

Comments Submitted by Philips, Thomson and Zenith on the

*Report of the
Broadcast Protection Discussion Subgroup
to the Copy Protection Technical Working Group*

May 31, 2002

Comment Date May 29, 2002

General Comments:

A. This draft report systematically overstates the extent of agreement on issues and, of greater concern, systematically understates the extent to which there is disagreement. Among other approaches, it frequently characterizes the views of certain companies or groups of companies as the view of BPDG and characterizes disagreements as held by “a few companies,” or particular single companies. This comment should be included as an objection to the Report. References in this Report and in the Requirements Document (at nn. 1, 12, 15, 17, 20, 24, 25, 27 and 31) should be to “a number of participants.”

B. It is essential that this Report accurately characterize the procedural capabilities, goals and scope of BPDG. The following paragraph should be added as paragraph 1.8:

BPDG, like the Copy protection Technical Working Group (CPTWG) under which it was formed, is a body that is limited to considering the technical aspects of copy protection. Issues of policy are outside of its scope and were not considered. Further, like CPTWG, BPDG is not a consensus standards body. It has no process for resolving disputes or for making decisions, no process for formal notice of decisions to be taken, no procedural rules governing meetings and no process for voting. The group did not seek consensus. Rather it provided a forum to explore certain technical issues and to identify where there was agreement (and the extent of that agreement) and where there was disagreement. Further, as described below, it operated under extremely tight time constraints, which may have inhibited the emerging of certain views and the development of technical alternatives. In addition, not all relevant interests participated. The outcomes reflected in this document cannot be viewed as “consensus.”

C. The commenting companies fundamentally object to the process by which BPDG was conducted. It became apparent during the meetings of April 3 and April 17 that the only meaningful negotiations were occurring behind closed doors among the studios, the 5C companies and CIG. At the all-day April 3 meeting, although members of BPDG flew cross-country and across oceans to attend, the entire afternoon was spent waiting while those interests met. Although a two hour status meeting was held on April 17, substantive negotiations, lasting 14 hours, did not occur until the next day, among the studios, 5C and CIG. According to reports, these discussions continued for tens of hours during the next week, leading to the announcement of the proposal tabled by the studios, 5C and CIG, subject to certain reservations by CIG (the MPAA/5C Proposal). Since that announcement, no changes to the Procedural Requirements advanced by any party other than the studios, 5C or CIG have been included in the draft Requirements Document. This comment should be attached as an objection to the Report.

D. The process defects have continued and have infected the process for the preparation of this Report. It is not appropriate for the “Co-Chairs” to have plenary authority to decide whether or not comments will be incorporated into the Report. There should be a formal process for resolving comments and disagreements. Further, even were a Co-Chair driven process appropriate (which it is not), commenters should be given notice, significantly in advance of the release of the Report, which of their comments have been adopted and which have been rejected, so that they can provide further clarification as an attachment to the Report. This comment should be attached as an objection to the Report.

E. The BPDG Requirements Document is clearly an unfinished product. There are extensive brackets or other disagreement on such fundamental issues as the criteria applicable to identify an authorized technology for Table A,

the process for identifying authorized technologies for Table A, whether it is appropriate to have a list of approved technologies or simply criteria applicable to interfaces and recording protection, the proper treatment of remodulators, the rules for handling “Unscreened Content,” whether at least some of the robustness rules should be defined in terms of the capabilities of ordinary consumers, what devices should be governed by the Requirements Document, and whether the right to use unprotected DVI outputs should extend to CE as well as IT products. This Report should identify the Requirements Document as an unfinished product that requires substantial additional work. This comment should be included as a paragraph in the Report.

F. The issues reserved for the “parallel group” raise fundamental issues of public policy, including issues relating to competition and fair use rights, among others. We believe that these issues are too important for an *ad hoc* group established without authority, leadership, charter or process. If anything, the process flaws of the BPDG highlight these concerns. The public policy issues raised in this section should be address in a properly constituted public forum, under strong guidance from those charged with the development of sound public policy. We would, therefore, strike all references to the parallel group in this Report and in the Requirements Document, and include a request for a suitable, open, accountable, forum.

G. There is no reason that downstream products receiving content over an authorized interface should be subjected to requirements that are any greater than those requirements to which Covered Products are subject.

1. Background

1.1 This report is presented by the Co-Chairs of the Broadcast Protection Discussion Group (“BPDG”) to the Copy Protection Technical Working Group (“CPTWG”), to summarize the work and conclusions of the BPDG in evaluating ~~technical solutions~~ a proposed solution presented by Twentieth Century Fox (News Corp.) and the five member companies of the DTLA (identified below) for preventing unauthorized redistribution (including unauthorized redistribution over the Internet) of unencrypted digital terrestrial broadcast television (referred to hereinafter as “DTV”).

Comment: The report is the report of the Co-Chairs, it is not subject to formal approval or a vote of the BPDG or any formal process for resolution of disagreements. Many of the BPDG participants have repeatedly made clear that BPDG was not constituted to consider alternatives to the Fox/5C proposal, and have resisted consideration of alternatives. Time has not allowed development or consideration of other approaches.

1.2 ~~Work undertaken by the~~ CPTWG ~~beginning was formed~~ in 1996 ~~focused primarily upon to examine~~ means ~~for content by which copyright~~ owners ~~to protect~~ could prevent the copying of physical media distributed to the public in encrypted form, and means by which consumer ~~electronic~~ electronics and computing devices could perpetuate copy protections ~~over applied to~~ encrypted content delivered to the consumer by such physical media ~~and by cable and satellite transmission~~. Under current FCC regulations, most digital terrestrial television broadcasts are delivered in unencrypted form (“in the clear”). Thus, unlike prerecorded encrypted digital media such as DVD, or premium digital cable and satellite video transmissions delivered via conditional access, there may not be any licensing predicate (*i.e.*, no technology license is needed to decrypt content) to establish conditions for the secure handling of such content. Consequently, consumer products can be legally made and sold that allow this unprotected DTV content to be redistributed (*e.g.*, over the Internet) without authorization from the copyright holders.

