined busi-
9 ness model and an undefined business model, that
10 the undefined business model approximates the de-
11 fined business model more closely than it approxi-
12 mates any other defined business model.

13 (4) COMPLIANCE RULES.—The term “compli-
14 ance rules” means the rules provided for in section
15 201.

16 (5) CONDITIONAL ACCESS DELIVERY.—The
17 term “conditional access delivery”—

18 (A) means any delivery, whether analog or
19 digital, of a service, program, or schedule or
20 group of programs by means of any technology
21 that controls access to the delivery; and

22 (B) does not include a transmission or re-
23 transmission of an over-the-air television broad-
24 cast.



1 (6) COVERED FORMAT.—The term “covered
2 format” means any analog video format for which
3 the rights signaling system is specified, if such speci-
4 fication is certified by the Director of the Patent
5 and Trademark Office under section 202.

6 (7) DEFINED BUSINESS MODEL.—The term
7 “defined business model” means prerecorded media,
8 video-on-demand, pay-per view, pay television trans-
9 mission, subscription-on-demand, non-premium sub-
10 scription television, free conditional access delivery,
11 or non-conditional access broadcast transmission.

12 (8) FREE CONDITIONAL ACCESS DELIVERY.—
13 The term “free conditional access delivery” means a
14 conditional access delivery for which viewers are not
15 charged any fee, other than government-mandated
16 fees, for the reception or viewing of the program-
17 ming contained in the delivery.

18 (9) NON-CONDITIONAL ACCESS BROADCAST
19 TRANSMISSION.—The term “non-conditional access
20 broadcast transmission” means a broadcast trans-
21 mission, including an over-the-air transmission for
22 reception by the general public using radio fre-
23 quencies allocated for that purpose, whether analog
24 or digital, that is not subject to a technology that
25 controls access to the transmission.



1 (10) NON-PREMIUM SUBSCRIPTION TELE-
2 VISION.—The term “non-premium subscription tele-
3 vision” means an analog or digital delivery of a serv-
4 ice, or schedule or group of programs, including
5 those which may be offered for sale together with
6 other services, for which subscribers are charged a
7 subscription fee for the reception or viewing of the
8 programming contained in the delivery, other than
9 pay television and subscription-on-demand.

10 (11) PAY-PER-VIEW.—(A) The term “pay-per-
11 view”—

12 (i) means an analog or digital delivery of
13 an individual program or specified group of pro-
14 grams in a case in which —

15 (I) such individual program, or each
16 individual program of the group of pro-
17 grams, is generally uninterrupted by com-
18 mercial advertising messages; and

19 (II) recipients are charged a separate
20 fee for each such program or specified
21 group of programs; and

22 (ii) includes delivery of a single program
23 described in clause (i) for which multiple start
24 times are made available at time intervals which



1 are less than the running time of the program
2 as a whole.

3 (B) If a delivery qualifies both as pay-per-view
4 and a pay television transmission, then the delivery
5 shall be deemed, for purposes of this title, to be pay-
6 per-view rather than a pay television transmission.

7 (12) PAY TELEVISION TRANSMISSION.—(A) The
8 term “pay television transmission” means an analog
9 or digital transmission of a service or schedule of
10 programs, in a case in which—

11 (i) each individual program of the service
12 or schedule of programs is generally uninter-
13 rupted by commercial advertising messages; and

14 (ii) subscribing viewers are charged a peri-
15 odic subscription fee for the service or schedule
16 of programs, such as on a monthly basis, for
17 the reception of the programming delivered by
18 the service, whether separately or together with
19 other services or programming, during the view-
20 ing period covered by the fee.

21 (B) If a delivery qualifies both as a pay tele-
22 vision transmission and pay per view, video-on-de-
23 mand, or subscription-on-demand, then the delivery
24 shall be deemed, for purposes of this title, to be pay-



1 per-view, video-on-demand or subscription-on-de-
2 mand rather than a pay television transmission.

3 (13) PRERECORDED MEDIUM.—The term
4 “prerecorded medium” means the delivery of one or
5 more programs, in prerecorded form, whether in
6 analog or digital format, on a packaged medium,
7 such as a VHS tape or DVD disc, or on another op-
8 tical medium or storage device.

