

“TPMs”: A Perfect Storm for Consumers: Replies to Professor Geist

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This article has its origins in an article written by Professor Michael Geist and published in the Toronto Star entitled “TPMs: A perfect storm for consumers”.¹ Following the publication of the article, John Gregory made a posting to the e-commerce listserv he moderates asking if anyone had any comments to the article. I responded on February 13, 2005 with a reply to John’s request. Professor Geist replied to my comments on February 17, 2005. On March 9, 2005 I posted a further reply to Professor Geist. The article set out below is based substantially on my two postings to John Gregory’s listserv.

In his article, Professor Geist argues that “[t]he proliferation of technological protection measures, alongside new legislative proposals designed to protect these digital locks, represent a perfect storm of danger to consumers”. He argues that “anti-circumvention legislation, acting in concert with technological protection measures, has steadily eviscerated fair use rights”. His conclusion is that “Canada does not need protection for technological protection measures”. In fact, he contends that in order “to maintain . . . a competitive marketplace, and a fair copyright balance, we need protection from them”.²

My own view is that the proliferation of technologies that facilitate the digitization, copying, and distribution of content over the Internet, alongside changing philosophical views about the purpose and value of copyrights, represent “the perfect storm of danger” to rights holders. These events have steadily eviscerated the ability of copyright holders to enforce their rights and to build economically viable models to produce and distribute content. My view is that Canada needs to modernize its copyright legislation to help businesses, small and large, that rely on copyrights to develop, introduce, and distribute content recover from the imbalances caused by the tidal waves of technological and attitudinal change. I do not believe that the experience of the U.S. and other foreign jurisdictions with TPMs (technological protection measures) has been the disaster that Professor Geist suggests. To maintain a competitive marketplace and a

fair copyright balance, I believe we need protection for TPMs.

The issues raised by Professor Geist are of critical importance to the current public policy debate about the implementation of the WIPO Internet treaties. Accordingly, I will set out below an explanation of my views.

Copyright and the Public Interest

Any discussion about TPMs must start with the importance of the subject matter — copyrights — that they are designed to protect. The Government of Canada, in its study *A Framework for Copyright Reform*³ pointed out that the copyright-related sectors (publishing, film, sound recording, broadcasting, visual arts, software, etc.) are very important to the Canadian economy. In 2000, the GDP of the copyright-related sectors was estimated at \$65.9B, accounting for 7.4% of Canadian GDP. These sectors grew at an average annual rate of 6.6%, compared to 3.3% for the rest of the Canadian economy. The Government of Canada characterized these industries as “the third most important contributor to Canada’s economic growth”.⁴

The study also reminded us that the

*The Copyright Act is an important framework law that affects many sectors of the Canadian economy. It represents a powerful lever to promote innovation, entrepreneurship and success in the new economy. Copyright protection rewards the creation and dissemination of knowledge and cultural content, and facilitates access to this knowledge and content.*⁵

The report also acknowledged that the “*Copyright Act impacts on the development of Internet content, the use of electronic commerce by business and consumers, and on the growth of a wide range of cultural and information-based industries*”.⁶

In its *Framework*, the federal government stated it was “committed to ensuring that Canada’s copyright regime remains among the most modern and progressive in the world”.⁷ It underscored that its objectives for copyright reform are:

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- to create opportunities for Canadians in the new economy;
- to stimulate the production of cultural content and diversity of choices for Canadians;
- to encourage a strong Canadian presence on the Internet; and,
- to enrich learning opportunities for Canadians.⁸

Canadian copyright law has traditionally been built on the historical foundations and theoretical framework of UK copyright legislation, and in particular the *Copyright Act, 1911*.⁹ That legislation consistently protected the labours of authors either as an end in itself, or at the very least, as the primary goal of copyright.

For example, in *Ladbroke (Football) Ltd. v. William Hill (Football) Ltd.*, Lord Devlin stated in relation to the purpose of copyright “...it protects property. It is no more interference with trade than is the law against larceny. Free trade does not require that one man should be allowed to appropriate without payment the fruits of another’s labour”.¹⁰ In *L.B. (Plastics) Ltd. v. Swish Products Ltd.*, Lord Wilberforce stated “The protection given by copyright is against copying, the basis of the protection being that one man must not be permitted to appropriate the result of another’s labour”.¹¹ In *Walter v. Lane*, Lord Davey stated “it is a sound principle that a man shall not avail himself of another’s skill, labour and expense by copying the written product thereof”.¹² Lord Halsbury stated that “I should very much regret it if I were compelled to come to the conclusion that the state of the law permitted one man to make profit and to appropriate to himself the labour, skill and capital of another”.¹³ In the Privy Council case *MacMillan & Co. Ltd. v. Cooper*, Lord Atkinson stated that the moral basis of copyright rests on the 8th commandment “Thou shalt not steal”.¹⁴

Canadian copyright legislation historically was interpreted by the Supreme Court of Canada and other Canadian appellate courts as having the same purpose. In this regard, the Act was often construed so as to protect the value of authors’ copyrights in their works and to prevent persons from unfairly availing themselves of their labours without their consent. Authors’ rights were interpreted broadly so that rights granted were not lightly defeated or affected by the acts of others.

For example, in *Bishop v. Stevens*, Justice McLachlin of the Supreme Court of Canada stated that the *Copyright Act* “was passed with a single object, namely, the benefit of authors of all kinds”.¹⁵ In *Vigneux v. Canadian Performing Rights Society*, Justice Duff of the Supreme Court of Canada stated in relation to the *Copyright Act* that the purpose of copyright is to prevent persons from “unfairly availing themselves of the work of others” and that the “protection of authors ... is the object to be attained by all patent and copyright laws”.¹⁶ In *CAPAC v. Kiwanis Club of Western Toronto*, Justice Rand of the Supreme Court of Canada stated in relation to inter-

preting an exemption from infringement in the Act “to extend the language of the proviso would unnecessarily run counter to those principles of justice which accord to owners, particularly of property in the truest sense they have created, the accepted privileges of ownership”.¹⁷

More recently, since *Théberge v. Galerie d’Art du Petit Champlain inc.*,¹⁸ Canadian courts have recognized that the law of copyright is concerned with seeking a balance between promoting the public interest in the encouragement and dissemination of the works of the arts and intellect and the public interest in obtaining a just reward for the creator or, more accurately, to prevent someone other than the creator from appropriating whatever benefits may be generated. In *Théberge*, the Supreme Court made reference to the importance of the public domain in fostering innovation.¹⁹ In *CCH Canadian Ltd. v. Law Society of Upper Canada*, the Supreme Court noted the importance of the fair dealing exemption in accommodating the balance inherent in the Act.²⁰

In *Tariff 22*,²¹ the Supreme Court noted the “capacity of the Internet to disseminate ‘works of the arts and intellect’ is one of the great innovations of the information age”.²² It emphasized that “[i]ts use should be facilitated rather than discouraged, but this should not be done unfairly at the expense of those who created the works of arts and intellect in the first place”.²³ The Court’s reference to not permitting acts to be done “unfairly at the expense” of rights holders is an acknowledgment of the longstanding principle referred to above that a key purpose of copyright is to reward authors and protect property arising from the intellectual efforts of authors.

In *Tariff 22*, the Supreme Court made new law, finding that the provisions of the *Copyright Act* could be applied extra-territorially where there is a “real and substantial connection” between the infringement and Canada. This holding has made it clear that those who communicate content over the Internet, or who authorize its communication, have obligations to “pay the piper”.

In his article, Professor Geist references the goals of a “fair copyright balance” and a “competitive marketplace”.²⁴ In his listserv reply, he states “I respectfully disagree that commentators now overemphasize the user side of the equation. I think the CCH case provides a textbook example of how the court plans to engage in a balancing analysis that considers the impact of its decision on both sides. This is not a case of only considering users and arriving at users rights. Rather, it is what happens when you pay more than just lip service to user interests and attempt to develop a genuine balance”.²⁵

Though Professor Geist speaks of a balance, I do not see any recognition or achievement of balance in his article or reply. The article and reply set out reasons why TPMs ought not to be protected. References are made to the policy considerations of privacy, security, innovation, fair

dealing, not locking up the public domain, and frustrating consumer expectations. Yet, nowhere is there any attempt to “balance” countervailing arguments to show why the public interest favours not protecting TPMs. He does not attempt to balance the alleged impacts of protecting TPMs with the benefits associated with their protection. He does not consider the policy issues from all perspectives to determine where the true public interest lies. I do not even see “lip service” to rights holders’ interests or problems or any “attempt to develop a genuine balance”. This is where I think the debate should be redirected.

There is a growing tendency these days to suggest, either explicitly or implicitly, that the “public interest” should prevail over “private” copyright holders’ interests. The debate about the future of copyright seems polarized between those professing to represent the “public interest” and rights holders. Copyright reform is seen as a zero-sum game in which an increase in rights for creators is seen as harming the public interest.²⁶ This perceived dichotomy rests on the false assumption that the copyright system is intended to achieve a balance between the “public” and “private rights holders”. The view that copyright reform is a zero-sum game represents a fundamental misconception of the “public interest” in copyright law.

The objective of copyright is the public interest. The public interest, as the Supreme Court has reminded us in *Théberge*, is served by encouraging the dissemination of works “and obtaining a just reward for the creator or, more accurately, to prevent someone other than the creator from appropriating whatever benefits may be generated”. In other words, protecting rights holders from having others unfairly appropriate their works is in the public interest. We do not compensate authors simply because they develop original works. We protect creators because it benefits the public. By protecting TPMs, we protect rights holders from having others unfairly appropriate their works and thereby also benefit the public.

Unfortunately, the teachings of the Supreme Court in *Théberge* and *CCH* are often not applied as intended by the Court. Arguments in favour of a “fair copyright balance” are often made by reference solely to achieving that objective by promoting the goals of dissemination of information, enhancing “fair dealing”, creating a “public domain”, and promoting “user rights”. Somehow the goal of protecting property has been de-emphasized in favour of creating a “public domain”; the goal of rewarding authors has been subjugated to “fair dealing”; the notion of exclusive rights has been eclipsed by “user rights”.