Comment: The CPTWG’s work did not focus on cable and satellite. The first activities, DHSG and DTDG were focused on how to handle DVD content. In fact, a conscious decision was made not to address cable and satellite, because those interests were not present and did not participate at that time. Further, there was no discussion of issues such as “redistribution” or retransmission. The scope of discussion was copy protection.

1.3 In the course of negotiations between major motion picture studios and the Digital Transmission Licensing Administrator LLC (“DTLA”) (the members of which are identified in paragraph 1.6, below), relating to the licensing of DTLA’s “DTCP” technology for protecting encrypted conditional access digital video content within local digital network environments, the studios requested that the DTCP license also require licensed products to apply DTCP to protect DTV. These discussions were held in private, and were not known to the CPTWG. Although the DTLA stated that it could not impose such requirements through the DTCP license, the DTLA

companies stated that they would be willing to contribute their efforts to a multi-industry effort to develop solutions for protecting DTV against unauthorized redistribution.

1.4 In May 2001, an Advanced Television Standards Committee (“ATSC”) subcommittee began consideration of a proposal from Fox Broadcasting (News Corporation) to include in the ATSC technical standards for DTV a “Redistribution Control” descriptor, or “Broadcast Flag.” This Redistribution Control descriptor proposal was accepted, by ballot of the ATSC members, as part of the ATSC Standard as of April 2, 2002. Definition of the “RC descriptor” leaves open the question of what obligations should attach once the descriptor is detected and how those obligations may be imposed and enforced. The ATSC has repeatedly made clear that it is not involved with receiver design; it is solely a transmission standard.

Comment: It is useful to introduce the concept of the Broadcast Flag here, as that is the only identified purpose of the RC descriptor. The final sentence is needed to make clear that the adoption of the Broadcast Flag only opened the discussion of a content protection system, it did not provide the answer.

1.5 Also in May 2001, Fox developed and presented to the member companies of DTLA a ~~technical~~ proposal whereby this Redistribution Control descriptor, when detected in ATSC transport streams, could be used to signal protection of broadcast audiovisual content against unauthorized redistribution (including unauthorized Internet redistribution).

Comment: The proposal includes technical as well as legal and “compliance” aspects.

1.6 On November 28, 2001, representatives of the five member companies of DTLA – Intel Corporation, Hitachi Ltd., Matsushita Electric Industrial Co. Ltd., Sony Corporation and Toshiba Corporation (collectively also referred to as the “5C” companies) – described in a presentation to the CPTWG a refined version of the Fox ~~technical~~ proposal using the ATSC Redistribution Control descriptor ~~as a~~ “Broadcast Flag” to signal protection for DTV content against such unauthorized redistribution. A copy of the presentation, entitled “Protecting Against Unauthorized Redistribution of Digital Broadcast Content” is attached to this report at Tab A.¹ The presentation suggested that DTV content be protected beginning at the point of demodulation of the ATSC stream, so as to assure that DTV content in usable form would be securely routed to ATSC transport stream processors that would read the Broadcast Flag. If the flag were determined by the ATSC transport stream processor to be present, then the DTV content would be securely delivered to protected digital output and recording technologies. If the flag was determined by the ATSC transport stream processors not to be present, then no further protection need be applied to the DTV content. The presentation outlined possible requirements for compliant devices, and rules to ensure robust implementation of the suggested protection system.²

Comment: The proposal includes technical as well as legal and enforcement aspects. The language “as a Broadcast Flag” is redundant in light of the addition in 1.4, where the descriptor is introduced.

1.7 The five companies recommended that a group be formed, including representatives from all industries that would potentially be affected by the proposal, for the purpose of evaluating the suitability of this ~~technical~~ proposal for protecting DTV content and determining whether there was substantial industry support for the proposal as a solution to the redistribution problem. A number of participants expressed the view that prior to an evaluation of any particular technical approach, it was essential to consider important policy issues, including clear definition of the goal of “no redistribution,” consideration of the enforcement structure, and the effect of the approach on the entire connected infrastructure.

¹ The presentation is available from the CPTWG website at <http://www.cptwg.org/Assets/TEXT%20FILES/ProtectingWDC9911-01.PPT>.

² It was suggested that a more effectual technical and enforcement solution would be to encrypt DTV content at the source (*i.e.*, the transmitter). Given the current political environment and that this solution would make relatively new equipment obsolete, this approach was rejected by motion picture studios and broadcasters, as well as by representatives of consumer electronics manufacturers.

2. The Work of the BPDG

2.1 In a meeting the afternoon of November 28, 2001, approximately 70 representatives of the consumer electronics, information technology, motion picture, cable and broadcast industries agreed to form the Broadcast Protection Discussion Group. License Management International LLC (the License Administrator of DTLA's technology and certain other copy protection technologies) established an email reflector to promote discussions of any technical issues.³

2.2 ~~A Work Plan for the~~ Some participants of BPDG ~~was~~ drafted and circulated ~~to BPDG~~ a proposed Work Plan, which ~~stated~~ described the BPDG's Charter, in pertinent part to be as follows:

“to evaluate proposed solutions for (a) the secure signaling of protection for unencrypted digital terrestrial broadcast content against unauthorized redistribution outside of the personal digital network environment (e.g., the home or the automobile)⁴, and (b) the secure handling of such content by products when such signaling has been applied.”

