Negotiating Intellectual Property Provisions in Free Trade Agreements.
A Workshop on November 19, 2003

sponsored in Miami, Florida by:

The Program on Intellectual Property and the Public Interest
Washington College of Law, American University, USA

The Consumer Project on Technology, Washington, DC USA

and the

Centro Interdisciplinario de Derecho Industrial y Económico (CEIDIE)
Buenos Aires, Argentina

Briefing Paper:

# TECHNOLOGICAL PROTECTION MEASURES ISSUES PAPER

Gwen Hinze, Esq.
Staff Attorney
Electronic Frontier Foundation
Email: gwen@eff.org
Tel.: + (1)(415) 436-9333 x110

## A. THE ISSUE

Article 21 of Section 3 of the FTAA draft Intellectual Property chapter requires signatory countries to adopt legal protection for technological protection measures (TPMs) added by rightsholders to copyrighted works. Although legal protection is sought for the legitimate purpose of protecting rightsholders' copyrights, the United States' experience with similar provisions in the Digital Millennium Copyright Act (DMCA) demonstrates that *overbroad* legal protection may have many serious unintended effects.

The FTAA November 2002 draft IP chapter contains two versions of Article 21. While the first would extend existing international treaty protections to broadcasters, the second formulation is much broader and would:

(1) supplant existing national copyright systems;
(2) impair access to digital information and widen the digital divide;
(3) entrench the use of monopoly-priced proprietary products and services, and result in a net wealth transfer from signatory countries' economies to U.S. copyright owners; and
(4) potentially undermine other important policy goals by chilling scientific research and stifling technological innovation in domestic software and consumer electronics sectors.

## B. BACKGROUND ON TECHNOLOGICAL PROTECTION MEASURES (TPMS)

Article 11 of the 1996 WIPO Copyright Treaty and Article 18 of the WIPO Performances and Phonograms Treaty (the OMPI Copyright Treaties) require signatory countries to

provide "adequate legal protection and effective legal remedies against the circumvention of effective technological measures" added by copyright owners to their works.

Copyright industries in the U.S., however, pressed for considerably more protection. The result was the Digital Millennium Copyright Act (DMCA), which went *further* than the OMPI Copyright Treaties required. The DMCA has since become the model that U.S. trade negotiators have urged on its trading partners.

The DMCA's TPM provisions ban both *acts* of circumventing TPMs used by copyright owners to control access to their works, as well as any *device, service or technology* that is primarily designed or useful for circumvention. These prohibitions apply even if the intended use of the copyrighted work would not infringe copyright. So, for example, under U.S. law there is a copyright exception allowing blind persons to translate books into Braille. Under the DMCA, blind persons are no longer able to exercise this right in connection with e-books that are protected by TPMs.

The DMCA includes 7 limited exceptions for certain socially beneficial activities, including security testing, reverse engineering of software, encryption research, and law enforcement. However, these exceptions have proven inadequate in practice to protect many of these legitimate activities. Unfortunately, the proposed FTAA language does not include even these limited U.S. exceptions and bans a broader range of conduct than the DMCA.

### C. Provision Sponsors

U.S. copyright owners have lobbied strongly for the incorporation of this type of provision in both the FTAA and in the bilateral free trade agreements that the U.S. has recently concluded with Jordan, Singapore and Chile, because it provides an increased level of protection for their works beyond copyright, that is not dependent on proving copyright infringement under each country's differing copyright laws.

### D. Likely Impact Of Adopting Overbroad Legal Protection For TPMs

#### 1. National Copyright System Supplanted

A broad ban on circumventing TPMs, like the second formulation proposed in Article 21 of the FTAA, is likely to entirely supplant a signatory country's existing copyright law. In effect, this allows U.S. copyright owners' rights to trump national sovereignty and domestic public policy priorities.