In the U.S. there has been a great deal of debate concerning the relationship between the dual objectives of copyright. In the last U.S. Supreme Court decision to address this issue, Ginsburg J., in *Eldred v. Ashcroft*, specifically rejected Justice Breyer’s assertion that copyright statutes must serve public, not private ends, con-

cluding that “[t]he two ends are not mutually exclusive; copyright law serves public ends by providing individuals with an incentive to pursue private ones”.²⁷ The Court pointed out that rewarding authors is the best way to achieve the goal of increasing the dissemination of knowledge:

JUSTICE STEVENS’ characterization of reward to the author as “a secondary consideration” of copyright law ... understates the relationship between such rewards and the “Progress of Science”. As we have explained, “[t]he economic philosophy behind the [Copyright] [C]lause ... is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors”. ... Accordingly, copyright law celebrates the profit motive, recognizing that the incentive to profit from the exploitation of copyrights will redound to the public benefit by resulting in the proliferation of knowledge ... The profit motive is the engine that ensures the progress of science. ... Rewarding authors for their creative labor and “promot[ing] ... Progress” are thus complementary ...²⁸

Detractors of copyright argue that copyright protection and the public interest are mutually exclusive. This is patently incorrect.

Professor Geist suggests that the focus of copyright should be on users and creators. He expresses surprise at “the focus on the business side of copyright” and refers to *Bishop v. Stephens*,²⁹ which he says “speaks of creators and incentives for the creative process, not ‘businesses, small and large’, that rely on copyrights to develop, introduce and distribute content”.³⁰

The reality of copyright is that while copyright protection may serve the interests of small and large businesses, it is what enables individuals to devote their lives to the creation of original works. It serves as a critical catalyst for the creation and augmentation of cultural identity. In free market economies, businesses make investments in the creation of works. These investments are in creators; investments in cultural products are often risky. It is well known that only a fraction of works created return a profit to their investors. Without copyright protection, businesses would not take risks or make investments. Most creators would not have the financial ability to go it alone. There is nothing in the teachings of the Supreme Court to suggest any hostility to businesses that rely on copyrights to facilitate the creation and dissemination of works to the public.

For the reasons set out more fully below, I believe protecting TPMs is in the public interest. It gives copyright holders, creators and those who invest in the creative process, a means to prevent others from unfairly appropriating works. The focus of Professor Geist’s article is purely on the potential negative impacts of TPMs. My argument is that any such singular focus is fundamentally flawed. It misses the critical reality that the public interest in the creation and dissemination of works is served by protecting TPMs. To have a vibrant public domain and works that can be used for fair dealing

purposes, there must be adequate incentives for works to be created in the first instance.

Why We Need To Protect TPMs

As noted above, Canadian copyright policy has as its objectives the goals of creating opportunities for Canadians in the new economy; stimulating the production of cultural content and diversity of choices for Canadians; encouraging a strong Canadian presence on the Internet; and, enriching learning opportunities for Canadians. TPMs are essential to limiting the ease of carrying out copyright infringement in the digital environment. Without adequate legal protection and effective legal remedies against the circumvention of TPMs, these goals will be undermined.

The impacts of digitization of content of all sorts when coupled with the distributive nature of the Internet are well known. P2P file sharing networks allow individual computer users to search for and download content of all types including music, computer software, videos, movies and books.

Since Napster was first launched, numerous services have become popular for unlicensed sharing of files. KaZaA, Grokster, LimeWire, Aimster, Gnutella, Morphueus, eDonkey2000, and BitTorrent are some examples. Creators' and producers' anxieties about P2P file sharing arise from the reality that the technology is rapidly evolving, making any content that is available in an unprotected digital form available for easy file sharing around the world.³¹

An example is BitTorrent. According to British web analysis firm CacheLogic, BitTorrent accounts for an astounding 35 % of all Internet traffic — more than all other peer-to-peer programs combined — and dwarfs mainstream traffic like web pages. Over six months of surveying, CacheLogic found that BitTorrent accounted for 53% of all peer-to-peer network traffic.³²

As its name suggests, the software lets computer users share large chunks of data. But unlike other popular file-sharing programs, the more people swap data on BitTorrent, the quicker it flows, and that includes such large files as feature films and computer games. BitTorrent can be used to distribute legitimate content. However, it also enables copyright infringement to occur on a massive scale. It is probably the latest and best technological tool for transferring large files like movies. It is very efficient because the moment a user starts downloading he/she is also uploading.

The evidence is overwhelming that only a small portion of downloading does not involve infringement or illegal activity. One study illustrates this. In 2003, Palisade Systems acted as a node on a Gnutella network for the purpose of determining the type of files being shared. It analyzed 400,000 randomly selected search results out of the 22 million collected. It found that, of all requests,

42% were for adult or child pornography and 43% were for copyrighted music files and software.³³ It has also been estimated that more than 2.6 billion allegedly infringing music files are downloaded monthly.³⁴

The recent affidavit of Paul Audley sworn February 3, 2005, filed in support of CPCC's leave to appeal motion to the Supreme Court of Canada, provides a glimpse of this as well. According to the affidavit, for the 18-month period ending November 30, 2004, 64% of copied sound recording tracks came from the Internet and 36 from pre-recorded CDs. Of those copied from the Internet, only 13% had been paid for. On the average three of the 55 tracks copied during this period were purchased on the Internet, with the remaining 52 tracks copied without payment to rights holders.

There are other systems that trouble content owners. Two services offer "protection" to illicit file sharers who might try to block the use of P2P file sharing technology, either by hiding in a protected chat space to share files (WASTE), or by maintaining anonymity from rights holders representatives who attempt to identify uploaders through IP addresses (MUTE).³⁵

Rights holders who try to develop legitimate payment-based e-commerce business models that employ the Internet have had trouble competing with "free" services that are based entirely "on free pirated" copies of the same content. To protect their market rights, holders have turned to TPMs.

TPMs are well known and are now commonplace for products distributed electronically. Some of the well-known TPMs are content scrambling system (CSS), encryption used to protect commercial DVDs, and Adobe Systems' PDF technology, which is used to protect print content. Many content providers use TPMs built into products and media players of companies like Microsoft, Real Networks, and Apple.

*It doesn't matter how advanced TPMs are. None are invulnerable. Pirates will seek to hack through encryption, pick digital locks, and obliterate digital watermarks to unlock digital content. Some of the most commonly used TPMs, such as Macrovision, CSS, SCMS, and SDMI have been circumvented. As Dr. Ian Kerr pointed out in his study prepared for Canadian Heritage on technical protection measures, there is an escalating "arms race" between those who design TPMs and those who defeat them.*³⁶

Professor Geist denies that TPMs are of any benefit in staunching Internet piracy. He says "As for whether there are benefits to TPMs, there may be some but copyright protection isn't one of them. TPMs, or more particularly TPMs buttressed by legislation, are simply an ineffective method to protect copyrighted works". He then concludes, "That is also why to achieve the goals that are consistent with the Canadian e-commerce strategy, Canada should reject anti-circumvention legislation as unnecessary and indeed harmful".³⁷

Professor Geist’s views about the effectiveness of protecting TPMs do not accord with the opinions of Canada’s major trading partners, which have linked enacting anti-circumvention legislation with protecting copyrights on the Internet. His opinion is also contradicted by the Digital Connections Council, which recently examined this issue. It found that technologists almost uniformly view DRMs (digital rights management systems) as potentially valuable in the short term, as “speed bumps” to slow down attempts to obtain unauthorized access to digital information. As noted above, the Digital Connections Council concluded that “any system that seeks to monitor use of digital information so as to reward rights-holders will need some form of DRM”.³⁸

The Council also pointed out that DRMs are vulnerable in the long term. It noted that “The average person might be unable to mount even a rudimentary attack, and even talented crackers’ might fail. But just one successful attack can be incorporated into software that will permit even an amateur to succeed”.³⁹ These limitations of DRMs make legislation securing anti-circumvention critical.

The Balanced Copyright Coalition, a coalition of Canadian public interest advocates such as the Public Interest Advocacy Centre (PIAC), academics such as Professor Ian Kerr of the University of Ottawa, Canadian Internet, telecommunications, broadcasting, and technology companies and industry associations interested in the development of Canada’s *Copyright Act*, also agree that TPMs are an effective method to protect copyright works. In a letter dated September 15, 2003 to the Standing Committee on Canadian Heritage, the Balanced Copyright Coalition expressed concern about the potential expansion of the private copying levy to new media and devices. The members stated that they believed “that increased use of digital rights management strategies and particularly technological protection measures will give rights holders the ability to control the reproduction of works, thereby eliminating the rationale for imposing levy”.⁴⁰

Professor Geist also asserts that “the popularity of file sharing” “has little to do with anti-circumvention legislation”.⁴¹ He suggests that there is no relationship between Internet piracy and the lack of protection for TPMs.

Professor Geist’s arguments miss the fundamental problems being faced by Canadian businesses because of the lack of protection for copyrights on the Internet in Canada. The perception, particularly after *BMG v. John Doe*,⁴² is that Canada is a place where the laws protect the people who steal content, not the people who try to earn a living producing and selling it. The massive quantity of unlicensed downloading substantially undermines the incentive to develop and launch innovative services.⁴³ It harms rights holders by reducing sales and raising barriers to the industry’s entry into the market for digital distribution of content.⁴⁴

The lack of copyright protection makes it extremely difficult for Canadian businesses to launch innovative new services to compete with their American and foreign counterparts, which have stronger protection. Raising capital, even for promising business models, is frequently next to impossible. Banks, venture capital firms, and other financiers do not value investments made to distribute content on the Internet where the laws are unenforceable and copyrights are worthless. Entities that have launched services in Canada have delayed launching well before they could have because of the perceived lack of protection for copyrights here. Foreign licensors of content are reluctant to grant licenses to distribute content to Canadians because of fears of piracy. All of this hurts every segment of Canadian society including artists and other creators, publishers, intermediaries, and users.

