

**BEFORE THE FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

In the Matter Of

Digital Broadcast Copy Protection

MB Docket No. 02-230

COMMENT ON PROPOSED RULEMAKING

There has grown up in the minds of certain groups in this country the notion that because a man or a corporation has made a profit out of the public for a number of years, the government and the courts are charged with the duty of guaranteeing such profit in the future, even in the face of changing circumstances and contrary public interest. This strange doctrine is not supported by statute nor common law. Neither individuals nor corporations have any right to come into court and ask that the clock of history be stopped, or turned back, for their private benefit.
– Robert Heinlein

As a consumer of digital content, I have a grave concern about the proposed Broadcast Flag. Today we, as Americans, have the unhindered ability to view the Television programming of our choice. We enjoy the flexibility and control that technology gives me. Whether viewed over-the-air, through an analog or digital cable system, or through a satellite receiver, viewers can watch what they want, transfer it to a recordable medium, like a VCR, DVD, or a newer PVR system, and also archive it. We can use this recording for purposes of time shifting, or for viewing repeatedly at a later date, or can share the recording with a friend. We can be more than a passive recipient of content; we can modify, create and participate. New technologies give us more choices by allowing us to record a television program and watch it later; clip a small piece of TV to use in a home movie; or send by email a clip of the winning touchdown to a friend who supports the opposing team. The broadcast flag seems intentionally designed to remove this control and flexibility that I enjoy.

By introducing a concept like this broadcast flag, we would be taking a step backwards by limiting the possibilities of the digital medium. We're being asked to think like censors instead of visionaries. Consider the fears that existed 20 years ago around the concept of personal computers and the accessibility to information that they offered to the masses. There were those who would have limited the access to them but thankfully the regulatory agencies were not so short sighted and today have changed the world with their use.

Limiting in any way, the use of or access to, the digital medium would be shortsighted and would only benefit those who see it strictly as a profitable business. Their lack of

insight into the undiscovered benefits of the medium will only slow down the business they are trying to profit from, the consumer. Our access to alternative views, to ideas that inspire and move us, and connect us to creative thinking, and to information that is less accessible to the average person – all of this and more will be hindered and discouraged by the limitations being proposed.

A broadcast flag requirement would limit the development of future equipment providing consumers with new options. The proponents' stated intentions are irrelevant. The decision ignores the effect it will have on the future of everyone. Dozens of potential electronic devices would be impacted, or may never reach the consumer. The proponents are not embracing the future technology, and have instead demonstrated a desire not to change. The proponents' market is information, and since they own the private domain, they will naturally seek to envelop the public domain. Millions of schools, colleges and public libraries represent a huge profit potential.

Historically, the law has allowed for those not affiliated with creating content to come up with new, unanticipated ways of using it. For example, Sony invented the modern VCR – a movie studio did not. (Sony did not own a movie studio at the time.) Diamond Multimedia invented the MP3 player – a recording label did not. TiVo created the Personal Video Recorder – negating years of failed attempts at video on demand. Unfortunately, the broadcast flag has the potential to put an end to that dynamic. Because the broadcast flag defines what uses are authorized and which are not, unanticipated uses of content which are not foreseeable today are by default unauthorized. If we allow the content industry to "lock in" the definition of what is and is not legitimate use, we curtail the ability for future innovation – unanticipated but legal uses that will benefit consumers.

Existing copyright law prohibits the commercial use of these recordings, and payment mechanisms are in place already for the legitimate commercial use of recorded media. The proponents are seeking to overturn the Betamax doctrine – the principle that a technology is legal, provided that it can be used to accomplish legal ends. VCRs are legal, even though they can be used to make illegal copies of copyrighted works, because they can also be used to make legal copies of personal works and copyrighted works.

The proponents, with their emphasis on copy prevention, are trying to create a problem that does not exist in the mainstream today. Today, in the analog world, it is trivial to pirate movies or television for non-legitimate commercial use. Yet that ability has not materially harmed the broadcast industry or its revenues. Instead, the threat to broadcast companies comes from the fragmentation of traditional media into hundreds of specialty broadcasters, each of which now appeals to a smaller, more specialized audience. This fragmentation is seen by most to be a good thing for the consumer and for the industry as a whole. It is the biggest single threat to the largest broadcasters. However, we do not see any legislative or rule-making effort targeted at trying to eliminate the diverse competition.