A similar provision inserted into U.S. copyright law by the DMCA in 1998 has displaced the careful balance of public and private rights in U.S. copyright law created by the legislature and judiciary over the last 130 years. It has provided U.S. copyright owners with an increased level of protection above copyright law, by granting them a new right to control *access* to, and not merely *use* of, copyrighted works. This has had several results:

- The various statutory exceptions to copyright law (for instance, for uses in the education, library and disabled persons communities) have largely been overridden for technologically-protected digital information.
- Most importantly, it has effectively eliminated the ability to make "fair use" of protected digital works. In U.S. copyright law, fair use permits someone to make a reasonable use of a copyrighted work for a socially useful purpose such as

education, criticism or parody, or for a consumer's personal use (such as home video recording of television), without having to ask prior permission from a copyright owner. Fair use is intended to guarantee public access to copyrighted material to facilitate productive uses of information and free speech. The DMCA bans consumers from circumventing TPMs to make fair use of a protected digital work, such as making a back-up copy of a copy-protected CD or DVD that they have purchased. In addition, technology vendors are banned from producing or selling technologies and devices that consumers need if they are to enjoy copyright exceptions that would otherwise apply to digital media.

In other words, U.S. copyright owners have used TPMs backed by the DMCA to redraw the copyright balance and unilaterally set how much protection will be given to their work. Similar results would likely occur in FTAA signatory countries if the second formulation of Article 21 is adopted.

**2. Impaired Access To Information**

The second formulation of Article 21 would also have a substantial detrimental impact on the ability of educators, students and researchers in FTAA signatory countries to access digital information and technology. The current draft of the FTAA requires signatory countries to extend copyright protection to facts and data within databases. As information is treated as a copyrightable product and increasingly becomes available only in a technologically protected form, fair dealing and personal copying exceptions that previously guaranteed access will be technologically precluded. This will increase the cost of accessing information and ultimately result in the widening of the knowledge gap between industrialized and unindustrialized countries.

**3. Potential For Digital Lock-in And Net Wealth Transfer To U.S. Copyright Owners.**

U.S. copyright owners have used the DMCA's anti-circumvention provisions to obtain a monopoly over uncopyrightable products and technologies that interoperate with their works. This has serious anti-competitive implications for consumers in FTAA signatory countries. For instance:

- **Geographic Market Segmentation:** The motion picture and video game industries have used "region coding" technologies, backed by the DMCA and similar laws, to control the availability and pricing of DVDs and video games in various geographic regions. Other copyright industries can be expected to follow, potentially discriminating in both price and availability against consumers in various regions of the world.
- **Product Lock-in:** Lexmark, the second largest printer distributor in the United States, has used the DMCA to ban the sale of recycled Lexmark printer cartridges, which were being sold to consumers at lower prices than new cartridges and Lexmark's own "authorized" remanufactured printer cartridges.
- **Attacking Interoperability:** Chamberlain Group, the manufacturer of an electronic garage door opener, has used the DMCA in an attempt to ban the sale of a universal garage door transmitter imported by its main competitor, Skylink, which can be programmed to open Chamberlain garage door units, as well as several other brands of garage door units.

Under FTAA Article 21, vendors could prevent local businesses from creating

interoperable products that might provide market competition. Consumers in FTAA-signatory countries would be locked into purchasing products at higher, monopoly-based prices. For instance, a U.S. automobile manufacturer could use a TPM, backed by Article 21, to ban the sale of "unauthorized" replacement parts and services in FTAA-signatory countries. For FTAA signatories who are net *importers* of U.S. informational and entertainment intellectual property, this would result in a *net transfer of wealth* from signatory countries' domestic economies to U.S. copyright owners.

## E. Adverse Impact on Important Public Policy Goals

The U.S. DMCA's anti-circumvention provisions have been used in ways not intended by the U.S. Congress to stifle a wide array of legitimate activities, rather than to stop copyright piracy. In particular, the provisions have had two negative effects on important public policy goals:

### 1. Chilling Effect on Scientific Research

U.S. copyright owners have used the DMCA's provisions to cast a chill on free expression and legitimate scientific research. In 2001 a music industry organization threatened to sue a team of researchers for violating the DMCA when they attempted to publish a research paper describing their findings on security vulnerabilities in digital watermark technology. The music industry group considered that the information in the research paper was a "circumvention tool" and publishing the paper would violate the DMCA's ban on distributing "circumvention tools".

