Before the
House Committee on the Judiciary
Subcommittee on Courts, the Internet, and
Intellectual Property

"Content Protection in the Digital Age: The Broadcast flag,
High-Definition Radio, and the Analog Hole"
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Statement of Michael Petricone
for
The Consumer Electronics Association and
The Home Recording Rights Coalition

On behalf of the Home Recording Rights Coalition and the Consumer Electronics Association, I greatly appreciate the subcommittee's invitation to appear today. The issues you have posed for discussion are vitally important. At CEA, we have more than 2,000 members who contribute more than $120 billion to our economy and serve almost every household in the country. We thus believe it is vital to preserve the innovation, integrity and usefulness of the products that our members deliver to consumers. To varying degrees, each of the proposals that we have been asked to discuss today carries the potential to put the future usefulness of these products at risk, and to make our customers very, very, unhappy.

The Home Recording Rights Coalition was founded almost 25 years ago, in response to a court decision that said copyright proprietors could use the legal process to enjoin the distribution of a new and useful product – the VCR. This court decision was later reversed by the U.S. Supreme Court. Even the motion picture industry has admitted that it is glad that the VCR was allowed to come to market. But we constantly face concerns over consumers' ability to obtain newer and more capable products. After saying they will never do so again, the entertainment industry keeps coming back to the

Congress with proposals to subject new legitimate consumer products to prior restraints on their usefulness in the hands of consumers.

I want to assure the subcommittee that we evaluate each initiative on a case by case basis, and indeed we have worked with the content industry to propose legislation jointly. From 1989 through 1992, for example, we worked with the Recording Industry Association of America and other rights holders to draft and propose legislation that was enacted as the Audio Home Recording Act of 1992 (the "AHRA"). In developing this legislation we worked very closely with this subcommittee and its staff.

Similarly, we worked with the motion picture industry and with Members of Congress and their staff in developing Section 1201(k) of the Digital Millennium Copyright Act of 1998 (the "DMCA"). This provision requires that certain analog home recorders must respond to a copy protection technology, but – and this is the key point for us – in return, it has "Encoding Rules" that protect consumers' reasonable and customary time-shift recording practices from interference by content providers.

The HRRC and several CEA members also helped launch the Copy Protection Technical Working Group (CPTWG), an open forum in which participants in the content, information technology, and consumer electronics industries have met regularly for almost 10 years. The CPTWG has had work groups on both the "broadcast flag" and the "analog hole," and CEA members served as co-chairs of each group.

This Hearing Is About Three Very Different Subjects

The first thing our experience teaches us is that each of the three issues noticed for this hearing is a very different subject, and one of these actually imports an additional subject not even mentioned in the hearing notice or invitation. If I can emphasize one

fundamental point, it is that these subjects should not be conflated or confused. Each is a separate and distinct issue, whether perceived from the content side as a "problem," from the "technology" side as a potential "burden," or from the consumer side as an obstacle to the legitimate and quiet enjoyment of products and services at home.

The "Broadcast Flag Authorization Act"

The proposals for a "broadcast flag" emerged from two forums in which CEA, the HRRC, and various members have been very active – the Advanced Television Systems Committee (ATSC), and the Copy Protection Technical Work Group (CPTWG). In ATSC committees, members of the content community for years advocated a "descriptor" for the purportedly limited purpose of marking content, to enable control over mass Internet transmission. Members of the consumer electronics industry were greatly concerned that such a "flag" might be abused or used for other purposes, resulting in unwarranted control over consumer devices *inside* the home – something that had never been imposed on free, over-the-air commercial broadcasting. In response to these concerns, the content and broadcasting representatives agreed to clarify that the flag was not meant to govern transmission, but ***retransmission***, outside the home.