9 (14) PROFESSIONAL DEVICE.—(A) The term
10 “professional device” means a device that is de-
11 signed, manufactured, marketed, and intended for
12 use by a person who regularly employs such a device
13 for lawful business or industrial purposes, such as
14 making, performing, displaying, distributing, or
15 transmitting copies of audiovisual works on a com-
16 mercial scale at the request of, or with the explicit
17 permission of, the copyright owner.

18 (B) If a device is marketed to or is commonly
19 purchased by persons other than those described in
20 subparagraph (A), then such device shall not be con-
21 sidered to be a “professional device”.

22 (15) PROGRAM.—The term “program” means
23 an audiovisual work, in analog or digital format, as
24 defined in section 101 of title 17, United States
25 Code, that is offered for transmission, delivery, or



1 distribution, either generally or on demand, to sub-
2 scribers, purchasers, or the public at large, or other-
3 wise for commercial purposes.

4 (16) REDISTRIBUTION.—The term
5 “redistribution”—

6 (A) means the movement of video content
7 beyond the home or similar local environment;
8 and

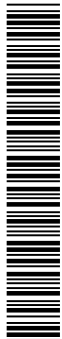
9 (B) does not include the secure movement
10 of video content within any of the rooms or
11 areas within a consumer’s primary residence, or
12 within and among locations such as a con-
13 sumer’s car, boat, recreational vehicle, or sec-
14 ondary residence.

15 (17) RIGHTS SIGNALING SYSTEM.—

16 (A) RIGHTS SIGNALING SYSTEM.—The
17 term “rights signaling system” means CGMS-
18 A, (“CGMS-A”) supplemented by VEIL.

19 (B) CGMS-A.—The term “CGMS-A”
20 means Content Generation Management Sys-
21 tem-Analog.

22 (C) VEIL.—The term “VEIL” means
23 Video Encoded Invisible Light technology.



1 (18) ROBUSTNESS RULES.—The term
2 “robustness rules” means the minimum robustness
3 requirements established under section 202.

4 (19) SUBSCRIPTION-ON-DEMAND.—(A) The
5 term “subscription-on-demand” means the delivery
6 of an individual program or a specified group of pro-
7 grams, in a case in which—

8 (i) a subscriber is able, at his or her dis-
9 cretion, to select the time for beginning the ex-
10 hibition of the program or group of programs;

11 (ii) such individual program, or each indi-
12 vidual program of the group of programs, is
13 generally uninterrupted by commercial adver-
14 tising messages; and

15 (iii) subscribing viewers are charged a peri-
16 odic subscription fee for the reception of such
17 programming during the viewing period covered
18 by the fee.

19 (B) If a delivery of a program qualifies both as
20 a pay television transmission and subscription-on-de-
21 mand, then the delivery shall be deemed, for pur-
22 poses of this title, to be subscription-on-demand
23 rather than a pay television transmission.

24 (20) UNDEFINED BUSINESS MODEL.—The term
25 “undefined business model” means the transmission,



1 delivery, or distribution of a program or programs
2 that is not a defined business model.

3 (21) VIDEO-ON-DEMAND.—(A) term “video-on-
4 demand” means a delivery of an individual program
5 or a specified group of programs in a case in
6 which—

7 (i) such individual program, or each indi-
8 vidual program of the group of program, is gen-
9 erally uninterrupted by commercial advertising
10 messages;

11 (ii) recipients are charged a separate fee
12 for such individual program or specified group
13 of programs; and

14 (iii) a recipient is able, at his or her discre-
15 tion, to select the time for beginning the of ex-
16 hibition of such individual program or specified
17 group of programs.

18 (B) In a delivery qualifies as both video-on-de-
19 mand and a pay television transmission, then the de-
20 livery shall be deemed, for purposes of this title, to
21 be video-on-demand.

22 **SEC. 109. EFFECTIVE DATE.**

23 This Act shall take effect 12 months after the date
24 of the enactment of this Act.



1 **TITLE II—COMPLIANCE**
2 **STANDARDS**

3 **SEC. 201. COMPLIANCE RULES.**

4 (a) **DETECTING.**—Any analog video input device sub-
5 ject to section 101(1) that receives an analog video signal
6 through transmission from a source external to that device
7 or by reading a recording of such signal from a
8 prerecorded medium—

9 (1) shall detect or cause to be detected the
10 presence of the rights signaling system in the analog
11 video signal; and

12 (2) if the rights signaling system is present in
13 the analog video signal—

14 (A) shall determine, or cause to be deter-
15 mined, based on information conveyed by the
16 rights signaling system, whether the content
17 contained in such analog video signal is copy
18 unlimited no redistribution content, copy one
19 generation content, or copy prohibited content,
20 in accordance with Table W; and

21 (B) shall abide by the relevant recording,
22 output, and passing rules set forth in sub-
23 sections (b), (c), and (d).