The chilling effect on scientific research and publication has been profound. U.S. and foreign scientists have refused to publish research on access control vulnerabilities, or have removed previously published research from the Internet due to fear of DMCA liability. Foreign scientists have refused to travel to the U.S. and several encryption conferences have been moved outside of the United States.

In particular, there is growing concern within the U.S. about the impact of the DMCA on computer security research. In October 2002, former U.S. White House Cyber Security advisor, Richard Clarke, admitted that the DMCA had chilled security research and called for DMCA reform. The U.S. Congress is currently considering two proposals that would amend the DMCA to permit circumvention and use of circumvention tools for scientific research.[1]

### 2. Technological Innovation Stifled

The DMCA has adversely impacted the U.S. technology sector in two ways. First, because the DMCA defines "circumvention" of a TPM in terms of conduct "authorized" by copyright holders, U.S. copyright owners have been able to extend their statutory rights to control technology that interacts with their copyrighted work, as described above.

Second, the DMCA has had a chilling effect on the ability of technology companies to reverse engineer computer code in order to develop new products. Reverse engineering is critical to encourage competition and innovation in the face of monopolistic practices in the software industry. Legitimate reverse engineering has traditionally been permitted in

---

[1] Digital Media Consumer Rights Act (H.R. 107, 108th Cong.) introduced by Representatives Boucher and Doolittle; B.A.L.A.N.C.E. Act (H.R. 1066, 108th Cong.) introduced by Representative Lofgren.

U.S. copyright law. Today, however, companies eager to impair market competition have turned to TPMs and the DMCA in an effort to hinder the creation of innovative interoperable products. For instance, Sony Corporation has used the DMCA to sue the creators of reverse-engineered emulator software programs, which allow consumers to play Playstation video games on their computers, rather than on Sony's proprietary Playstation game console.

Although the DMCA includes an exception for reverse engineering, the exception has proven to be too narrow to assist those seeking to use it. It is clear that the U.S. Congress did not intend that the DMCA would be used to stymie technological innovation, but the provisions are too broad to prevent this sort or misuse. FTAA signatories will face the same problems if the second formulation of Article 21, or a provision similar to the DMCA provision, is adopted.

### F. Precedents in Trade Agreements

The bilateral free trade agreements (FTAs) that the U.S. has recently concluded with Jordan (Article 4(13)), Singapore (Article 16.4(7)) and Chile (Article 17.7(5)) contain TPM provisions modeled on the DMCA provisions. The most restrictive of the FTA provisions is in the U.S.-Singapore FTA. The Industry Functional Advisory Committee on Intellectual Property advising the U.S. President and the U.S. Trade Representative has recommended that the Singapore FTA language should be incorporated in to the FTAA.

As currently worded, the first formulation of FTAA Article 21 generally mirrors the obligation set out in the OMPI Copyright Treaties, but extends protection to owners of broadcasting rights. This would allow countries of the South to implement TPM protection in a way that is consistent with their existing copyright law exceptions.

However, the second formulation goes further than both the OMPI Copyright Treaties and the DMCA provisions and raises similar issues to the DMCA. It bans the act of circumvention, with knowledge or having reasonable grounds to know and without authority, of an effective technological measure added to a copyrighted work by a rightsholder. It also bans the manufacture and distribution of devices, products or services that are (i) advertised or marketed for the purpose of circumvention, (ii) have only a limited commercially significant purpose other than circumvention, or (iii) are primarily designed, produced, adapted for the purpose of circumvention.

Unlike the DMCA, it does not have any exceptions that would preserve the existing rights of consumers and technology developers in FTAA signatory countries.