Professor Geist denies that the main reason that “TPMs are circumvented is to facilitate piracy and that this undermines business models and e-commerce”.⁴⁵ Again, this misses the critical point that it is the lack of protection for works and the technical measures used to protect them that undermines business models and e-commerce.

Professor Geist refers to Apple iTunes as a successful model of a service that uses “TPMs to protect their songs” but “leaves the legislation out of it”.⁴⁶ iTunes is actually an example of a service that relies on the anti-circumvention provisions of the U.S. DMCA⁴⁷ to protect the DRMs it uses to protect the music made available at the site. It is an example of legitimate U.S. services such as Real’s Rhapsody, MusicMatch, Roxio’s Napster 2.0, Wal-Mart, Direct Connect, Music Now, Best Buy, buymusic.com and other services, all of which use DRMs. These businesses appear to be meeting consumer expectations in the marketplace. They allow consumers flexibility while preventing mass unauthorized copying.

There are other reasons to protect TPMs. Canada is a world leader in the adoption, use and development of e-business. It is Canada’s stated policy to support and facilitate continued growth of e-business in the Canadian economy. As the Canadian Government has pointed out in its *Framework document*, we can do this by building trust in the digital economy; clarifying marketplace rules, both domestically and internationally; and removing barriers to the use of e-commerce.

In order to establish a framework to increase the practice of electronic commerce, on September 22, 1998, the government adopted the *Canadian Electronic Commerce Strategy*. The strategy included the following:

Establishing a climate of trust with respect to electronic markets: employing cryptography, protection of personal information and consumer confidence;

Clarifying digital marketplace rules: countering the barriers to the development of commerce by establishing a legal, policy, taxation and regulatory framework that is clear, precise and provides guidance; and

Realizing the opportunities: understanding the importance of electronic commerce with respect to jobs and growth.⁴⁸

The Canadian government has moved to address these objectives in important ways. For example, the federal government enacted PIPEDA⁴⁹ to provide for the use of electronic means to communicate or record information or transactions under federal law and to amend the *Canada Evidence Act*⁵⁰ to remove impediments to the use of electronic evidence. PIPEDA also created a private sector privacy regime to protect the collection, use, and disclosure of personal information.

There have been other significant law reform efforts in Canada in the area of removing barriers to electronic commerce. The Uniform Law Conference of Canada developed draft uniform legislation to remove barriers to electronic commerce. In August 1998, it approved the *Uniform Electronic Evidence Act*.⁵¹ In September 1999, it adopted the *Uniform Electronic Commerce Act (the "UECA")*.⁵² These uniform pieces of legislation were enacted very quickly by provinces throughout Canada.

Encryption and other technological protection measures are increasingly being used to provide assurance in Internet transactions. Encryption is used, among other things, to provide assurances of message integrity (that the content of the message received is the same as that sent), confidentiality (to protect information from being viewed in transit or being transmitted to the wrong person), authentication (to provide assurances that an asserted identity is valid for a given person or computer system), and non-repudiation (holding the sender to his/her communication).

One of the objectives of the UECA was to facilitate contracting in electronic environments. By recognizing electronic communications including "clicks" on a screen and electronic signatures, provincial governments throughout the country implicitly acknowledged the importance of promoting certainty in e-transactions. Recognizing electronic communications enables contractual rights holders to enforce online bargains. TPMs and DRMs help rights holders achieve the same objective. Without them these rights holders have no practical means of enforcing terms related to licensed uses of works protected by copyright.

The establishment of a domain name system by the Canadian Internet Registration Authority (CIRA) to govern all ".ca" domain names was another important step. The development of its Domain Name Dispute Resolution Policy (the CDRP) has helped deal with abuses by cybersquatters who used the digital medium of the Internet to appropriate in bad faith the trade marks owned by entities doing business in Canada. Canadians have now put in place a system for permitting rights holders to obtain easy redress for new forms of piracy related to domain names that were made possible by the Internet.⁵³

Another development is the Federal/Provincial Internet Template to protect consumers doing business over the

Internet.⁵⁴ This template has been adopted provincially, resulting in amendments to numerous consumer protection statutes throughout Canada.

Why have all these developments occurred so rapidly? The answer, I believe, had a lot to do with promoting and facilitating e-commerce, developing trust and confidence, and removing barriers to its widespread adoption. They also happened so quickly because Canadian governments recognized the importance of keeping in step with international developments and harmonizing Canada's laws with those of its major trading partners. If Canada is to be a leader in e-commerce, it must move to facilitate the development of the appropriate environment and not permit, without good policy reasons, other trading partners to have superior legal frameworks that support e-commerce. Canada did not let this happen in the areas of privacy, consumer protection, and laws that *implemented the principles in the UNCITRAL Model Law*.⁵⁵

Canada has let itself fall behind, however, in implementing the WIPO Copyright Treaties. In December of 1996, delegates from 150 countries met in Geneva to determine whether international copyright reform was perceived necessary to stem the proliferation of illegal copying transmitted through electronic means. The question of whether to afford legal protection to TPMs was one of the items considered. Based on the general recognition that TPMs are vulnerable to circumvention, a consensus was reached that legal protection against circumvention was required. This consensus was ultimately reflected in Article 11 of the WCT⁵⁶ and Article 18 of the WPPT.⁵⁷

It is important to remember the goals behind the WCT, as reflected in the recitals thereto:

The Contracting Parties,

Desiring to develop and maintain the protection of the rights of authors in their literary and artistic works in a manner as effective and uniform as possible,

Recognizing the need to introduce new international rules and clarify the interpretation of certain existing rules in order to provide adequate solutions to the questions raised by new economic, social, cultural and technological developments,

Recognizing the profound impact of the development and convergence of information and communication technologies on the creation and use of literary and artistic works,

Emphasizing the outstanding significance of copyright protection as an incentive for literary and artistic creation,

Recognizing the need to maintain a balance between the rights of authors and the larger public interest, particularly education, research and access to information, as reflected in the Berne Convention.⁵⁸

The goals set out above are compatible with Canada's objectives regarding copyright and its strategy regarding e-commerce. Presumably, this is why Canada signed these treaties. As we know, Canada's major trading partners, including the U.S., Japan, most of the EU and Australia, have implemented or ratified the treaties,

including the provisions that relate to TPMs.⁵⁹ Canada has not.⁶⁰

The decision not to afford legal protection to TPMs could affect the possibility of Canada ratifying the WIPO Treaties. As Dr. Ian Kerr pointed out in his second study for the Department of Heritage, such a decision could result in Canada being deprived of the reciprocal protection afforded by other States under the treaties in the area of copyright.⁶¹

The Relationship Between Protecting TPMs and Promoting Innovation and e-Commerce

Professor Geist suggests there is no link between legal protection for TPMs and promoting e-commerce in copyright works. He asks the following questions: “Where is the evidence that the absence of legal protection for these technologies is needed to facilitate e-commerce? What e-commerce is not occurring today but for anti-circumvention legislation?” He also states “In fact, if anything, a Canadian decision to not follow the U.S. approach would open up new e-commerce opportunities for innovative companies that can bring products to market without fear of litigation”.⁶²

The link between protecting intellectual property rights and innovation was recently addressed in the European Proposal for a directive on measures and procedures to ensure the enforcement of intellectual property rights.⁶³ The European Union made it clear that strong protection for intellectual property is necessary to foster innovation in IP-based good and services.

Innovation has become one of the most important vectors of sustainable growth for businesses, and of economic prosperity for society as a whole. Businesses must constantly improve or renew their products if they wish to keep or capture market shares. Sustained inventive and innovative activity, leading to the development of new products or services, puts businesses at an advantage in technological terms and is a major factor in their competitiveness.

If businesses, universities, research organisations and the cultural sector are to be able to innovate and be creative under good conditions, it should be ensured that creators, researchers and inventors in the Community benefit from an environment favourable to the development of their activities, including as regards the new information and communication technologies ...

Businesses, which often invest large amounts of money in research and development, marketing and publicity, must be in a position to recoup their investments. Appropriate and effective protection of intellectual property helps to establish the confidence of businesses, inventors and creators in the Internal Market and is a powerful incentive for investment, and hence for economic progress.⁶⁴

The effect of counterfeiting and piracy on innovation was described as follows:

The phenomenon of counterfeiting and piracy leads to businesses losing turnover and market shares (loss of direct sales) which they have sometimes had difficulty acquiring, not to mention the intangible losses and the moral prejudice they

suffer because of the loss in terms of brand image with their customers (loss of future sales). The spread of counterfeit and pirated products in fact leads to a prejudicial downgrading of the reputation and originality of the genuine products particularly when businesses gear their publicity to the quality and rarity of their products. This phenomenon also involves additional costs for businesses (costs of protection, investigations, expert opinions and disputes) and in certain cases may even lead to tort actions against the *de facto right holder of the products marketed by the counterfeiter or pirate* where the proof of good faith cannot be brought ...

If counterfeiting and piracy are not punished effectively, they lead to a loss of confidence amongst operators in the Internal Market as an area for developing their activities and protecting their rights. The effect of this situation is to discourage creators and inventors and to endanger innovation and creativity in the Community.⁶⁵

The European Union enacted a Directive to harmonize copyright among member states.⁶⁶ The *EU Copyright Directive* stressed the need to create a general and flexible legal framework at Community level in order to foster the development of the information society in Europe. In enacting the directive, the EU recognized that copyright and related rights play an important role in protecting and stimulating the development and marketing of new products and services and the creation and exploitation of their creative content.

The EU acknowledged that a harmonised legal framework on copyright and related rights “providing for a high level of protection of intellectual property, will foster substantial investment in creativity and innovation” and lead “to growth and increased competitiveness of European industry, both in the area of content provision and information technology and more generally across a wide range of industrial and cultural sectors”. The Europeans believed that this would “safeguard employment and encourage new job creation”. They also recognized that technological development has multiplied and diversified the vectors for creation, production and exploitation and, as a consequence, “the current law on copyright and related rights should be adapted and supplemented to respond adequately to economic realities such as new forms of exploitation”.⁶⁷

The *EU Copyright Directive* was the means used by the EU to implement the *WIPO Copyright Treaty*, including the provisions thereof that protect TPMs. The recitals to the *EU Copyright Directive* show the European Community belief in the importance of the link between strong protection for copyright and innovation and for maintaining cultural diversity.