Digital television is exactly the same. Restricting usage and recording rights will only slow the adoption of digital TV by the American consumer, and circumvention systems will rapidly appear. The proponents' proposals will only have the effect of making the normal, expected behavior of nearly 300 million television viewers illegal.

Analog-to-digital converters (ADCs) are the building blocks of modern digital technology. An ADC's job is to take samples of the strength (amplitude) of some analog signal (light, sound, motion, temperature) at some interval (frequency) and convert the results to a numerical value. ADCs are embedded in digital scanners, samplers, thermometers, seismographs, mice and other pointer devices, camcorders, cameras, microscopes, telescopes, modems, radios, televisions, cellular phones, walkie-talkies, light-meters and a multitude of other devices. In general, ADCs are generic and interchangeable – that is, a high-frequency ADC from a sound card is potentially the same ADC that you'll find in a sensitive graphics tablet.

The proponents perceive ADCs as the lynchpin of unauthorized duplication. No matter how much copy-control technology is integrated into DVD's and DTV broadcasts, there is always the possibility that some Internet user will aim a camcorder at the screen, always the shadowy fan at the concert wielding a smuggled digital recorder, always the audiophile jacking a low-impedance cable into a high-end stereo. This frightening image haunts the proponents, and each one uses an ADC to produce unauthorized copies.

Accordingly, the calls for a regimen where "watermark detectors would be required in all devices that perform analog to digital conversions" will come. The plan is to embed a "watermark" in all copyrighted works. Thereafter, a "monitoring chip" that would sense this watermark's presence and disable certain features depending on the conditions would accompany every ADC.

This is meant to work like so: You point your camcorder at a TV screen. The magical, theoretical watermark embedded in the show is picked up by the monitoring-chip, which disables the camcorder's ADC. Your camcorder records nothing but dead air. The microphone, sensing a watermark in the show's soundtrack, also shuts itself down. This is the only way to ensure no unauthorized copies could possibly be made.

The objective of a law like this is to make "unauthorized" synonymous with "illegal." In the world of copyright, there are many uses that are legal, even if they are unauthorized, for example, the fair-use right to quote a work for critical purposes. Any critic, be they a professor, a reporter, even an individual with a personal website, may lawfully copy parts of copyrighted works in a critical discussion. Such a person may scan in part of a magazine article, record a snatch of music from a CD or a piece of a film or television show in the lawful course of making a critical work.

You don't need to be a critic to make a lawful, unauthorized copy. Anyone who wants to "format shift" some personal property – be it by scanning in a book, transferring an old LP to MP3, or using a PVR – make unauthorized but legal copies. This is absolutely

lawful, but under the "analog hole" proposal, providing the tools to make such unauthorized uses would be illegal. It's outrageous that the proponents would demand a law that intentionally breaks technology so that it can't be used in lawful ways, but the unintended consequences of this regime are even more bizarre.

There is no "analog hole", nor is there a significant threat inherent to the conversion to digital broadcast streams from the current analog system. All we, as a consumers, are looking for is the exact same ability to archive and time-shift broadcast media that we have today. No more, no less. It is merely a benefit that media will become digital in nature – it makes it easier for me to exercise the rights as citizens and consumers we already hold.

The vast majority of Americans are law-abiding consumers who believe that piracy should be prevented and prosecuted. However, if theoretical prevention comes at the cost of prohibiting us from making legal, personal use of our content, then the FCC should be working to protect all consumers rather than enable those who would restrict consumer rights. In the case of the broadcast flag, it seems that it will have little effect on piracy. With file-sharing networks, a TV program has only to be cracked once, and it will propagate rapidly across the Internet. So, while we may be required to purchased consumer electronic devices that cost more and allow me to do less, piracy will not be diminished.

The number of gadgets than will touch digital TV signals is larger than you might think. The generic PC under your desk will have more than enough power to tune, demodulate and display TV signals. In fact, I use my computer as my only television device.

Whatever measures the studios take to "protect" their product from their customers will have to be applied to PCs, too. The tamper-resistant seal around their devices will have to be wrapped around your software and hardware. It will become impractical or illegal to write open-source software for playing with digital video because of the risk of lawsuits from the media companies. Copy-prevention mechanisms in hard-drives, video cards, and sound-cards will be mandatory in your PC, even if those mechanisms break all kinds of legitimate software. Consumer privacy will be put at risk when their computer is filled with anti-privacy unique serial numbers that get transmitted back to central repository.

If the FCC enacts the "broadcast flag" all digital electronic equipment will be forced to honor it. This will effectively put an end to Americans making use of private recordings as they see fit in their own homes. It will also cause the loss of countless other creative works that might have been derivative works. It will also drive up costs of consumer equipment, harming our economy by draining our pocketbooks.