24 (b) **RECORDING.**—



1 (1) COPY PROHIBITED CONTENT.—An analog
2 video input device shall not record or cause the re-
3 cording of copy prohibited content in digital form,
4 including retention and deletion on a frame-by-
5 frame, minute-by-minute, or megabyte-by-megabyte
6 basis, unless—

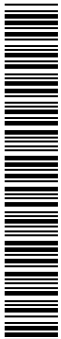
7 (A) the copy prohibited content is retained
8 for a period of not more than 90 minutes from
9 initial receipt of each unit of such content using
10 a bound recording method; and

11 (B) such content is destroyed or otherwise
12 rendered unusable no later than the end of that
13 90-minute period.

14 (2) COPY ONE GENERATION AND COPY UNLIM-
15 ITED NO REDISTRIBUTION CONTENT.—An analog
16 video input device shall not record or cause the re-
17 cording of copy one generation content or copy un-
18 limited no redistribution content in digital form,
19 other than—

20 (A) using an authorized recording method
21 in accordance with any requirements established
22 under section 202(1); or

23 (B) using a bound recording method, in
24 which case Copy One Generation Content so re-



1 corded becomes Copy Prohibited Content with
2 respect to that device.

3 (3) TRANSITORY IMAGE.—The requirements
4 under paragraphs (1) and (2) do not prohibit tem-
5 porary storage of data for the sole purpose of ena-
6 bling a function not prohibited by those require-
7 ments, if such stored data—

8 (A) is not maintained in the manner de-
9 scribed in section 512(a)(4) of title 17, United
10 States Code, after that function has been per-
11 formed; and

12 (B) is not stored in a way that permits
13 copying or redistribution of such data for other
14 purposes.

15 (c) OUTPUTS.—

16 (1) ANALOG OUTPUTS.—An analog video input
17 device shall not pass, or direct to be passed, copy
18 prohibited content, copy one generation content, or
19 copy unlimited no redistribution content to an ana-
20 log output except—

21 (A) as an analog video signal that is
22 passed with—

23 (i) in the case of copy prohibited con-
24 tent, the rights signaling system encoding
25 indicating “no copying is permitted”;



1 (ii) in the case of copy one generation
2 content, the rights signaling system encod-
3 ing indicating “one generation of copies
4 may be made”; or

5 (iii) in the case of copy unlimited no
6 redistribution content, the rights signaling
7 system encoding indicating “copy control
8 restrictions not asserted but redistribution
9 of the work is intended to be limited”; or

10 (B) if such device is incorporated into a
11 computer product, to a VGA output or to a
12 similar output that was widely commercially
13 available as of May 1, 2001, and that carries
14 uncompressed video signals with a resolution
15 less than or equal to a constrained image to a
16 computer monitor.

17 (2) DIGITAL OUTPUTS.—An analog video input
18 device shall not pass, or direct to be passed, copy
19 prohibited content, copy one generation content, or
20 copy unlimited no redistribution content to a digital
21 output except—

22 (A) to an output protected by an author-
23 ized digital output method in accordance with
24 any requirements established under section
25 202(1); or



1 (B) for the purpose of making a recording
2 (in accordance with paragraph (1) or (2) of
3 subsection (c), if such such content is protected,
4 including during transmission, by the cor-
5 responding authorized recording method.

6 (d) **PASSING VIA OTHER THAN AN OUTPUT (ADD-**
7 **IN DEVICES).**—An analog video input device that passes
8 copy prohibited content, copy one generation content, or
9 copy unlimited no redistribution content from that analog
10 video input device to another product, other than through
11 an output in accordance with subsection (d), shall so pass
12 such content protected in accordance with the minimum
13 robustness requirements established under section 202.