Any harmonisation of copyright and related rights must take as a basis a high level of protection, since such rights are crucial to intellectual creation. Their protection helps to ensure the maintenance and development of creativity in the interests of authors, performers, producers, consumers, culture, industry and the public at large. Intellectual property has therefore been recognized as an integral part of property.

If authors or performers are to continue their creative and artistic work, they have to receive an appropriate reward for

the use of their work, as must producers in order to be able to finance this work. The investment required to produce products such as phonograms, films or multimedia products, and services such as “on demand” services, is considerable. Adequate legal protection of intellectual property rights is necessary in order to guarantee the availability of such a reward and provide the opportunity for satisfactory returns on this investment.

A rigorous, effective system for the protection of copyright and related rights is one of the main ways of ensuring that European cultural creativity and production receive the necessary resources and of safeguarding the independence and dignity of artistic creators and performers.

Adequate protection of copyright works and subject matter of related rights is also of great importance from a cultural standpoint. Article 151 of the Treaty requires the Community to take cultural aspects into account in its action.⁶⁸

The EU went further by explicitly recognizing the link between protecting TPMs to protect works and to thereby accomplish the goals of promoting the creation and dissemination of works.

A common search for, and consistent application at European level of, technical measures to protect works and other subject-matter and to provide the necessary information on rights are essential insofar as the ultimate aim of these measures is to give effect to the principles and guarantees laid down in law.⁶⁹

Technological development will allow rightholders to make use of technological measures designed to prevent or restrict acts not authorised by the rightholders of any copyright, rights related to copyright or the *sui generis right in databases*. The danger, however, exists that illegal activities might be carried out in order to enable or facilitate the circumvention of the technical protection provided by these measures. In order to avoid fragmented legal approaches that could potentially hinder the functioning of the internal market, there is a need to provide for harmonised legal protection against circumvention of effective technological measures and against provision of devices and products or services to this effect.⁷⁰

To accomplish the objectives set out above, the *EU Copyright Directive* included a specific article on the protection of technological measures and rights management information.⁷¹

The New Zealand government also recognized that “A modern and effective copyright regime” is an important ingredient in achieving the government’s stated key goals, particularly those designed to: “grow an inclusive, innovative economy for the benefit of all New Zealanders; strengthen national identity; and improve the skills of New Zealanders”. It also recognized that “An effective copyright regime is also a key element in government initiatives aimed to achieve these goals in the areas of electronic-commerce, arts, culture and heritage, economic and industry development and education”.⁷²

The New Zealand government went further, drawing a direct connection between protecting TPMs and promoting innovation in Internet commerce involving copyright works:

Technological protection measures and electronic rights management information mechanisms are designed to deter attempts to make unauthorised use of copyright works. In this way they encourage owners to utilise digital

technology and use new distribution media like the Internet and provide a wider range of copyright products to the public. Ensuring that there is adequate protection under the law to prevent circumvention of such measures will therefore benefit users as well as creators and copyright owners.⁷³

The relationship between strong protection for copyrights and protecting culture has also been recognized. For example, the New Zealand government acknowledged that “An effective copyright regime is also a key element in government initiatives aimed to achieve these goals in the areas of electronic-commerce, arts, culture and heritage, economic and industry development and education”.⁷⁴

The Commission of the European Communities has similarly underscored the relationship between strong copyright protection and the preservation and development of the cultural sector. The EC Commission recently wrote that “Intellectual property rights hold particular relevance for the cultural sector, especially in the audiovisual sphere. A lack of adequate protection would not only severely trammel the development of a major economic sector but would, above all, pose a threat to our heritage and cultural diversity”.⁷⁵ This policy consideration, which is apropos our own diverse society, was expressed as follows:

What marks this sector out from others is the fact that it constitutes a key element of our society, so that it is essential not only to preserve it but especially to promote its development. Yet it is particularly under threat from piracy. The cultural sphere (including the music publishing and audiovisual sectors) puts its losses through counterfeiting and piracy at more than 4.5 billion euro annually. On the audiovisual side, for example, piracy of works that meet with a certain degree of success not only deprives the authors of their rights but also makes it impossible to maintain plurality. This applies in particular to works published in a limited quantity, often stemming from the cultures of smaller Member States where there are no economies of scale. Moreover, the replacement of analogue by digital media has considerably exacerbated the problem.⁷⁶

Arguments Against TPMs

Professor Geist makes a number of arguments against protecting TPMs. Each of these arguments is dealt with below.

Restrictions on Use of Content

One of Professor Geist’s concerns about TPMs is that consumers “may find themselves locked out of content they have already purchased, while sacrificing their privacy ... rights in the process”.⁷⁷ Professor Geist did not expand much on these arguments in his article or reply. Presumably, however, his concerns are directed to use of DRMs by rights holders. As Kerr has explained,

A digital rights management system typically involves two core concepts: i) a database containing information that identifies the content and rights holders of a work, and ii) a licensing arrangement which establishes the terms of use for the underlying work. DRMs permit the exchange of usage

information among rights owners and distributors, and establish the manner in which a work may be used.⁷⁸

DRMs facilitate the electronic management and marketing of usage rights in digital content. Digital content can be text, graphics, images, audio, video or software in digital format. DRM systems are mainly applied to media products, great parts of which are protected by copyright. DRM systems are embedded in both the physical distribution of CDs, DVDs, and other media and in online distribution, such as the online delivery of music files, e-books, games, pay TV and video-on-demand. Online distribution takes place over the Internet, interactive TV cable networks, and via wireless networks.

The recent *Indicare Study, Digital Rights Management and Consumer Acceptability: A Multi-Disciplinary Discussion of Consumer Concerns and Expectations*⁷⁹ points out that DRMs have generated high expectations in the context of the discussions on the management of copyright and related rights in the new digital environment. DRMs are capable of controlling, monitoring and metering most uses of a digital work. They can be used to clear rights, to secure payment, to trace behaviour and to enforce rights.⁸⁰

DRMs enable a wide variety of business models. They are seen as being crucial for the development of new *business models, in which pricing schemes, subscription models, credit sales and billing schemes could be incorporated. DRMs permit different price-points for services, such as “à la carte” downloads, subscriptions, or rental and preview. Business models might also include network downloads, streaming, rights lockers, broadcasts, and super distribution using P2P technologies. In contrast to traditional distribution, consumers could gain wider access to content wherever and whenever they choose. Given their ability to unbundle copyright into discrete and custom-made products, DRMs promise a much greater range of consumer choice and perhaps even a reduction in prices.*⁸¹

If DRM systems are subject to the escalating “arms race” between those who design them and those who defeat them, one might expect that some businesses will decide not to offer copyright works online or to offer them with fewer choices for the consumer. If consumers can circumvent restriction enforcements embedded in DRMs, then no business model can recoup the content provider’s loss of revenue. For a wide variety of high-quality content to be made available by rights holders, the latter need to be compensated for their creative work. Consumers and the society as a whole will profit from flourishing markets for information and creative works.⁸²

Further, if someone can separate the content from the TPM, that person can distribute the unprotected content over the Internet. As the *Indicare Study* also explains,

Therefore, from the technology point of view content protection is perhaps the most important aspect of DRM. In fact, technologists often see copy protection as the foundation to DRM, with everything following from, and building on it. If a building has inadequate foundations, it may pro-

vide the necessary accommodation and be aesthetically pleasing, but it will not be structurally sound.⁸³

DRMs might also be seen as technology that levels the playing field, enabling smaller- and medium-sized businesses to compete with bigger businesses. The “major” recording companies, movie studios, publishers and software companies might be able to withstand some losses from online piracy. Smaller labels, publishers, and producers may not. DRMs enable these smaller entities to lower their risk of making a major capital investment only to find that there is no market for the product’s distribution because everyone already has it for “free”. To this extent, DRMs promote competition in the market for digital content.

DRMs use Rights Expression Languages (RELs) to provide a concise mechanism for expressing rights over DRM content. RELs are independent of the content being distributed, the mechanisms used for distributing the content, and the billing mechanisms used to handle payments. An example is XrML (extensible rights markup language), a digital rights language software. Another example is Open Digital Rights Language (ODRL). The basic rules of RELs were in the nature of “do not copy”, “do not print” or “do not show”.

*The Indicare Study points out that in newer RELs, focus has been given to user expectations. It points out that symmetric rights expression languages can be created from traditional RELs by adding semantics that take into account the expectations of content providers and consumers. It also suggests that DRM systems could be a step towards overcoming much of the criticism related to fair use (fair dealing in Canada).*⁸⁴

Professor Geist’s concern about consumers being “locked out of content” because of TPMs (or DRMs) needs to be balanced against the major potential benefits to consumers through the choices that DRMs make possible. It is rational to think that in a competitive marketplace businesses would want to exploit new technologies that give consumers more choice. Satisfied consumers buy products and services. (Just look at Apple’s iPod and iTunes products, which use DRMs very successfully to create products that benefit consumers and Apple’s shareholders.) Newer RELs can also be used to take into account the expectations of consumers.

Professor Geist expresses concern over the use of regional coding technologies which make importing such protected works from one country to another difficult. The potential for this is real. However, the magnitude of the actual problem is uncertain. To the extent this is a problem, I would suggest that its significance needs to be weighed against the benefits of the controls. *Regional coding is part of the DeCSS DRM used on DVDs. It is used by the studios to protect their marketing windows, e.g., to avoid DVD release in a market where the film is still in theatrical release, or available only through premium cable/satellite services.*

Professor Geist's point about consumers being "locked out" of content they have already purchased may be influenced by a concern that consumers will acquire content pursuant to misleading or false representations, or material non-disclosures concerning the usage limitations associated with DRMs. There is legislation to ensure that contracts are fair including consumer protection legislation and business practices legislation. These pieces of legislation give consumers important remedies in such circumstances. There are also common-law and equitable doctrines that protect against misrepresentation, unconscionability and contracts of adhesion.