A copy of ~~the~~ their proposed Work Plan is attached to this Report at Tab B.⁵

2.3 On January 15, 2002, the co-chairs of the CPTWG reviewed the statement of charter in the Work Plan and, acting on their own motion, without formal CPTWG approval, approved the BPDG as a working group under the aegis of the CPTWG.

2.4 Certain participants ~~had~~ have noted that, while the Broadcast Flag proposal by Fox and 5C addressed protection in the digital domain beginning at the point of demodulation, it did not address the ~~“analog hole,”~~ whereby unprotected video fact that DTV content may be transmitted in the clear through analog form can outputs from devices, and then be converted by consumers back to digital form ~~without~~ in the ~~protection originally applied to the digital content~~ clear. ~~Participants~~ Many participants have recognized that because this so-called “analog hole” issue applies to a range of content far broader than DTV, the BPDG would not be an appropriate forum in which to address it.

2.5 ~~Certain~~ Many participants voiced disagreement with the premise on which the BPDG was formed; ~~expressing the view~~. Some participants believed that no technological restrictions ~~on the~~ should apply to handling ~~of any digital terrestrial~~ broadcast signals ~~should be imposed~~. ~~Comments from those parties~~, because such signals are ~~attached~~ sent over the air unprotected (unencrypted) and available for free, and such content should not be subject to more rigorous protection once received in the home. Many participants believed that technological restrictions, if applicable at Tab C, should only apply to HD content. Other participants, who did not object the principle of reasonable protection of broadcast content, continued to object to the lack of process, lack of rules, absence of clear objectives and the fact that a group of companies continued to advance their own drafts as the basis for discussion, without authority, while ignoring substantial criticism.

2.6 The Work Plan proposed March 31, 2002, as a target for completing an evaluation of the Broadcast Flag proposal. ~~The target was substantially met with respect to the fundamental elements of the broadcast flag proposal. Notwithstanding, due~~ Due to the complexity of ~~certain~~ the issues ~~raised by BPDG participants under consideration~~, the

³ ~~More~~ As of April, 2002, more than 200 individuals had subscribed to the bpdg-tech reflector.

⁴ See section 5.1 with respect to disagreements regarding the appropriateness and meaning of the phrase “outside of the personal digital network environment (e.g., the home or the automobile).”

⁵ The BPDG Work Plan suggested that a “parallel group” be constituted to address means by which any Compliance and Robustness Requirements applicable to the Broadcast Flag solution could be implemented and enforced. This parallel group has been established and has held several meetings. A separate email reflector for this policy group also has been established, and can be joined by sending an email message to reflector@lmicp.com, and including in the body of the message the sender's name and a request to subscribe to the policy list. As of the date of this report, more than 135 individuals have subscribed to this reflector.

target was extended such that the work of the BPDG would be completed prior to the June 5, 2002, meeting of the CPTWG.

Comment: The second sentence is unexplained, inaccurate and unnecessary. Further, the complexity arises from the subject matter, not participant comments.

...

2.8 The Co-Chairs express their deep appreciation to all BPDG participants who have extended truly extraordinary efforts to support the rapid conclusion of this project. The Co-Chairs recognize that the work of the BPDG has been undertaken in a highly compressed timeframe, reflecting the concern of certain members of Congress that the transition to DTV has stalled and the assertion by certain content providers that broadcast protections would spur the more timely deployment of high value content over DTV. ~~Although consensus~~Due to the compressed schedule and the scope of BPDG's reference, consideration of numerous important policy issues has been deferred and there was inadequate time to develop, seek or give serious consideration to alternatives to the Fox/5C proposal. Although general agreement was rapidly reached in support of ~~the~~certain fundamental elements of the ~~proposa~~Broadcast Flag approach, other issues of fundamental importance remain unresolved. Further, addressing many of the detailed aspects of implementing the Fox/5C proposal ~~proved~~have proven to be more challenging and, therefore, time-consuming. Consequently, it has been difficult for those making technical and drafting proposals to unfailingly meet the targeted dates for distribution of such proposals, so as to give all participants ample advance opportunity to fully consider the proposals to be discussed. We recognize that this process at times has been imperfect; and that, with more time or additional resources, perhaps we could have enhanced the timing and operation of the project. Nevertheless, the Co-Chairs commend all parties for their good faith efforts to work within the bounds of this expedited process, ~~and believe that the process ultimately has given all participants a fair opportunity to express their views through the reflector, in telephone conferences and in meetings.~~

Comment: The final sentence is not accurate and ignores the dramatic procedural flaws in the BPDG process. Further, the issue is not how views were "expressed" but how once expressed, those views were handled, and how decisions were made.

3. The Work Product of the BPDG

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3.4 The first three drafts were prepared by the drafting group, reflecting some of the comments received from BPDG participants. The fourth draft was proposed for comment by a group representing companies of the MPAA, 5C and Computer Industry Group. (This fourth draft was part of a proposal that included criteria by which technologies might be approved for protection of digital output transmissions and digital recordings of DTV content. This and another proposal from Philips for such criteria, also reflecting comments from BPDG participants and supported by a substantial number of BPDG participants, are described below in section 6.)

Comment: It is not accurate to imply that all comments were reflected.

3.5 The "final" draft of the Compliance and Robustness Requirements document, attached at Tab D, is the primary work product of the BPDG. It is the view of the Co-Chairs that the draft reflects the substantial ~~consensus~~ among work accomplished by the BPDG participants. A ~~small~~substantial number of significant comments concerning the draft were not resolved by the BPDG participants. These comments are reflected below in section 5 of this Report.