Our members led in forming a Broadcast Flag work group at the CPTWG, and in drafting a final report. While the concept of a passive "flag" proved simple enough, the digital means of securing content in response to such a flag, and the potential effect on consumers and their devices, proved highly controversial and contentious. The pros and cons were finally sorted out in the FCC Report & Order, which specified that the "flag" was meant solely to address ***"mass, indiscriminate redistribution"*** of content over the

Internet. This is the Order that the Court of Appeals nullified on jurisdictional grounds, and which the language circulated by the subcommittee would reinstate.

While our members have a variety of views on the FCC action, CEA and HRRC have a couple of very clear concerns:

- First, we have been disappointed to see the "ATSC Descriptor" show up in a number of standards proceedings, proposed by the content industry for uses that go well beyond those originally described to the ATSC.

- Second, legislative language circulated and attributed to the Motion Picture Association of America and its members would go well beyond the FCC's "mass, indiscriminate redistribution" standard, and could be interpreted as constraining distribution on networks *inside* the home.

- Third, the flag regulations were invalidated before they ever took effect. The legislation circulated by the subcommittee does not automatically put those regulations into force; it would be up to the FCC to decide whether to do so. Accordingly, it should be clearly understood that, if this legislation is enacted into law, manufacturers must be given a commercially reasonable period of time to manufacture and include the necessary circuitry in their devices.

This draft language comes closer to a narrow reinstatement of what the FCC originally did in its broadcast flag order. It is an improvement over previous MPAA drafts--which made their way to us indirectly—that perhaps unintentionally would have given the FCC unacceptably broad power to regulate all transmissions over digital networks, inside or outside the home. However, we believe that if Congress is going to provide more protection to the media industry, then it also should simultaneously safeguard the rights of consumers to enjoy the copyrighted works that they lawfully acquire. That is why, should Congress move forward with the broadcast flag legislation, or with any of the three legislative proposals being discussed at this hearing, HR 1201 should be part of the package.

The "Analog Content Protection Act"

Whatever superficial similarity may exist between the Broadcast Flag and the "Analog Hole," there is one overriding fundamental difference: The "analog hole" restricts home copying, not just Internet retransmission. To be sure, the nature of the problem from the content provider perspective is different, but the potential consequences of the "solution," from the technology and consumer perspective, also are much more invasive and serious. An "analog hole" solution would impose a technology mandate, directly by legislation, on virtually *every* product and piece of software capable of digitizing analog video signals, and on every digital device capable of storing them.

The analog hole issue affects more than just free, over-the-air broadcasts. Every set-top box from a cable or satellite service has "component analog" outputs that render either HDTV or (depending on the product) standard definition video from digitally transmitted sources.[1] For about the first 5 years that HDTV was available, this "component analog" interface was the *only* way of moving an HDTV program from a set-top box to a device that could display HDTV, and it was the only HD-capable external interface on HDTV receivers. This interface probably is still the way a majority of U.S. cable and satellite subscribers receive HDTV (as well as digitally transmitted standard definition) signals.[2]

[1] Hence, the proposal is somewhat misnamed – it is addressed primarily to protecting digital content as rendered by analog interfaces, not "analog content."

[2] Whereas HDTV is transmitted only digitally, many HDTV receivers use technically "analog" displays such as cathode ray tubes ("CRTs") to show the picture. Even when entirely "digital" displays became popular, the prevailing interface from set-top boxes and into HDTVs remained "component analog" until the last few years. Some experts still prefer the "CRT" presentation; which display mode is best is a matter of opinion.

At present, we know of no products in the consumer marketplace that are configured to digitize or record from this interface, which involves three separate wires and a great deal of bandwidth. Notwithstanding, content owners have been concerned that in the future consumers may be able to digitize and record all content coming out of a set-top box, including Video On Demand and Pay Per View content that otherwise might (consistent with FCC "Encoding Rules") be classified as "no copy" material.

The HRRC has been aware of this issue for almost a decade, and has offered to work with the content community to explore legislation to address it, subject to two main provisos:

- First, any technology employed must be well known and fully vetted within any industry whose products would be affected; and its implementation must not damage ordinary consumer use of present and future products, or the advance and uses of technology; and

- Second, the technology must be subject to Encoding Rules governing its use, so as to protect reasonable and customary consumer home recording and other practices.