Privacy

Professor Geist also argues that because of TPMs consumers "may find themselves ... sacrificing their privacy". He goes on to argue: "The same technologies can function much like spyware by invading the personal privacy of users. For example, technological protection measures can be used to track consumer activity and report the personal information back to the parent company".⁸⁵

There is no doubt that business models that involve metering of uses of content could involve the collection and use of personal information. What is not clear is why collection of information by content holders in providing a service to consumers should be a different concern than in any other context. There are thousands of businesses today, online and offline, including financial institutions, retailers, and service providers that collect huge amounts of personal information. In many cases information is collected to better serve the consumer. Credit card issuers monitor our spending habits. Card issuers can tell you exactly how much you spend in each consumer good category. Library databases keep records of what you read. Video stores and video on demand services know what you watch and, more or less, when you watch. Many of the existing databases are more intrusive than DRMs because they are aggregators of information.

PIPEDA⁸⁶ was specifically enacted by Parliament to enable Canadian businesses to launch innovative new e-commerce initiatives that involve the collection of personal information, while at the same time giving consumers trust and confidence that such information would not be abused. TPMs do not raise unique questions about the collection, use or disclosure of personal information. PIPEDA imposes a "reasonableness" standard in relation to the collection and use of personal information. It also establishes a regime that would apply to the collection, use or disclosure of personal information by content providers using DRMs. This might entail the development of technical tools offering privacy compliant properties, and more generally, for a transparent and limited use of unique identifiers, with a choice option for the user.⁸⁷

Complying with PIPEDA is a must for Canadian businesses that use DRMs. In this regard, there is no reason to think that Canadian businesses would use "spyware" — that is, a software tool installed on a consumer's computer without the knowledge and consent of the consumer. In this respect, consumers who are privacy conscious might be better off dealing with a business located in Canada than one located in the U.S. or in other countries that don't have comprehensive private-sector privacy legislation.

TPMs Effects on Fair Dealing and Innovation

Professor Geist makes other arguments against legislation to protect TPMs. He says:

From a traditional copyright perspective, anti-circumvention legislation, acting in concert with technological protection measures, has steadily eviscerated fair use rights such as the right to copy portions of work for research or study purposes, since the blunt instrument of technology can be used to prevent all copying, even that which copyright law currently permits.⁸⁸

I do not disagree that there is the potential to limit through technology activities that owners of copies of works might otherwise be able to perform without infringing any copyrights. Examples would include actions that might be excused as a "fair dealing", or which might not violate any exclusive right at all. Technical prohibitions against copying do not prevent the use of ideas embodied in a work, as has been suggested. They could be used, however, to restrict forms of access that users might otherwise desire. And there is truth that TPMs could be used to control uses of works as part of a "permissions-based society", even though it might not be in creators' interests to do so. There is a point where overly broad copyright protection can inappropriately inhibit uses of works and innovation and thereby be contrary to the public interest.⁸⁹

Copyright law should take into account the needs of users and subsequent innovators in determining the right balance. The progress in both science and art is incremental and cumulative. This is summed up in the well-known statement of Sir Isaac Newton who wrote, "If I have seen far it is by standing on the shoulders of giants". The metaphorical "shoulders of giants" on which successors may legally stand are not unlimited, however. As was pointed out in the *Lotus Development Corp. v. Paperback Software International* case, "The legally relevant shoulders of programming giants are their ideas — and do not extend to all of their expressions. The encouragement of innovation requires no more".⁹⁰

Copyright provides creators with a monopoly over the commercial exploitation of their work for a limited time. Like any monopoly, it imposes costs on society. But, as I pointed out earlier, our laws grant such monopolies because it provides a benefit to society by providing an

incentive for the production of original works, which often require substantial investments in order to come into being. The incentives provided by copyright protection are designed to encourage innovation by creators. A system that eliminates incentives for creators, by allowing works to be easily appropriated by others without compensation, would likely lead to a decline in innovation.⁹¹

The policy issue, however, is not, as some would have it, whether protecting TPMs could have the effect of inhibiting some fair dealing or innovation. The relevant question to ask is how protecting or not protecting TPMs would impact on the overall increase or decrease in the quantity and quality of works being made available to the public. Specifically, the question is what would be the overall impact on innovation in the Canadian economy, including innovation in e-commerce for copyright materials. Any balanced discussion of the issue must look at these policy considerations from all sides.

Professor Geist contends that the experience with technological protection measures under the DMCA “demonstrates the detrimental impact of this policy approach — Americans have experienced numerous instances of abuse that implicate . . . user rights under copyright.”⁹²

This assertion is contradicted by the U.S. Copyright Office that specifically examined this issue. The Copyright Office examined the deployment of technological measures in 2000 and 2003. It found that, by and large, TPMs had not been used in a heavy-handed or inappropriate way.⁹³ In 2003, the U.S. Copyright Office examined whether TPMs interfered with fair use and other limitations to copyright. The Copyright Office strongly defended the use of TPMs and found that on balance they expanded product availability and consumer choice. The following extracts from the Copyright Office’s report is instructive on this issue:

... commentators seek to “platform shift” their sound recordings or motion pictures. However, tethering and DRM policies serve a legitimate purpose for limiting access to certain devices in order to protect the copyright owners from digital redistribution of their works. Moreover, consumers have choices of formats and may decide whether their intended use is best served by a digital online version or by another available version of a work. While availability for use has been restricted in certain digital formats, the overall availability for use of these works has not been adversely affected. The effect of circumvention of the protection measures employed on these works would likely decrease the digital offerings for these classes of works, reduce the options for users, and decrease the value of these works for copyright owners.⁹⁴

In the context of motion pictures on DVD (and the desire by proponents of an exemption to circumvent CSS to watch DVDs on Linux) the Copyright Office made the point much more clearly:

As a general proposition, the DVD medium has increased the availability of motion pictures for sale and rental by the general public, and the motion picture studios’ willingness to distribute their works in this medium is due in part to the faith they have in the protection offered by CSS. The

balancing of the incremental benefit of allowing circumvention for the purposes of watching a movie on a Linux-based computer is outweighed by the threat of increased piracy that underlies Congress’ motivation for enacting section 1201.⁹⁵

The Digital Connections Council, an organization whose mandate is to assess the effect of intellectual property policies on economic growth, productivity and innovation, concluded that in spite of the criticisms levied against DRMs, they are needed to give rights holders sufficient confidence to conduct business over the Internet. Moreover, while rejecting other initiatives proposed by rights holders to strengthen their hands against would-be infringers, or those whose actions are seen as facilitating infringement because of the potential to inhibit innovation, the Council nevertheless did endorse the use and protection of TPMs. The Council’s views on this issue were expressed as follows:

We recognize the need for digital rights management (DRM) systems that will allow creators to be rewarded for their efforts. We are skeptical about government-mandated DRM, and we recommend that manufacturers not be required to build in mandated copy protection technologies. But DRM systems provide a useful “speed bump” for consumers by inhibiting unauthorized uses of materials . . .⁹⁶

Yet even with these difficulties, some forms of DRM are likely to be part of the solution to today’s controversy. Clearly there is a need to make rights-holders confident enough about being rewarded that they will make their works available to the public. And even though DRM systems may be cracked, they will serve as speed bumps; most consumers will accept DRM limitations and not use available work-arounds, particularly if they feel that they are getting adequate value for their money — as can be seen from the widespread consumer use of DVDs whose protection scheme was cracked several years ago. But as in other markets, it would be preferable to have competition rather than fiat in the DRM market and assured appropriate consumer access to protected content. Consumers will benefit most from simple DRM that they understand well. Making consumers spend a lot of time thinking about whether they want to spend a dime on this song now or later or never will create a good deal of social cost, and requiring complex DRM systems may reduce their commercial potential. It is critical to acceptance of DRM systems that they be simple, convenient, easy to use, and easily understood by consumers.⁹⁷

In the present state of technology, it is impossible to monitor private copying to assure that copies are made only for non-infringing uses. A TPM that allows circumvention for “non-infringing” purposes necessarily allows circumvention for any use, including piratical ones. There is no way to control how the means to circumvent is used once the tool is in the hands of a user. When one considers the question of the balance between promoting innovation in the creation and distribution of works and the limited impacts on innovation and fair dealing, the public interest, in my view, is heavily weighed in favour of protecting TPMs and protecting copyrights.

Professor Geist’s point about TPMs necessarily eviscerating “fair use rights” also rests on several other premises

that are open to question. First, it has not yet been determined in Canada that users actually have “rights” in works they acquire. The reference to user’s rights by the Supreme Court in the *CCH* case was intended to emphasize that the fair dealing defence to copyright infringement was not to be interpreted restrictively. The court decision is otherwise clear that “fair dealing” is a defence to infringement; one that the defendant has the procedural onus of proving. In the U.S. “fair use” is also regarded as an affirmative defense that the putative infringer has the burden of carrying.⁹⁸ Simply put, use limitations imposed on content through DRMs do not violate any legal “rights” of users.

Professor Geist’s point about TPMs necessarily eviscerating “fair use rights” also suggests that users of content have “rights” to access and use content in any manner they desire rather than the manner in which the content is made available by rights holders. It is a basic tenet of property law, however, that an owner may do what he or she desires with his or her personal property. This includes determining the conditions of use of property. Authors have always been free to choose whether and when to make their works available to the public, and how to do so.

A number of practical illustrations make the point. In the physical world, someone claiming a “right” of fair dealing can’t go into the Great Library and demand the right to make a photocopy of an old book whose spine is too frail to open or whose pages are too faded to make good copies. People also don’t have the right to force providers of video on demand services to sell copies of the movies they broadcast because they want to copy portions from an original to make near perfect copies for study purposes. Movies studios also do not have any obligation to release motion pictures in video formats that facilitate copying. Neither can people demand that their cable providers descramble their signals so that they can watch programming they have not decided to purchase, or so they can watch a program many times, even though they are only willing to pay for one viewing. The fair dealing defense simply does not create a right for what is the technological equivalent of breaking and entering.