Comment: The draft does not reflect substantial consensus. That statement is inconsistent with the oft-stated position that BPDG is not a consensus body. Further, in light of the number of bracketed issues, and the importance of those issues, it would be disingenuous in the extreme to characterize the issues that were not resolved as a "small number" in any sense.

3.6 In addition, a number of significant issues have been deferred to the so-called “parallel group” for further consideration. These issues are identified in section 6 of this Report.

~~3.6.3.7~~ The initial draft of the Compliance and Robustness Requirements included, for frame of reference, two alternative proposals for section X.2, each of which described which devices would be required to comply with the Compliance Robustness Requirements prior to being sold or distributed. The two different proposals for section X.2 were submitted respectively by certain Motion Picture Association of America member company representatives, attached at Tab E, and by representatives of member companies of DTLA and Computer Industry Group, attached at Tab F. The BPDG briefly reviewed these documents for purposes of understanding the proposed methods of assuring implementation of the proposed Compliance and Robustness Requirements, but it was understood that any proposals for section X.2 would receive further discussion and appropriate consideration by the parallel group.⁶

Comment: The text of footnote 6 should be included in the body of paragraph 3.7. This is a significant point, going to the legitimacy of this Report and the activities of BPDG. Further, the number of participants expressing this view cannot reasonably be described as “small.”

4. Summary of Conclusions

The discussions to date have yielded substantial agreement among the BPDG participants concerning the ~~technology to be used~~use of the ATSC RC descriptor to signal protection for DTV content, and a number of the requirements to be imposed upon certain devices that handle DTV content that is to be protected. ~~These~~In addition, there are a number of points about which substantial agreement was not reached. The fundamental points of agreement among a substantial majority of the BPDG ~~are set forth in the final draft Compliance and Robustness Requirements, and~~participants are summarized ~~below~~in this Section 4 of the Report:

Comment: The Requirements Document reflects much that is not the subject of substantial agreement. It overstates matters to say points of agreement are reflected in the draft Requirements Document.

...

4.3 Protection requirements should begin at the point of demodulation of the incoming 8-VSB, [16-VSB,]⁸ 64-QAM or 256-QAM DTV signal that thereby produces a data stream consistent with ATSC Standard A/53 Annex C⁹ (e.g., in demodulation software or a demodulation chip).

Comment: It should be noted that noted that a 'dumb' QAM demodulator for a PC is a fairly easy product to engineer, and is NOT covered. A 'dumb' QAM demodulator is a 6MHz tuner that feeds a digitizer and QAM decoder. This 'dumb' QAM demodulator will generate the symbols that compose the bitstream, but is not ATSC A/53 compliant. It is a trivial matter, however, to write software that converts the output of this QAM demodulator to an ATSC bitstream, thus completing a device that would violate the rules of the Requirements Document. It is our opinion that a QAM demodulator on a cable plant would not even need an equalizer to accomplish this in many cases.

4.4 A product covered by the Compliance and Robustness Requirements must handle demodulated content in a protected manner unless/until the product screens for the Broadcast Flag and determines that it is not present.

⁶ A ~~small~~-number of ~~companies~~participants expressed concern that drafting of Compliance and Robustness Requirements could not be meaningfully completed until the parties determined under what circumstances its provisions apply (i.e., until section X.2 was completed and agreed upon).

⁸ Participants at previous BPDG meetings have suggested that 16-VSB should be added so as to conform to ATSC specifications.

⁹ These requirements would need to be supplemented or amended if, in the future, new modulation standards replace those listed.

Comment: We have been informed that a number of BPDG participants do not accept the proposition in paragraph 4.4. Their disagreement should be noted.

...

4.6 Unscreened Content and Marked Content should be recorded by or output from covered products via only the following permitted methods:

- a. Analog outputs and recording methods;
- b. nVSB and mQAM modulators (subject to certain conditions);
- c. Unprotected DVI outputs (at limited resolution); and
- d. Digital outputs and recording methods that provide specified levels of protection against unauthorized redistribution.¹⁰

Agreement on this paragraph is subject to paragraph 5.6.

Comment: First, VSB and QAM modulation should be on table A. If these technologies provide sufficient “protection” for content in the air, they provide sufficient protection for content in the home. Second, we do not believe the studios have made any showing of why the proposed treatment of Unscreened Content should be changed at this late date. Early screening will provide no greater protection against a forged ATSC descriptor in content received through a demodulator than allowing that content to be treated as “Unscreened Content.” Further, concerns about the treatment of Unscreened Content appear to depend on specific characteristics of Table A technologies. Thus, they should be addressed as associated obligations in Table A. Any other treatment would favor certain proposed systems at the expense of others that handle Unscreened Content in a way that avoids concerns. For example, to the extent that the problem is that content protected by 5C technology loses any indicator of its source or flag state, that is a feature/ flaw of the 5C system, not a requirement for what it takes to protect broadcast content. If an alternate technology preserves the flag throughout its operation, then that alternate technology can perform its work on Unscreened Content. The proposed limitation is a further indication that this process has been directed by the studios towards enshrining DTCP as the standard technology for copy protection. The rules should not be written to favor DTCP over other technologies. Allowing Unscreened Content to be passed as Marked Content provides flexibility to manufacturers implementing the BPDG Requirements in products. That flexibility should be preserved absent a compelling reason to the contrary.

We are also concerned about the repeated comments that DTCP will not permit an nVSB or mQAM remodulated output for broadcast content. That would appear to place unreasonable limitations on the use of remodulation as an interface technology. That is particularly true in light of the fact that content flowing into DTCP sink devices will be “trusted” content, so there should be no concern about its right to be so transmitted. We note that OCPS is designed to permit remodulated outputs.