14 **SEC. 202. IMPLEMENTING REGULATIONS.**

15 Not later than 120 days after the date of the enact-
16 ment of this Act, the Director of the Patent and Trade-
17 mark Office, in consultation with the Register of Copy-
18 rights, shall adopt regulations to establish—

19 (1) minimum robustness requirements to ensure
20 the content security preservation requirements set
21 forth in section 201 are implemented in a reasonable
22 manner so that such requirements cannot be de-
23 feated or circumvented by the use of generally avail-
24 able tools or equipment, and can only with difficulty



1 be defeated or circumvented by use of professional
2 tools or equipment;

3 (2) a list of certified analog video signals that
4 typically carry copyrighted video content and are a
5 covered format under this Act;

6 (3) a list of certified digital content rights pro-
7 tection output and home networking connection
8 technologies that effectively implement the analog
9 hole rights signaling system detection and content
10 protection responses set forth in Table W;

11 (4) a list of certified digital content rights pro-
12 tection recording technologies that effectively imple-
13 ment the analog hole rights signaling system detec-
14 tion and content protection responses set forth in
15 Table W;

16 (5) criteria and procedural rules to govern addi-
17 tions to and removal from the lists established under
18 paragraphs (2), (3), and (4); and

19 (6) arbitration rules necessary for purposes of
20 resolving disputes arising under paragraph (3) and
21 disputes concerning comparable undefined business
22 models under section 103.

23 **SEC. 203. DEFINITIONS.**

24 (a) IN GENERAL.—In this title:



1 (1) ANALOG VIDEO SIGNAL.—The term “analog
2 video signal” means a signal conforming to one of
3 the certified analog signal formats on the list estab-
4 lished under section 202(2).

5 (2) AUTHORIZED DIGITAL OUTPUT METHOD.—
6 The term “authorized digital output method” means
7 an output method on the list certified by the Direc-
8 tor of the Patent and Trademark Office under sec-
9 tion 202(3), as such list may be amended from time
10 to time in accordance with the procedures estab-
11 lished under section 202(5).

12 (3) AUTHORIZED RECORDING METHOD.—The
13 term “authorized recording method” means a re-
14 cording method on the list certified by the Director
15 of the Patent and Trademark Office under section
16 202(4), as such list may be amended from time to
17 time in accordance with the procedures established
18 under section 202(5).

19 (4) BOUND RECODING METHOD.—The term
20 “bound recording method” means a method for re-
21 cording content that effectively and uniquely associ-
22 ates such recording with a single analog video input
23 device (using a cryptographic protocol or other effec-
24 tive means) so that such recording cannot be
25 accessed in usable form by another product (except



1 where the content of such recording is passed to an-
2 other product by an authorized digital output meth-
3 od).

4 (5) COMPUTER PRODUCT.—The term “com-
5 puter product” means a device that is designed for
6 or permits the end user to install a wide variety of
7 commercially available software applications thereon,
8 such as a personal computer, handheld “personal
9 digital assistant”, and similar products, and further
10 includes a subsystem of such a product, such as a
11 graphics card.

12 (6) CONSTRAINED IMAGE.—The term “con-
13 strained image” means an image that—

14 (A) has the visual equivalent of no more
15 than—

16 (i) 350,000 pixels per frame (e.g. an
17 image with resolution of 720 x 480 pixels
18 for a 4:3 (non-square pixel) aspect ratio);
19 and

20 (ii) 30 frames per second;

21 (B) may be attained by reducing resolu-
22 tion, such as by discarding, dithering, or aver-
23 aging pixels to obtain the specified value; and



1 (C) can be displayed using video processing
2 techniques such as line doubling or sharpening
3 to improve the perceived quality of the image.

4 (7) COPY UNLIMITED NO REDISTRIBUTION CON-
5 TENT.—The term “copy unlimited no redistribution
6 content” means, with respect to an analog video
7 input device—

8 (A) the content of an analog video signal
9 received by that device through transmission
10 from a source external to that device, or by
11 reading of the signal from a prerecorded me-
12 dium, with a rights signaling system encoding
13 indicating “copy control restrictions not as-
14 serted but redistribution of the work is intended
15 to be limited”, as defined in Table W; or

16 (B) the result of combining content with
17 any content other than copy one generation
18 content or copy prohibited content.

19 (8) COPY ONE GENERATION CONTENT.—The
20 term “copy one generation content” means, with re-
21 spect to an analog video input device—

22 (A) the content of an analog video signal
23 received by that device through transmission
24 from a source external to that device, or by
25 reading of that signal from a prerecorded me-



1 dium, with a rights signaling system encoding
2 indicating “one generation of copies may be
3 made”, as defined in Table W; or

4 (B) the result of combining content de-
5 scribed in subparagraph (A) with any content
6 other than copy prohibited content.