One final example, closer to home: if Carswell publishes my book on Computer, Internet, and E-Commerce Law only in print form, readers who might crave an electronic copy (as I’m sure you all do) don’t have the right to demand that Carswell distribute my book on CD or make it available as part of a Web-based service so that anyone can copy it and distribute it to the world for free. If Carswell someday does decide to make my book available electronically as part of a Web-based service, it would be reasonable for it to come up with a flexible system of metering use so that readers can pay for what they really want. DRMs will enable Carswell to make my book available online and to do so in ways that (hopefully) benefit the public.

Nothing in the fair dealing defense ensures that every work is available in every format to every user who seeks access. Several U.S. cases that have considered this issue have come to this conclusion in regard to the fair use defense under the U.S. Copyright Act. In *Corley*, the Second Circuit Court of Appeals stated:

We know of no authority for the proposition that fair use, as protected by the Copyright Act, much less the Constitution, guarantees copying by the optimum method or in the identical format of the original. . . Fair use has never been held to be a guarantee of access to copyrighted material in order to copy it by the fair user’s preferred technique or in the format of the original.⁹⁹

The Court in a separate criminal case, *U.S. v. Elcom* came to the same conclusion:

Nothing in the DMCA prevents anyone from quoting a work or comparing texts for the purpose of study or criticism. . . Defendant has cited no authority which guarantees a fair user the right to the most technologically convenient way to engage in fair use. The existing authorities have rejected that argument.¹⁰⁰

The concept of TPM’s necessarily eviscerating “fair use rights” also suggests that “user rights” are inalienable and can’t be given up, even when it is in the end user’s interest to do so, so as to obtain access to content under terms that are otherwise attractive. However, just as copyright law permits rights holders to license and assign rights, and authors to “waive” moral rights, users of copyright can waive any defences (or, for the sake of argument, any rights) they may have to use works in the manner contemplated by copyright. Fair dealing for research and private study are examples. In the U.S. it is well established that users can contractually waive their fair use “rights” (or defences), such as the “right” to reverse engineer a product.¹⁰¹ There is no good reason to think that Canadian law is any different on this point.

Of course, if the concern is that under no circumstance should consumers be permitted to waive “rights” of fair dealing, then the issue raises broader questions. In particular, it raises the question as to whether there is any overriding public policy reason not to enforce such contracts with consumers when the Copyright Act recognizes other agreements, express and implied, in respect of copyrights. Are fair dealing “rights” more valuable than copyrights that are permitted to be licensed and assigned? Are “rights” of fair dealing inherently more valuable than moral rights that can be waived?

There is no reason to think that such contracts would necessarily be unfair, or more unfair than any others in relation to copyright. The enforceability of such contracts would be subject to the same doctrines as any other contracts, including the doctrines related to misrepresentation, unconscionability and adhesion. Unauthorised uses are very damaging in the digital environment. Limited use authorisations become permanent usage; individual uses become public distributions; uncompensated uses substitute for legitimate exploitation; traditional sales are hurt, new business models

become uneconomic, and consumer choice is thereby restricted. TPMs promote new usage and pricing options for consumers while at the same time protecting against interference with and unreasonable prejudice to rights of content holders. In this context, it seems quite fair to enforce such contracts.

The DMCA has Changed the Balance in Copyright Law

One of Professor Geist’s main points is that TPMs and the DMCA have eviscerated the balance inherent in copyright law. The recent *Chamberlain*¹⁰² and *Lexmark*¹⁰³ U.S. appeal decisions referred to by Professor Geist that have examined the DMCA’s anti-circumvention provisions have, however, construed its provisions with the intent of maintaining the balance of objectives of copyright law. In fact, these decisions have stressed the importance of not negatively impacting consumer expectations. They have not been the disaster that Professor Geist suggests, but rather stand for precisely the contrary proposition: the DMCA has worked as intended, without negatively impacting consumers.

By way of background, the U.S. DMCA was enacted in 1998 to implement the *WIPO Copyright Treaty*, which requires contracting parties to

provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law.¹⁰⁴

Even before the treaty, Congress had been devoting attention to the problems of copyright enforcement in the digital age. Hearings on the topic had spanned several years. This legislative effort resulted in the DMCA.

Congress crafted the new anti-circumvention and anti-trafficking provisions in the DMCA to help bring U.S. copyright law into the information age. Congress had recognized that advances in digital technology had stripped copyright owners of much of the technological and economic protection to which they had grown accustomed. Large-scale copying and distribution of copyrighted material used to be difficult and expensive. It is now easy and inexpensive.

Congress, in enacting the DMCA, expressed concerns about the threat of “massive piracy” of digital works due to “the ease with which [they] can be copied and distributed worldwide virtually instantaneously”. As Congress saw it,

copyrighted works will most likely be encrypted and made available to consumers once payment is made for access to a copy of the work. [People] will try to profit from the works of others by decoding the encrypted codes protecting copyrighted works, or engaging in the business of providing devices or services to enable others to do so.¹⁰⁵

Backing with legal sanctions “the efforts of copyright owners to protect their works from piracy behind digital

walls such as encryption codes or password protections”, Congress noted, would encourage copyright owners to make digital works more readily available. Congress therefore crafted legislation restricting some, but not all, technological measures designed either to access a work protected by copyright, § 1201(a), or to infringe a right of a copyright owner, § 1201(b).¹⁰⁶

Congress recognized that technological access control measures have the capacity to prevent fair uses of copyrighted works as well as foul. Hence, there is a potential tension between the use of such access control measures and fair use, as well as the much broader range of explicitly non-infringing uses. As the DMCA made its way through the legislative process, Congress was preoccupied with precisely this issue. Proponents of strong restrictions on circumvention of access control measures argued that they were essential if copyright holders were to make their works available in digital form since digital works could otherwise be pirated too easily. Opponents contended that strong anti-circumvention measures would extend the copyright monopoly inappropriately and prevent many fair uses of copyrighted material. Congress enacted the DMCA with the intent of striking a balance between those interests.¹⁰⁷

Prior to the DMCA, a copyright owner would have had no cause of action against anyone who circumvented any sort of technological control, but did not infringe. The DMCA rebalanced these interests to favour the copyright owner. The importance of “rebalancing” interests in light of recent technological advances is manifest in the DMCA’s legislative history. This rebalancing is summarized in the Chamberlain case as follows:

The most significant and consistent theme running through the entire legislative history of the anti-circumvention and anti-trafficking provisions of the DMCA, §§ 1201(a)(1),(2), is that Congress attempted to balance competing interests, and “endeavored to specify, with as much clarity as possible, how the right against anti-circumvention would be qualified to maintain balance between the interests of content creators and information users”. H.R. Rep. No. 105-551, at 26 (1998). The Report of the House Commerce Committee concluded that § 1201 “fully respects and extends into the digital environment the bedrock principle of ‘balance’ in American intellectual property law for the benefit of both copyright owners and users”.¹⁰⁸

Section 1201 of the DMCA divides technological measures into two categories: measures that prevent unauthorized access to a copyrighted work and measures that prevent unauthorized copying of a copyrighted work. Making or selling devices or services that are used to circumvent either category of technological measure is prohibited in certain circumstances. As to the act of circumvention in itself, the provision prohibits circumventing the first category of technological measures, but not the second.¹⁰⁹

This distinction was employed to assure that the public will have the continued ability to make fair use of copyrighted works. Since copying of a work may be a fair use

under appropriate circumstances, § 1201 does not prohibit the act of circumventing a technological measure that prevents copying. By contrast, since the fair use doctrine is not a defense to the act of gaining unauthorized access to a work, the act of circumventing a technological measure in order to gain access is prohibited.¹¹⁰

*Section 1201 proscribes devices or services that fall within any one of the following three categories: they are primarily designed or produced to circumvent; they have only limited commercially significant purpose or use other than to circumvent; or they are marketed for use in circumventing.*¹¹¹

Section 1201 contains two savings provisions. First, section 1201(c)(1) states that nothing in § 1201 affects rights, remedies, limitations or defenses to copyright infringement, including fair use. Second, § 1201(c)(2) states that nothing in § 1201 enlarges or diminishes vicarious or contributory copyright infringement. The prohibitions contained in § 1201 are also subject to a number of exceptions. The exceptions include those for non-profit library, archive and educational institutions;¹¹² reverse engineering to achieve interoperability;¹¹³ encryption research;¹¹⁴ protection of minors;¹¹⁵ personal privacy;¹¹⁶ and security testing.¹¹⁷

The scope of the DMCA's anti-circumvention provisions was comprehensively reviewed by the Federal Circuit Court of Appeals in *Chamberlain*. The dispute there involved Chamberlain's Security+ line of GDOs and Skylink's Model 39 universal transmitter. Chamberlain's Security+ GDOs incorporated a copyrighted "rolling code" computer program that constantly changes the transmitter signal needed to open garage doors. Skylink's Model 39 transmitter, which does not incorporate rolling code, nevertheless allows users to operate Security+ openers. Chamberlain alleged that Skylink's transmitter rendered the Security+ insecure by allowing unauthorized users to circumvent the security inherent in rolling codes. Of greater legal significance, however, Chamberlain contended that because of this property of the Model 39, Skylink was in violation of the anti-traffic-ficking clause of the DMCA's anti-circumvention provisions, specifically § 1201(a)(2).

Chamberlain claimed that the DMCA overrode all pre-existing consumer expectations about the legitimate uses of products containing copyrighted embedded software. It contended that Congress empowered manufacturers to prohibit consumers from using embedded software products in conjunction with competing products when it passed § 1201(a)(1). According to Chamberlain, all such uses of products containing copyrighted software to which a technological measure controlled access were now *per se illegal under the DMCA unless the manufacturer provided consumers with explicit authorization*. Chamberlain did not allege that Skylink's Model 39 infringed its copyrights, nor did it allege that the Model 39 contributed to third-party infringement of its copyrights. Chamberlain's allegation was simply that the only

way for the Model 39 to interoperate with a Security+ GDO was by "accessing" copyrighted software.

Chamberlain urged the court to read the DMCA as if Congress created a new protection for copyrighted works without any reference at all to either the protections that copyright owners already possessed or to the rights that the U.S. *Copyright Act grants to the public*. It argued that no necessary connection had to exist between access and copyrights.