In general, compatibility and consumer ease of use would be promoted by providing that sink and playback devices receiving content protected using an authorized technology may handle that content in the same manner as a Covered Product (and thus, may output it to any output, or record it using any method, approved in X.3 or X.4 (as applicable). Such a rule should be adopted.

Unprotected DVI outputs should be allowed in both IT and CE products on the same terms.

¹⁰ *Note to BPDG Members:* MPAA companies proposed a change to the Compliance and Robustness Requirements to address the “laundering” problem discussed in section 5.9. Should consensus be reached on this proposal, MPAA companies suggest adding before the period at the end of this section the following language: “, provided that Authorized Digital Output Protection Technologies and Authorized Recording Methods (i.e. those of Table A) are permitted to be used for Marked Content but not for Unscreened Content”.

Finally, we have been informed that a number of BPDG participants do not accept the proposition in paragraph 4.6. Their disagreement should be noted.

4.7 The requirements to protect digital recordings should not interfere with the ability of consumers to make secure copies of DTV content marked with the Broadcast Flag, either on personal video recorders (*e.g.*, a hard-disk based device such as TiVo or ReplayTV) or on removable media (*e.g.*, on D-VHS tapes or DVD recordable discs). Importantly, however, with respect to some significant removable media, such as DVD recordable discs, the BPDG has not yet determined how successfully to ensure this ability of consumers. Similarly, the requirements to protect digital outputs should not interfere with the ability of consumers to send DTV content across secure [home and personal digital networks]¹¹, such as a home digital network connecting digital set top boxes, digital recorders, digital servers and digital display devices.¹²

Comment: Footnote 12 raises an important issue (raised by more than “one participant” that should be in the text of the document.

...

4.9 General agreement among a majority of BPDG participants has been reached as to some of the specific robustness requirements to be implemented by covered products. However, participants disagree on some significant issues, such as whether the covered products should be required to be equally robust against all potential attackers, whether casual consumers or hacking experts, and what level of robustness the covered product must achieve (e.g., whether it “frustrates” an attacker, or “effectively frustrates” an attacker). Many participants believe that the robustness rules will need to be revisited after the legal/enforcement provisions referenced in Section X.2 are defined.

We have been informed that a number of BPDG participants do not accept the proposition in paragraph 4.9. Their disagreement should be noted.

...

5. Summary of Points as to ~~which Consensus was~~ Which Substantial Agreement Was Not Reached

Comment: As noted above, the use of the term consensus is inappropriate, as it implies that elsewhere, consensus was reached.

In the course of the discussions of the Compliance and Robustness Requirements, ~~complete consensus was not reached on certain points, as to which some participants voiced specific disagreements~~ substantial disagreement remained with respect to a number of significant issues. The Co-Chairs believe that additional time in BPDG would not be likely to ~~produce consensus on~~ resolve these ~~points~~ disagreements. These points include:

¹¹ See section 5.1 with respect to the bracketed phrase.

¹² ~~One BPDG participant asked~~ It also was proposed that “unauthorized redistribution” should be agreed not to include any redistribution that would be deemed “fair use” of content that a consumer legitimately acquires, so that the requirements proposed by BPDG would not restrict the public’s fair use rights. Several BPDG participants observed that although the requirements would not impinge upon copying of time-shift recordings, current content protection technologies inevitably cannot accommodate all instances where redistribution of DTV content (*e.g.*, the retransmission of program clips for educational purposes) might be fair use, either as currently understood, or as it may develop in the future. Other participants noted that debate or comment on application of fair use principles was outside the scope of the BPDG. Some participants ~~noted~~ expressed the view that, ~~although~~ such fair use purposes might be met today by converting the signals to analog and then back to digital form. Other participants disagreed that the ability to convert signals in this manner would, in and of itself, satisfy the needs of fair use, in part because it was beyond the ability of many members of the public to do so. Finally, some copyright owners expressed their hope and expectation that future, more sophisticated systems that implement broadcast protection may better accommodate such fair uses.

5.1 The scope of protection to be accorded to DTV content has been described in the BPDG meetings and documents in various ways, such as, “protection against unauthorized redistribution (including the Internet),” or “unauthorized redistribution outside the home or personal digital network environment,” or outside the “home or other similar local environment,” and so forth¹³. Notwithstanding, all statements of the scope of the BPDG project have included redistribution over the Internet as an example of such protection. A few number of participants contend that that the scope of protection now should be limited to unauthorized redistribution only over the Internet, as that poses the greatest risk to copyright owners and is the argument that has been made repeatedly to Congress. Others suggest that the parallel group consider a more precise definition of the contours of such protection, so as to clarify that the protection would limit redistribution of DTV to “personal” environments, which they described as including the home, automobile, personal portable devices, and communications between primary and secondary residences.

5.2 The draft Robustness Requirements ~~proposes~~propose to set certain levels of robustness according to the type of tools that would be required to circumvent the protection, and other criteria having to do with the degree of success of the circumvention protection, for example, that a Covered Product must “effectively frustrate attempts to modify such Covered Product to defeat the Compliance Requirements. Some BPDG participants ~~have suggested~~maintain that ~~certain Robustness Requirements instead~~such criteria must necessarily be geared to the level of technical~~based on a defined skill level, such as that of an ordinary consumer, so that unreasonable requirements (e.g., preventing successful hacks even by the user~~most knowledgeable professional technicians) are not imposed upon device manufacturers. ~~The~~Other participants, specifically, the MPAA member companies ~~have maintained, claim~~ that ~~such an approach would be inconsistent with the structure~~draft requirements (even the “effectively frustrate” one) are purely based on the type of the Robustness Requirements tools required and that no reference to users is needed. ~~They note, stating~~ by way of example, that the requirements should not permit a professional to defeat protection with a screwdriver. Finally some participants have objected entirely to the robustness requirements, contending that they will interfere with fair use and with future innovation.