Virtually everything in our world is copyrighted or trademarked by someone, from the facades of famous skyscrapers to the background music at your local mall. If ADCs are constrained from performing analog-to-digital conversion of all watermarked copyrighted works, you might end up with a cell phone that switches itself off when you get within

range of the copyrighted music on your radio; or a camcorder that refuses to store your child's first steps because he is taking them within eyeshot of a television playing "SpongeBob Squarepants".

The primary difference between most ADCs is the frequency at which they run. Two ADCs of like frequency and bit rate can be interchanged. If any unrestricted ADCs are allowed into the marketplace, they will surely find themselves repurposed in camcorders, samplers, and scanners, defeating the copy protection scheme.

The broadcast flag when combined with the DMCA becomes a form of encryption or protection as the DMCA defines it. This will effectively prevent Americans from utilizing their fair use rights in broadcasts they receive. It is also contrary to years of FCC regulations and American case law that both hold that any over the air broadcast may be used by anyone that receives it for their own entertainment in any manner that they choose.

While there is no hard proof that the broadcast flag would be a problem for older digital equipment there is also no guarantee that makers of equipment that honored the broadcast flag would allow any interoperability. The proponents cannot assert that the flag will not limit consumers' ability to send content through different devices, when this is exactly what they seek to do with it. The broadcast flag would limit what equipment the American public could own. It would create two classes of electronics owners in the United States, the TV/Movie industry, who could own fully functional computers, and everyone else that would be forced to own crippled equipment.

Any measure that restricts fair use is theft. The proponents of the flag assert that the flag will not interfere with legitimate copying for personal use, but this statement is vague, considering that the proponents probably do not agree with current law regarding what fair use means. Yet if this interpretation is taken as a basis for the flag, then their biased interpretation will continue to permeate public standards and law. The FCC should not cater to private interests - if the FCC takes any sides on the matter of fair use, which is itself controversial, then it should take the side of the general public, and thus fervently oppose such measures.

Information should be shared, not hoarded for profit. Copyright was meant to provide a limited time of protection to its owners. This scheme would permanently live in the signal, effectively giving them control over the content long after it should have reached the public domain. Currently broadcasters watermark their programs with visible logos in the signal, which provide an unobtrusive, visible signal of where the content originated, and is an excellent, proven alternative to the ATSC flag.

Instituting the use of a broadcast flag will only deter for a limited time. Information is a living entity and if it exists, it will always find an alternative path to its public. Restrictions like this will only inspire creative thinkers to find another alternatives and will most likely encourage the use of other mediums. Consequently, those who seek to

control the medium will in the end, defeat their own purpose. Instead of encouraging a powerful medium to flourish and riding the crest of the wave, they will end up with little to surf.

The future holds many advances in store for us. I Would like the ability to take content from outside sources, direct it to various devices, even display in different rooms. I might also want to self edit the content so that it is appropriate for my children, in my view, if I think the content is something that would benefit them. My mother, a teacher, may do this for their students, as well. I may also wish to show pieces of content to guests, or I may want to gather pieces into a work of art. Currently we are all able to do very similar things with non-electronic media, and it is all perfectly legal.

With measures such as this flag, none of this will become reality. The flag will be an issue at every stage, and in every device. By allowing private interests from one area to determine this, we'll greatly stifle electronic advancements that might have far greater impact on our lives. The private interests in favor of this measure can envision the future, too. But their vision regards superficial notions of profit and market share. The FCC should not be helping to secure these at the expense of the American taxpayer.

The mission of the FCC is to regulate communications via radio, television, wire, satellite and cable with proper management of the airwaves as a public trust. Yet the flag has no direct bearing on any of these forms of communication - it does not enable it, make it better, or enhance it in any way. The FCC has no business getting into Digital Restriction Management.

This measure unduly affects the receiver of the communication. The FCC need not become involved in the use of devices that record, edit, or replay these communications and extend the reach of its concerns into the private everyday lives of taxpayers and purchasers of electronic devices. If violations of copyright do occur, the content providers have a laundry list of methods to recover any damage they suffer. Requiring every American to do that for them is not the responsibility of the FCC.

In closing, I urge you to require the proponents to demonstrate that its proposed technologies will allow for all legal uses and will actually achieve the stated goal of preventing piracy. If they cannot, I urge you to reject the broadcast flag proposal.

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