7 (9) COPY PROHIBITED CONTENT.—The term
8 “copy prohibited content” means, with respect to an
9 analog video input device—

10 (A) the content of an analog video signal
11 received by such device through transmission
12 from a source external to that device, or by
13 reading of such signal from a prerecorded me-
14 dium with a rights signaling system encoding
15 indicating “no copying is permitted”, as defined
16 in Table W;

17 (B) content received by that device as copy
18 one generation content that has been recorded
19 using a bound recording method in accordance
20 with section 201(b)(2)(B); or

21 (C) the result of combining content de-
22 scribed in subparagraph (A) or (B) with any
23 other content.

24 (10) TABLE W.—The term “Table W” means
25 the following table:



TABLE W Analog Hole rights signaling System Detection & Content Protection Response

| | (Step 1) CGMS-A State De- tected | (Step 2) RCI State Detected (redistribu- tion con- trol bit to be detected with CGMS-A) | (Step 3) VEIL De- tected | Rights Asser- tion DescriptionT | Technical Content Protection Response |
|---------|---|--|---|---|--|
| 1 | Not Present | Not Present | No | No copy or redistribution controls being asserted | No Technical Protection Applied |
| 2 | Not Present | Not Present | Yes | IN-CONSISTENT STATE* — Rights are being asserted so the CGMS-A and RCI must have been stripped | VIEW ONLY- Protect as Copy Prohibited Content |
| 3 | (0,0) Copy Control Not Asserted | Not Present | No | No Copy or redistribution control is being asserted | No Technical Protection Applied |
| 4 | (0,0) Copy Control Not Asserted | Not Present | Yes | IN-CONSISTENT STATE* -Rights are being asserted so the CGMS-A was probably tampered and/or the RCI was probably stripped | VIEW ONLY- Protect as Copy Prohibited Content |
| 5 | Not Present | (0) Re-distribution Control Not Asserted | No | It appears that no copy or redistribution control is being asserted | No Technical Protection Applied |
| 6 | Not Present | (0) Re-distribution Control Not Asserted | Yes | IN-CONSISTENT STATE* -Rights are being asserted so the CGMS-A and/or RCI were probably stripped or tampered | VIEW ONLY- Protect as Copy Prohibited Content |
| 7 | (0,0) Copy Control Not Asserted | (0) Re-distribution Control Not Asserted | Yes | IN-CONSISTENT STATE* -Rights are being asserted so the CGMS-A and/or RCI were probably tampered | VIEW ONLY- Protect as Copy Prohibited Content |



TABLE W Analog Hole rights signaling System Detection & Content Protection Response—Continued

| | (Step 1) CGMS-A State De- tected | (Step 2) RCI State Detected (redistribu- tion con- trol bit to be detected with CGMS-A) | (Step 3) VEIL De- tected | Rights Asser- tion DescriptionT | Technical Content Protection Response |
|----------|---|--|---|--|--|
| 8 | (0,0) Copy Control Not Asserted | (1) Re- distribution Control Asserted | Detection Unnecessary | No numeric copy control is being asserted but redistribution control is being asserted | Protect as Copy Unlimited No Re- distribution Content |
| 9 | Not Present | (1) Re- distribution Control Asserted | Detection Unnecessary | It appears that no numeric copy control is being asserted but redistribution control is being asserted | Protect as Copy Unlimited No Re- distribution Content |
| 10 | (1,0) Copy One Generation | Detection Unnecessary | Detection Unnecessary | Numeric copy control is being asserted and re- distribution control is implied by CGMS-A state | Protect as Copy One Generation Content |
| 11 | (0,1) Copy No More | Detection Unnecessary | Detection Unnecessary | Numeric copy control is being asserted and re- distribution control is implied by CGMS-A state | VIEW ONLY- Protect as Copy Prohibited Content |
| 12 | (1,1) Copy Never | Detection Unnecessary | Detection Unnecessary | Numeric copy control is being asserted and re- distribution control is implied by CGMS-A state | VIEW ONLY- Protect as Copy Prohibited Content |

1 (b) OTHER DEFINITIONS.—The definitions in section
2 108 apply to this title.