5.3 The identification and qualification of “authorized technologies” as discussed in paragraph 4.6(d), above, is generally recognized to be a critical element of the proposed approach to broadcast redistribution protection. There remains substantial disagreement as to the means by which a technology may be “authorized” and the standards that such technology must meet. These have been referred to the parallel group.

~~5.35.4~~ The draft Compliance Requirements would permit personal computer products to continue to deliver protected DTV content through unprotected DVI outputs, at MPEG-2 main profile @ main level video quality. This provision is designed to accommodate legacy computer monitors that receive content only through DVI. A few number of participants have suggested that this capability also should apply to consumer electronics products, inasmuch as some manufacturers might wish to market devices, such as cable or satellite set-top boxes, that would be capable of delivering DTV to such personal computer monitors, and that it generally is not sound policy to discriminate among the converging CE and IT industries. The MPAA member companies have stated that the provision is narrowly tailored to address a very small number of currently existing legacy displays, and have maintained that there is no material benefit to expanding the provision in such a manner, and that there may be substantial harm in doing so.

~~5.45.5~~ The draft Compliance Requirements would permit the use of a self-certified “Robust Method” for outputs only where the DTV content was unaltered Unscreened Content (e.g., Unscreened Content that had not yet been transport stream processed). A few number of participants have requested such an output be permitted for Marked Content as well, noting concern that without it, the development of innovative content protection systems for home networks, and rapid deployment of same, would be significantly affected. The MPAA member companies have maintained that Marked Content, having been subject to transport stream processing, is particularly susceptible to unauthorized redistribution and should therefore be subject to the more rigorously and clearly identified protections

¹³ The phrase “home or other similar local environment” is used specifically in relation to the output of DTV content using a self-certified “Robust Method”, and a few number of participants have requested that it be changed to “home or personal digital network environment” consistent with wording used elsewhere, whereas the MPAA member companies have maintained that “personal digital network” is unduly broad, especially in this context.

provided by “authorized” protection technologies, citing benefits to both manufacturers and consumers arising from the certainty and resulting increased access to attractive digital broadcast content that would be afforded by this approach.

~~5.5~~5.6 The draft Robustness Requirements include the requirement, included in similar content protection technology agreements, that Covered Products “shall be manufactured in a manner clearly designed to effectively frustrate” attempts to modify such Covered Products to defeat the Compliance Requirements. ~~One participant has~~A number of participants have proposed that the word “effectively” be deleted, stating that it adds unnecessary ambiguity to the requirement and could be construed in an unintended fashion (e.g., as requiring foolproof design). The MPAA member companies maintain that deleting the word “effectively” would afford an insufficient level of protection, and would be inconsistent with the language and intent of the Robustness Requirements.

~~5.65~~7 Philips submitted a presentation describing a potential method whereby unencrypted recordings of broadcast content could be protected by an alternative “flag preserving” mechanism. Protection in this scheme would derive like the obligation to detect the Broadcast Flag in the first place, from “compliance” rather than “self-protection.” Technical and related policy questions and comments for and against the proposal were discussed ~~at length~~ in BPDG meetings and conference calls. Several favored the proposal because it would permit content recorded in unencrypted form on the DVD+RW format (and other DVD recordable formats) to be played on certain legacy DVD players. The MPAA member companies have stated objections to the proposal based upon the perceived inadequate technical security provided under the proposal, particularly with respect to legacy devices. There were other objections to the broader scope of legislation that would be necessary for purposes of enforcement. ~~Others observed~~It was argued that this proposal benefited a particular DVD recording format, yet would impose technical and legal mandates upon DVD players and drives of all formats. ~~In response to inquiries at two meetings~~Others noted that, the BPDG participants voiced insufficient interest in further pursuing the fact, this proposal within benefited all backwards compatible DVD recording formats, and therefore also benefited consumers. In light of the opposition of the motion picture companies, the concerns expressed about the additional scope of legislative mandate, and the compressed time available to BPDG to review the Fox/5C proposal, the BPDG- did not pursue this proposal.

~~5.75~~8 A proposal was later made by ~~Philips and a small~~ number of consumer electronics companies that, for a limited number of years (intended to capture the reasonable life of legacy DVD players), in-the-clear recordings of Unscreened Content and Marked Content could be made using standard definition DVD recorders. Motion picture companies opposed such a “grandfather” provision, inter alia, because tens of millions of legacy DVD-ROM drives would remain capable of unauthorized redistribution of such content when played back, including over the Internet.

~~5.8~~ ~~It was suggested~~5.9 A number of participants argued that the method for transmitting DTV content that is received from a trusted source and remodulated using an nVSB modulator ~~could~~should be included on Table A. ~~A small~~ number of companies supported this suggestion. Motion picture companies objected to this proposal on grounds that nVSB remodulation is not a “protection” technology at all, and it was not appropriate to include on Table A technologies that were not protection technologies. Additionally, it was noted by others that the impact of this proposal would be to permit other non-protection technologies to be listed on Table A, under criteria proposed by companies of the Motion Picture Association of America, DTLA and Computer Industry Group (see section 6.6). Those who supported inclusion of remodulation on Table A argued that as long as the content originated and was freely available over the air in this state, it made no sense to require a higher degree of “protection” for content circulating around the home, and that any technology that provided an equivalent level of preventing redistribution should be accepted for inclusion on Table A.

Comment: In light of the agreement set forth in paragraph 4.1 that nVSB is “technically sufficient” for signaling protection, there is no justification for requiring a greater degree of “protection” from any Table A technology.