Skylink argued that the DMCA should not be construed to reach its conduct or product because the DMCA, so applied, could prevent those who wish to gain access to technologically protected copyrighted works in order to make non-infringing use of them from doing so. The court rejected Chamberlain's construction of the DMCA. According to the court:

Contrary to Chamberlain's assertion, the DMCA emphatically did not "fundamentally alter" the legal landscape governing the reasonable expectations of consumers or competitors; did not "fundamentally alter" the ways that courts analyze industry practices; and did not render the pre-DMCA history of the GDO industry irrelevant . . .¹¹⁸

Such a regime would be hard to reconcile with the DMCA's statutory prescription that "[n]othing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title". 17 U.S.C. § 1201(c)(1). A provision that prohibited access without regard to the rest of the *Copyright Act* would clearly affect rights and limitations, if not remedies and defenses.

Chamberlain's proposed construction would allow copyright owners to prohibit exclusively fair uses even in the absence of any feared foul use. It would therefore allow any copyright owner, through a combination of contractual terms and technological measures, to repeal the fair use doctrine with respect to an individual copyrighted work or even selected copies of that copyrighted work. Again, this implication contradicts § 1201(c)(1) directly. Copyright law itself authorizes the public to make certain uses of copyrighted materials. Consumers who purchase a product containing a copy of embedded software have the inherent legal right to use that copy of the software. What the law authorizes, Chamberlain cannot revoke.¹¹⁹

Chamberlain's proposed severance of "access" from "protection" is entirely inconsistent with the context defined by the total statutory structure of the *Copyright Act*, other simultaneously enacted provisions of the DMCA, and clear Congressional intent¹²⁰

. . . The statutory structure and the legislative history both make it clear that the DMCA granted copyright holders additional legal protections, but neither rescinded the basic bargain granting the public noninfringing and fair uses of copyrighted materials, § 1201(c), nor prohibited various beneficial uses of circumvention technology, such as those exempted under §§ 1201(d),(f),(g),(j). See Reimerdes, 111 F. Supp. 2d at 323.

We therefore reject Chamberlain's proposed construction in its entirety. We conclude that 17 U.S.C. § 1201 prohibits only forms of access that bear a reasonable relationship to the protections that the *Copyright Act* otherwise affords copyright owners. While such a rule of reason may create some uncertainty and consume some judicial resources, it is the only meaningful reading of the statute. Congress attempted to balance the legitimate interests of copyright owners with those of consumers of copyrighted products.

See H.R. Rep. No. 105-551, at 26 (1998). The courts must adhere to the language that Congress enacted to determine how it attempted to achieve that balance. See *Gwaltney*, 484 U.S. at 56. . .

The DMCA cannot allow Chamberlain to retract the most fundamental right that the *Copyright Act grants consumers*: the right to use the copy of Chamberlain’s embedded software that they purchased.¹²¹

After categorically rejecting Chamberlain’s attempts to read the TPM provisions in a broad fashion that would significantly alter the balance of copyright, the court set out what must be proved to make out a violation of § 1201(a)(2): (1) ownership of a valid copyright on a work, (2) effectively controlled by a technological measure, which has been circumvented, (3) that third parties can now access (4) without authorization, in a manner that (5) infringes or facilitates infringing a right protected by the Copyright Act, because of a product that (6) the defendant either (i) designed or produced primarily for circumvention; (ii) made available despite only limited commercial significance other than circumvention; or (iii) marketed for use in circumvention of the controlling technological measure. A plaintiff incapable of establishing any one of elements (1) through (5) will have failed to prove a *prima facie* case. A plaintiff capable of proving elements (1) through (5) need prove only one of (6)(i), (ii), or (iii) to shift the burden back to the defendant. At that point, the various affirmative defenses enumerated throughout § 1201 become relevant.

The court summarized the findings as follows:

The DMCA does not create a new property right for copyright owners. Nor, for that matter, does it divest the public of the property rights that the *Copyright Act has long granted to the public*. The anti-circumvention and anti-traffic-ficking provisions of the DMCA create new grounds of liability. A copyright owner seeking to impose liability on an accused circumventor must demonstrate a reasonable relationship between the circumvention at issue and a use relating to a property right for which the *Copyright Act* permits the copyright owner to withhold authorization — as well as notice that authorization was withheld. A copyright owner seeking to impose liability on an accused trafficker must demonstrate that the trafficker’s device enables either copyright infringement or a prohibited circumvention. . . .¹²²

On the facts of the case, Chamberlain failed to show, among other things, the necessary fifth element of its claim, the critical nexus between access and protection. Chamberlain neither alleged copyright infringement nor explained how the access provided by the Model 39 transmitter facilitated the infringement of any right that the U.S. *Copyright Act* protects.

The Chamberlain opinion was recently followed in a case involving the owners of the copyrights in TrueType fonts and Adobe Systems, the publisher of the well-known Acrobat product. In *AGFA Monotype Corp. v. Adobe Systems, Inc.*¹²³ the plaintiff contended that Acrobat 5.0 allows users to complete forms and change text annotations using its TrueType fonts when such users have not obtained a license for the plaintiff to edit documents using its fonts. The Court dismissed claims

against Adobe based on the anti-circumvention provision of the DMCA. The Court did so for several reasons. One key one was because Acrobat did not facilitate infringement of the plaintiff’s TrueType fonts. Another was because Acrobat 5.0 was not designed or produced primarily for circumvention. It had more than a limited commercially significant purpose or use other than circumventing the embedding bits associated with the plaintiff’s TrueType fonts. The Court held that “[k]nowledge of a possible outcome does not equate to a company primarily designing or producing a technology for the purpose of circumvention”.¹²⁴ The *Adobe case* illustrates that U.S. courts are being vigilant to ensure that the DMCA is not being used to thwart the distribution of technology that only has the potential to be used for circumvention purposes.

The Threat of Litigation to Innovation

Professor Geist argues that the threat of litigation like the litigation involving *Chamberlain* and *Lexmark* could stifle innovation. Professor Geist states that “the threat and cost of litigation surely creates a significant drag on innovation by small and medium sized businesses”.¹²⁵

Interestingly, these cases are discussed in a lead story in *BNA’s Electronic Commerce & Law Report*.¹²⁶ The article, referring to the *Lexmark* case states that “it could be a godsend to third party manufacturers, making it much easier for them to fend off claims of copyright infringement”. The article also concludes that “the teachings of these two cases suggest a judicial reluctance to find liability for circumventing security measures where consumers legitimately expect to be able to use their equipment as intended”.¹²⁷

The point about litigation arising from changes to the law seems to me, in any event, to be a necessary potential consequence of any new laws that are enacted. All laws can generate disputes. The issue really is whether the benefit of enacting any particular law is adjudged as doing more good than harm. For example, Ontario recently passed some of the most stringent consumer protection legislation in the country. (The new regulations will be in force this July.) These laws are designed to give consumers more substantive rights including rights to sue businesses and to bring class action proceedings notwithstanding agreements with businesses to the contrary. Some businesses argued that this legislation will make doing business in Ontario more onerous and will subject businesses to more litigation. Still the province of Ontario believes that notwithstanding the potential impacts on businesses, protection of consumers is in the public interest. Environmental and securities regulation are two other obvious examples.

As far as the argument against TPMs goes, there is the potential for some litigation and perhaps businesses having to undertake due diligence before embarking on developing and marketing anti-hacking devices. In the U.S. there have been only a handful of cases so far. The

few cases in the U.S. do not suggest that the threat of being sued under the DMCA has inhibited legitimate businesses from launching new ventures that require the use of legal circumvention devices because of the DMCA.

Effect on the Public Domain

Professor Geist further argues that “anti-circumvention legislation, acting in concert with technological protection measures . . . also have the potential to limit the size of the public domain, since in the future, work may enter [the] public domain as its copyright expires, yet that content may be practically inaccessible as it sits locked behind a technological protection measure”.¹²⁸

It is not clear from Professor Geist’s article why a publisher would invest substantially in a work expecting to make a return on that investment, but yet make that work inaccessible to prevent generating a return from the investment. It is true that with TPMs a person could, through technological measures, protect a work that is in the public domain. This protection would be virtually meaningless, however, because that protection would extend only to the particular copy so protected. It would not prevent the copying or distribution of any of copies.

A copyright holder could theoretically also try to lock-up content during the period in which copyright subsists, and thereby inhibit its availability following the expiration of copyright therein. One really wonders whether TPMs could ever practically protect a work for such a long period of time. (At a minimum, it would be 50 years if the author dies immediately at the time of publication.)

In any event, neither scenario could be legally accomplished in the U.S. The recent decision of the U.S. Sixth Circuit Court of Appeals in *Lexmark*, referred to by Professor Geist, makes it clear that the anti-circumvention provisions of the DMCA cannot be used by a person to protect public domain works from being accessed:

... See generally Anti-Circumvention Rulemaking Hearing, at 44–56, at <http://www.copyright.gov/1201/2003/hearings/transcript-may9.pdf> (testimony of Professor Jane Ginsburg) (Section 1201(a) does not “cover[] the circumvention of a technological measure that controls access to a work not protected under [the Copyright] title. And if we’re talking about ball point pen cartridges, printer cartridges, garage doors and so forth, we’re talking about works not protected under this title”). . . .¹²⁹

All three liability provisions of this section of the DMCA require the claimant to show that the “technological measure” at issue “controls access to a work protected under this title”, see 17 U.S.C. § 1201(a)(2)(A)–(C), which is to say a work protected under the general copyright statute, id. § 102(a). To the extent the Toner Loading Program is not a “work protected under [the copyright statute]”, . . . the DMCA necessarily would not protect it.¹³⁰

Effects on Security and Security-Related Research

Professor Geist’s article raises an additional concern about the use of TPMs. He says “There is also concern that technological protection measures can be used to induce security breaches”. Given the problems associated with inducing security breaches (hacking) of TPMs, this seems like an inconsequential concern by comparison.