We only received this draft legislation on Monday night, so obviously have not had any chance to gather comments on it. But it is evident that there are many potential problems and uncertainties with this very lengthy draft, and each one of them will and should undergo extensive analysis and consideration before the Congress even thinks about acting. Among the most obvious:

- The scope of the legislation is so broad that it would be appear to cover just about any component or piece of software code that can function as an "analog to digital converter." Hardware and software performing this function are found in a great variety of products that have nothing to do with television – airplanes, automobiles, medical devices, PCs, measurement equipment, and many, many, more. Yet, essentially, any such component or software would have to be configured to look for certain codes, and to be

licensed and technically equipped to encrypt the output. Devices receiving this output would then have to be licensed and equipped to *decrypt* it.

- Two technologies, "CGMS-A" and "VEIL," would be specified to work in tandem. VEIL is present as a backstop for the stripping out of CGMS-A encoding, which is said to be relatively easy to do. However, the result of the VEIL technology would be to achieve a default *no copy* result even where the content provider did not intend to, or should not be allowed to, prevent copying.[3] While the CGMS –A technology is relatively well understood, VEIL is largely unknown as far as its cost, functionality, and potential interference with ordinary and legal consumer product uses.

- Although CGMS-A has a long history of actual use in consumer electronics products, the VEIL technology is largely an unknown entity in this respect - particularly as to key concerns such as implementation cost, burdens on devices that would have to detect or preserve it, any intellectual property rights covering the technology, and if applicable, any license terms, fees and conditions for its use.

- There are lengthy "Compliance" and "Robustness" rules to constrain the operation of downstream products. The cumulative effect on products' operation and cost would need to be carefully examined.

- As in the case of the Broadcast Flag, there would need to be a process to qualify encryption technologies for downstream protection. Unlike the case of the Flag, however, the subject here is not just televisions that process regulated signals; it would be the output of *all* devices capable of processing an analog signal to produce a digital result. This raises issues as to how many such technologies should be qualified; how such a great variety of converter components might operate with a great variety of decryption devices, and whether the operation of some non-TV products – either intentionally or by mischief – could be brought to a sudden and disastrous halt.

- Many key decisions would be left arbitrarily up to the Patent & Trademark Office. It is not clear what policy basis or preparation would equip the PTO to make these decisions, or who would exercise oversight over its judgments.

I expect that given time, my members will identify additional issues with this hugely complex draft bill which, at the moment, is largely incomprehensible even to

[3] While both of these technologies, and others, have been examined in Work Group sessions of the CPTWG, the problems inherent in applying them – including the unacceptable default result from VEIL and the difficulty in defining a scope of covered devices – are also very familiar, and there is no consensus in the technical community that this combination is appropriate as a mandated solution.

those who have long been involved in developing technology solutions for the video industries.

However, this is not to say that CEA or HRRC will necessarily oppose some ultimate version of the "analog hole" legislation.

As I said, we have for years offered to discuss some legislative approach to address the analog hole. The draft you have circulated, however, is *not* one that has been discussed or previously shared with CEA or the HRRC, and so does not represent or resemble a multi-industry consensus. We adamantly oppose its enactment in its current form.

The "HD Radio Content Protection Act"

Although the hearing notice suggested that this hearing would focus on a new terrestrial Digital Audio Broadcast service called "HD Radio", we now see that the proposed "HD Radio Content Protection Act," in addition to crippling or destroying the emerging market for digital audio broadcasting, is also aimed at crippling or destroying established and popular satellite radio services. With this amount of notice it is possible to make only some very basic, but I hope very clear, comments.

First, there is no established basis whatsoever for congressional or FCC meddling with the ongoing satellite radio services, or with the terrestrial digital audio broadcast services just now being launched. Whatever consumers will be able to do with these services in the future – including the recording, indexing, storing, and compilation of playlists -- has been equally feasible for decades to do the same things with existing FM radio service, with comparable quality. Yet, every time the Congress has reformed the

Copyright Act, it has declined to grant phonorecord producers any right or control of whether their albums are broadcast in the first place.