~~5.9~~ ~~During early BPDG meetings certain~~5.10 Certain participants expressed the view that an approach based on a “broadcast flag” for protecting DTV content must be designed so as to avoid negatively affecting other content protection systems. A specific concern noted was the possibility that such a flag-based system, in conjunction with consumer n-VSB and m-QAM modulators, might be misused to “launder” content ~~from~~formerly protected by other protection systems. For example, motion picture content might be ripped from a DVD-Video disc, converted into a transport stream, and passed through a consumer modulator such that a product compliant with the flag-based

requirements would demodulate it and handle it as DTV content. Pursuant to such concerns, the MPAA member companies proposed during an April BPDG meeting that consumer n-VSB and m-QAM modulators be required to block content that arrived from non-trusted sources containing the Broadcast Flag from being modulated. In mid-May such companies further proposed that the draft Compliance Requirements be modified so as to prevent Unscreened Content from being passed to outputs protected by “authorized” protection technologies, on the basis that Unscreened Content is not known to be DTV content. [This latter concern was presented too late in the process, and represented too fundamental a change in the direction of the draft Requirements Document to allow the participants to consider and understand its rationale and impact.](#)

6. [Matters Suggested for Referral to the Parallel Group](#)

In the course of the BPDG discussions, several issues arose that related to policy issues rather than technical issues. The BPDG therefore recommends that the parallel group should consider the following issues:

[Comment: The issues discussed below raise fundamental issues of public policy, including issues relating to competition and fair use rights, among others. We believe that these issues are too important for an *ad hoc* group established without authority, leadership, charter or process. If anything, the process flaws of the BPDG highlight these concerns. The public policy issues raised in this section should be address in a properly constituted public forum, under strong guidance from those charged with the development of sound public policy. We would, therefore, strike references to the parallel group, and include a request for a suitable, open, accountable, forum.](#)

...

6.6 The BPDG requests that the parallel group consider proposed criteria that could be used to determine whether a particular technology should be “authorized” as a digital output protection technology or recording method. Three proposals were presented to the BPDG. Two proposals coalesced into a single proposal offered by companies of the Motion Picture Association of America, DTLA and Computer Industry Group, which was part of an overall proposal that included amendments to the Compliance and Robustness Requirements (the “Tri-Group” proposal). That proposal is attached to this Report at Tab G. The other proposal for criteria, offered by Philips [and supported by a substantial number of BPDG participants](#), is attached to this Report at Tab H. The two approaches can be summarized as follows:

6.6.1 The Tri-Group proposal includes three criteria that are intended to reflect demonstrated **marketplace** use or approval of the technology by [the](#) content owners [who participated in BPDG](#) (and, in the case of Criterion Two, by implementer licensees), and one criterion (Criterion Three) by which a proponent may demonstrate that a proposed technology provides protections at least as effective as those offered by any other technology on the list. [The forum, procedures and basis for determining whether a technology is “at least as effective” have not yet been proposed, and the studios have rejected technologies offered for Table A based on the lack of a process under Criterion Three. Further, the studios have argued that effectiveness requires consideration of factors in addition to technical merit, including the terms under which the technology is licensed, and the provisions governing its enforcement. A number of participants expressed concerns that unless defined standards are articulated, this process will become unmanageable.](#) Several organizations and participants have submitted statements noting that certain of their technologies would qualify under the criteria noted above.

6.6.1.1 DTLA submitted a statement that the DTCP transmission protection technology satisfies at least Criterion Two of the Tri-Group proposal; and that protection technologies that were approved to protect DTCP-protected content, namely, HDCP for transmission protection and CPRM and D-VHS for recording protection, would therefore qualify under the criteria as authorized technologies. This submission is attached at Tab I. DTLA proposed “Associated Obligations” that define the requirements for implementation of these technologies in conjunction with the BPDG Compliance and Robustness Requirements, which obligations also are included in the attachment to Tab I. At the BPDG meeting on April 29, participants speaking on behalf of Sony Pictures and Warner Bros. confirmed that those companies had entered into licenses to use DTCP and that they believe DTCP and the other three technologies mentioned above satisfy the criteria set forth in the Tri-Group proposal. Representatives from four other MPAA companies also stated at the April 29 meeting that they believe the four technologies satisfy the criteria and should be included on Table A. [\(but did not specify those companies that “used or](#)

approved” the technologies). DTLA’s assertion that DTCP qualifies under Criterion Two was questioned on the ground, among others, that the DTCP license does not yet address broadcast content, that DTLA appears to be counting licensees that do not hold a license relevant to the protection of broadcast content, and that DTLA’s license agreement and associated compliance rules have changed over time, and the terms under which the counted licensees are licensed may not be the terms offered to new licensees. DTLA has not identified the implementers it is counting or the license and rules under which they are licensed.

...

~~6.6.2 The 6.6.1.4. Philips proposal is set forth as submitted a combination of technical criteria, and criteria defining specific attributes statement that would be required of licenses for any proposed its OCPS transmission protection technology. 6.6.2.1 Philips submitted a statement that its OCPS transmission protection technology satisfied both its proposed criteria and one Criterion Three of the Tri-Group proposed criteria proposal. Philips attached to its submission a technical description of the OCPS technology, a term sheet outlining proposed license terms, and proposed compliance and robustness rules. This The submission is attached at Tab N. Philips did also proposed additional obligations, attached at Tab []. The motion picture studios have taken the position that the submission cannot rely on Criterion Three, as no process has yet been developed for Criterion Three. The studios have also taken the position that because the technology has not propose “Associated Obligations.” yet been implemented, it is immature.~~

6.6.2 Philips proposal set forth a combination of technical criteria, and criteria defining specific attributes that would be required of licenses for any proposed technology. In particular, Philips argued that the public and technology developers would be best served by objective technical criteria for Table A technologies, rather than requiring a comparison to any particular, existing approved technology or consent from private parties. Philips further argued that any technology that receives the government’s imprimatur under Table A should be licensed on terms that do not distort competition, that ensure that consumer rights concerning the handling of content are protected by policy makers, not by private parties, and that reach only as far as needed to protect broadcast content. These positions received support from a significant number of BPDG participants.

6.6.2.1 Philips submitted a statement that its OCPS transmission protection technology satisfied both its proposed criteria and one of the Tri-Group proposed criteria. It noted that a number of the other proposed technologies did not yet have license terms or compliance rules applicable to broadcast content, that the licenses under which those technologies were offered distorted competition and were subject to over-reaching conditions unrelated to broadcast content, and that the compliance rules governing consumer rights and manufacturer obligations were placed in the hands of private parties.

Comment: The repeated statements that DTCP does not permit nVSB or mQAM remodulated outputs on the May 23 conference call was striking. The consequence is that consumers’ expectations will not be met when a home network containing a cascade of robust authenticated links and remodulator/broadcast flag protected links fails for some connections with some types of content and does not fail for others. There is no reason for an approved technology to prohibit the use of remodulated outputs, and we call upon 5C to confirm that it will approve nVSB and mQAM remodulation for the output of Marked and Unscreened Content.

...

6.7.1 The Tri-Group believes that adding to Table A technologies that satisfy the proposed criteria should be as seamless and transparent as possible. Accordingly, the Tri-Group requested that parallel group undertake the task of creating a straightforward process under Criteria One and Two, whereby a proponent would give notice that one or more of the criteria are satisfied (which notice would, where applicable, specify which companies have used or approved a technology), and an adequate opportunity would be given to each company named in such notice (as well as other BPDG participants) to dispute the claim that ~~the named company~~ used or approved the technology. If no such dispute were forthcoming, the proposed technology would be added to Table A. The process would need to provide a speedy process to resolve any such disputes.

Comment: Did the Tri-Group not express a similar view with respect to Criterion Three?

...

6.8 Computer Industry Group companies have requested that the parallel group consider the establishment of additional or variations of the objective criteria proposed by the Tri-Group in Criterion Three, and other implementers have requested that additional or variations of the objective criteria be added as separate criteria. Tri-Group proposed Criterion Three already contains tests for a technology which is proposed to be added to Table A without direct content owner “use or approval.” Computer Industry Group Companies believe that the parallel group could examine such Criterion in light of the limits of the BPDG goals as stated in work plan for the BPDG: “to prevent unauthorized redistribution of unencrypted digital over-the-air broadcast content.” Those companies believe that some of the criteria could be altered or additional criteria substituted that would permit a technology to be added to the list consistent with those goals and consonant with the Compliance and Robustness Requirements. Those companies were concerned that some parts of Criterion Three may not be interpreted to be objective, and that comparing the technical effectiveness of the technologies should be an objective measurement. Their concern was, however, that comparing license terms relating to security (*i.e.*, output and recording controls), enforcement and Change Management might not be objective. Those companies believe that (a) it should not be difficult, in the context of protecting over-the-air digital television, to create alternatives or variations of those criteria that both are objective and are consistent with the robustness and compliance provisions of the Compliance and Robustness Requirements and (b) it is critical that the requirements be objective and readily understood by a manufacturer proposing a technology to be added to the list.

[Comment: In light of this disagreement on an apparently fundamental issue, is it appropriate to refer to the proposal as a “Tri-Group” proposal as opposed to an studio/5C proposal?](#)

6.9 ~~Computer Industry Group companies~~A number of participants requested that the parallel group determine that the Compliance and Robustness Requirements not go into effect until a minimum number of technologies have been included in Table A under the Tri-Group proposed criteria. (The tri-group proposal does not require this.) Those ~~companies~~participants view this as an important precondition to compliance obligations for two reasons: (a) since compliance will be a new government mandate, there should be a reasonable number of technologies to select from in order to ensure that no manufacturer is forced to adopt one of a small number of alternatives; (b) Criterion Three of the Tri-Group proposal only functions adequately if there are a sufficient number of technologies to compare a technology proposed to be included on the list.

[Comment: CIG was not the only group taking this position. We agreed at the time, and believe that there must be a number of technologies on the list. Further, DTCP, CPRM, DVHS and HDCP should all count as a single family of technologies.](#)

[END]

[Additional Comments on Table A.](#)

[DTCP, HDCP, CPRM, D-VHS: Philips is not alone in its belief that \(i\) these technologies do not qualify for inclusion on Table A at this time; \(ii\) that DTCP fails to meet MPAA/5C criterion Two, and that it fails to meet appropriate objective criteria for inclusion; and \(iii\) that the other technologies fail to qualify under MPAA/5C Criterion Four \(and that Criterion Four is not an appropriate criterion\), and that they fail to meet appropriate objective criteria for inclusion. The reference to Philips should be changed to “a number of participants.” DTLA has made no showing that there are 10 licensees who are licensed under the terms that DTLA will be offering for broadcast protection. Indeed, those terms have not yet been specified. Further, just as the motion picture companies have objected that there is not yet any process for Criterion Three, there is no final standard under Criterion Two, so no technology may qualify in that way.](#)

[nVSB modulation has been proposed for inclusion on Table A by many participants other than Philips and is supported by the submitters of these comments. Further, nVSB modulation should be available for sink devices that use other output technologies to receive Marked and Unscreened Content.](#)