There is no demonstrated problem, and there is no reason to take control of these services away from broadcasters and satellite radio providers, or to interfere with the customary enjoyment of these services by consumers, and put those controls solely in the hands of the record companies. The Congress has consistently declined to do so. As a result, the United States remains a world leader in developing new broadcast and consumer technologies and services.

Second, Congress did address the advent of digital recording by passing a law in 1992 that went in a different and opposite direction. As you know, the Audio Home Recording Act provides for a royalty payment to the music industry on Digital Audio Recording devices and media. While the AHRA addressed the ability of devices to make digital copies from digital copies, it never imposed any constraints on the first copies that consumers were ***explicitly allowed*** to make in return for that royalty payment. Yet, inexplicably, this draft is completely silent about the existence of the AHRA, and about any need to confirm, modify or repeal it if this bill were to become law. (We expect that some in the music industry receiving AHRA royalties might oppose doing away with their royalty pool.)

Apparently the Recording Industry Association of America, which took the lead in working with us on the Audio Home Recording Act, has forgotten that the AHRA exists. In 1991, Jay Berman, then head of the RIAA and now head of the industry's umbrella organization, IFPI, told the Senate that the AHRA --

> "… will eliminate the legal uncertainty about home audio taping that has clouded the marketplace. The bill will bar copyright infringement

> lawsuits for both analog and digital audio home recording by consumers, and for the sale of audio recording equipment by manufacturers and importers. It thus will allow consumer electronics manufacturers to introduce new audio technology into the market without fear of infringement lawsuits …."[4]

In addition to establishing a royalty fund, the AHRA gave technical oversight authority to the Department of Commerce, not the Federal Communications Commission or the Patent and Trademark Office. Proposing a complete overhaul of the laws regarding recorders from satellite and terrestrial radio services without addressing or amending the AHRA is like moving city hall without telling the mayor.

Specifically, the proposals for locking down terrestrial and satellite radio broadcasts are harsh, intrusive, and completely unacceptable, as is the notion of impairing these services or making them more expensive for consumers. The proposal to lock down free, terrestrial radio broadcasts seeks the coloration of the video Broadcast Flag, but it is nothing of the sort. Unlike the video "flag", the proposal, as previously presented by the RIAA to the FCC, is specifically aimed at frustrating the long-accepted, reasonable, private and noncommercial practices of consumers ***inside the home***. Moreover, the only apparent way to accomplish this would be require encryption either at the source of the broadcast or when the broadcasts are first received in the home. This would make digital radio programs incompatible with most of the existing stereo equipment that is in almost every home today. (Source encryption would also make useless the many models of digital radio receivers that are today being sold to "early adopters," and indeed would stop this service from being established for at least several

[4] *The Audio Home Recording Act of 1991: Hearing before the Senate Committee on the Judiciary*, S. Hrg. 102-98 at 115, October 29, 1991, written statement of Jason S. Berman.at 119. Mr. Berman, in fact, emphasized that the comprehensive compromise nature of the AHRA was a reason for the Congress to pass it: "Moreover, enactment of this legislation will ratify the whole process of negotiation and compromise that Congress encouraged us to undertake." *Id.* at 120.

years.[5]) The RIAA never explained to the FCC how it could accomplish its objectives in a non-intrusive manner, and it has not done so now.

Indeed, the FCC's Digital Audio Broadcast proceeding was begun by the Commission in ***1999*** and its initial emphasis was almost entirely technical. Nevertheless, neither the RIAA nor any other music industry interest ever made a single filing in that proceeding until ***last year*** – and even then it did not disclose what specific technology would be imposed on consumers, and it still has not done so. During that time the FCC has found no evidence of harm to copyright holders from digital radio broadcasting. No matter what technology is ultimately chosen, it would be an unwarranted, unnecessary, and probably unworkable intrusion into consumer use and into the very viability of the new digital radio format on which so many have worked long and hard for several years.

I must emphasize that the rollout of terrestrial digital radio is well underway. Over 500 stations are broadcasting digitally, and over 25,000 radios have been produced—not to mention chips and components that have been ordered and new products on assembly lines. Since no encryption system currently exists, an encryption requirement would instantly render these radios obsolete.

Determining an encryption standard will take at least a year, during which time no radios could be manufactured and broadcasters will be forced to the sidelines with their new digital transmitters. Essentially, an encryption requirement would stop the rollout of this exciting new technology dead in its tracks.

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[5] What about those consumers who already have purchased digital radios designed to receive unencrypted broadcasts? Does this post-launch encryption proposal portend that Congress next will have to consider consumer subsidies for digital radio converters? More to the point, how can the consumer electronics industry provide consumers with sufficient incentives to invest in new technologies such as digital radio if consumers perceive, with justification, that these new products may soon be regulated into obsolescence?

The proposal to suddenly lock down satellite radio comes even more "out of the blue." There is no indication that new devices to be rolled out by these services would depart from the requirements of the Audio Home Recording Act, most of which were drafted by the music industry itself. Nor is there any indication of any problems as a result of the wide consumer acceptance of these services.

As in the case of Digital Audio Broadcasts, this bill seems aimed at destroying the utility of new consumer products that, like the VCR or TiVo, will likely have the effect of enhancing consumers' lives and broadening the market for entertainment programming. Exciting new products are on the market that will allow XM and Sirius customers to record and index the content they lawfully paid for, much like a radio TiVo. There is no evidence of harm to the content community – indeed, these products do not allow recordings to be moved off the device in digital form. Yet again, these provisions will make illegal the manufacture and consumer enjoyment of these innovative technologies.

These provisions would not only outlaw products that are on the verge of introduction, but also existing products like the XM MyFi which was introduced at last year's International Consumer Electronics Show. Essentially, all these products do is allow subscribers to "place-shift," so that they can listen to programming they have paid for outside the car or the home, just like portable FM radios. Once again, the record labels have demonstrated no evidence of actual harm that would justify such a massive government intrusion into consumers' private, noncommercial home recording practices, or the right of entrepreneurs to build new products.

Moreover, we do not understand on any reasoned ***policy*** basis the proposals to undo, in section 114 of the Copyright Act, a host of provisions that Congress adopted just a few years ago in the Digital Millennium Copyright Act.

At best, these changes appear calculated solely to give the recording industry a litigation advantage in a royalty rate proceeding scheduled to begin next year. As representatives of an industry that manufactures receivers for this fledgling satellite radio industry, we see no reason for Congress to stack the deck in proceedings that will be moving forward under existing law. In essence, with this provision RIAA is trying to resolve a business dispute by statute. Just last year, congress created the Copyright Royalty Board to resolve these very types of business disputes. We suggest that Congress should simply let the Copyright Royalty Board do its work, and not deny consumers the benefit of digital technology and new devices.

In short, we see no justification to undo the provisions of the AHRA and the DMCA that were specifically enacted by Congress to address digital and satellite radio services. There is no reason for the Congress to give further consideration to this third leg of the legislation.

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While we have voiced many specific concerns today about what some of this legislation would do to consumers and to the use and viability of legitimate consumer products, we must not ignore the overarching issue of technological progress and U.S. competitiveness. While other countries are busy developing their technology industries in order to compete more efficiently with the United States, we face proposals from the

content community to suppress technological development on arbitrary or insufficient bases. This is a trend that ought not to be encouraged.

Again, thank you, Mr. Chairman, for the opportunity to appear before this Subcommittee to address these important issues. We have worked collegially with the content industries when they have been willing to do so. We appreciate being asked to be here today and look forward to working with you and your staff as you examine the important issues that have been raised for discussion today.