Professor Geist is also concerned about maintaining “a vibrant security research community”.¹³¹ He argues that protection for TPMs will result in chilling of speech for scientific research related to encryption research. This is an important concern. But it does not follow that having laws that prevent circumvention is necessarily incompatible with a vibrant security research community. In other areas the courts and governments have acted to prevent “breaking and entering” and surreptitious attempts to access information.

For example, confidential information will be protected under equitable principles if a substantial element of secrecy exists, and, except by the use of improper or surreptitious means, there would be difficulty in obtaining access to or acquiring the information.¹³² Data security is an important feature of privacy legislation, including the obligation to take reasonable security precautions to protect data in the *Personal Information Protection and Electronic Documents Act (PIPEDA)*.¹³³

Part VI of the *Criminal Code*, which relates to protections against invasions of privacy, contains provisions that make the wilful interception of private communication by any “electromagnetic, acoustic, mechanical or other device” an indictable offence.¹³⁴ The Code also makes the wilful interception of a radio-based telephone communication by any electromagnetic, acoustic, mechanical, or other device an indictable offence. The Code also contains an anti-device measure that can be used for the surreptitious interception of private communications.

Part IX of the *Criminal Code*, which addresses offences against rights of property, also contains provisions relevant to TPMs. Section 342.1 prohibits computer hacking in order to obtain unauthorized access to computers. Section 342.2(1) makes it an offence in certain circumstances to possess, sell, offer for sale or distribute any device, the design of which renders it primarily useful for committing an offence under section 342.1.¹³⁵

The *Radio-Communication Act*¹³⁶ contains both anti-circumvention and anti-device measures related to the legal protection of TPMs employed to encrypt subscription programming signals or to facilitate radio-based telephone communication and radiocommunication.¹³⁷

These laws are not broad enough to cover the TPMs in use to protect content being distributed over the Internet. It is interesting to note that none of Professor Geist’s concerns about protecting TPMs in the copyright context are being expressed with respect to TPMs that are currently given protection under Canadian law such as those protected by the *Radio-Communication Act* and the *Criminal Code*. There is also no indication that research has suffered in Canada as a result of this legislation. Their existence does, however, support the public policy objectives of giving legal protection against circumvention where there are good policy reasons to do so.

Professor Geist makes his arguments about the potential chilling of speech by referring to the examples of Dmitry Sklyarov and Edward Felton. Professor Geist says the following about Dmitry Sklyarov:

Many computer science researchers have foregone working on sensitive security and encryption matters due to legal fears, pointing to the arrest and imprisonment of Dmitry Sklyarov, a Russian software programmer who spent several months in a California jail in 2001 after he traveled to the U.S. to discuss a circumvention software program at a conference.¹³⁸

Secondary sources of information published about the case suggest that Sklyarov was not jailed for discussing circumvention software. He was indicted for participating in a criminal enterprise to hack Adobe’s eBook Reader. He was not charged for discussing research into anti-circumvention devices. The nature of the actual charge is described by the Electronic Frontier Foundation as follows:

Dmitry Sklyarov was arrested in Las Vegas on July 16, 2001, and charged with trafficking in, and offering to the public, a software program that could circumvent technological protections on copyrighted material, under section 1201(b)(1)(A) of the U.S. *Copyright Act*, which was made law by the 1998 *Digital Millennium Copyright Act* (the *DMCA*). He was also charged with aiding and abetting his employer, Russian software development company, Elcom Ltd (a.k.a. ElcomSoft Co. Ltd), to do that. Dmitry was held in jail until August 6, 2001, when he was released on bail of \$50,000, on condition that he remained in Northern California.

On August 28, 2001, a grand jury indicted both Dmitry and ElcomSoft with five counts of violating U.S. law. These include four counts alleging circumvention offenses and aiding and abetting circumvention offenses, under the *DMCA*, and a charge of conspiracy to traffic in a circumvention program. Under the charges, Dmitry faced up to 25 years in prison and a fine of up to \$2,250,000, and ElcomSoft, as a corporation, faces a penalty of \$2,500,000. (For further details, see the next question.)¹³⁹

The December 17, 2002, CNET story on the case also suggests that he was not arrested simply for talking about circumvention technologies. According to the article

The case was launched in July 2001, when ElcomSoft employee Dmitry Sklyarov was arrested during the Las Vegas Defcon hackers conference after giving a speech about his company’s software, which is designed to crack protections on Adobe Systems’ eBooks. Prosecutors, working

with Adobe, said ElcomSoft’s Advanced eBook Processor violated the *DMCA*.¹⁴⁰

ElcomSoft was subsequently indicted and went to trial. It was acquitted at trial solely because it lacked the sufficient *mens rea*, because it did not know its actions were criminal violations of the *DMCA*. The CNET article notes that

Jury foreman Dennis Strader said the jurors agreed ElcomSoft’s product was illegal but acquitted the company because they believed the company didn’t mean to violate the law.

“We didn’t understand why a million-dollar company would put on their Web page an illegal thing that would (ruin) their whole business if they were caught”, he said in an interview after the verdict. Strader added that the panel found the *DMCA* itself confusing, making it easy for jurors to believe that executives from Russia might not fully understand it.

In other words, the jury found that no one who knew the law would engage in activity this blatantly illegal.¹⁴¹

The case actually shows that it would be hard in future cases under the *DMCA* to procure convictions in similar circumstances. Again, according to CNET:

Lawyers not involved in the case said the ElcomSoft verdict boded ill for future criminal prosecutions under the controversial copyright law. A “not guilty” verdict in a criminal case comes without the ability to appeal, unlike the civil copyright cases targeting Napster and other companies that have bounced through federal court in recent years. Future courts won’t be bound by Tuesday’s verdict, which will stand untouched.

“It is troubling for enforcement of the (criminal provisions of the) *DMCA*”, said Evan Cox, an attorney with the San Francisco firm of Covington & Burlington. “This was the kind of case that the *DMCA* was meant to prevent. If this enforcement led to a not guilty verdict, you have to wonder what would lead to a successful case”.¹⁴²

Professor Geist states the following about Edward Felton: “several years ago Edward Felton, a Princeton researcher, sought to release an important study on encryption that included circumvention information. When he publicly disclosed his plans, he was served with a warning that he faced potential legal liability if he publicly disclosed his findings”.¹⁴³

It may have been unfortunate that Mr Felton was threatened with prosecution for planning to release research related to vulnerabilities of an encryption system. However, as a result of the suit brought by Mr Felton, the U.S. government stated in documents filed with the Court in November 2001 that “scientists attempting to study access control technologies” are not subject to the *DMCA*. In the result, the scope of the *DMCA*’s provisions has been clarified in a manner that should give researchers comfort concerning their right to publish information about vulnerabilities in encryption systems.

A press release by the EFF published on Wednesday, February 6, 2002 stated the following in this regard:

“Based on these and other statements from the government and the recording industry, the judge dismissed our case,” noted Princeton Professor Ed Felten. “Although we would have preferred an enforceable court ruling, our research team decided to take the government and industry at their word that they will never again threaten publishers of scientific research that exposes vulnerabilities in security systems for copyrighted works . . .”

“The statements by the government and the recording industry indicate that they now recognize they can’t use the DMCA to squelch science,” added EFF Legal Director Cindy Cohn. “If they are as good as their word, science can continue unabated. Should they backslide, EFF will be there.”¹⁴⁴

Conclusion

Professor Geist concludes his article with the statement that

[i]n fact, the time has come for all Canadians to speak out and to tell the responsible ministers along with their local MPs what is increasingly self-evident. Canada does not need

protection for technological protection measures. In order to maintain our personal privacy, a vibrant security research community, a competitive marketplace, and a fair copyright balance, we need protection from them.¹⁴⁵

In my view Professor Geist’s conclusion is not supported by the arguments adduced to support it. In fact, what is increasingly clear is that Canada does need protection for technological protection measures. In order to help Canadian content owners and businesses develop sound models there is a need to restore the balance in copyright. We must recognize that to produce a competitive and buoyant marketplace in copyright content there needs to be an incentive to create and distribute works. It is wrong to view copyright reform as a zero-sum game in which users automatically lose if copyright protection is strengthened. The public interest is served by creating an environment in Canada in which rights are respected and creators and intermediaries are motivated to take risks to create and disseminate content. Protecting TPMs does just that.

Notes:

¹ Michael Geist “TPMs: A perfect storm for consumers” *Toronto Star* (January 31, 2005), online: *Toronto Star* http://www.thestar.com/NASApp/cs/ContentServer?pagename=thestar/Layout/Article_Type1&c=Article&cid=1107126609169&call_pageid=970599119419 [Geist, at para 2 *Perfect Storm*].

² *Ibid.*

³ Industry Canada & Canadian Heritage, *Framework for Copyright Reform* (Ottawa: Industry Canada, 2001) online: *Industry Canada* <http://strategis.ic.gc.ca/epic/internet/incrp-prda.nsf/en/rp01101e.html> [Framework].

⁴ Framework, *ibid.* See also, *Canadian Heritage, The Economic Contribution of Copyright Industries to the Canadian Economy* by Wall Communications Inc. (Ottawa: Canadian Heritage, 2004) online: *Canadian Heritage* http://www.pch.gc.ca/progs/ac-ca/progs/pda-cpb/pubs/index_e.cfm.

⁵ Framework, *ibid.*

⁶ *Ibid.*

⁷ *Ibid.*

⁸ *Ibid.*

⁹ *Copyright Act, 1911 (U.K.), 1 & 2 Geo. 5, c. 46.*

¹⁰ [1964] 1 All E.R. 465 at 479 (H.L.).

¹¹ [1979] R.P.C. 551 at 619 (H.L.).

¹² [1900] A.C. 539 at 552 (H.L.).

¹³ *Ibid.* at 545.

¹⁴ (1923), 40 T.L.R. 186 at 187 (India P.C.).

¹⁵ [1990] 2 S.C.R. 467 at 478-479 [Bishop v. Stevens].

¹⁶ [1943] S.C.R. 348, reversed [1945] A.C. 108 (Canada P.C.). Rand J. is quoting from Lord Lindley in *Hanfstengl v. Empire Palace*, [1894] 3 Ch. 109 at 128.

¹⁷ [1953] 2 S.C.R. 111 at 116.

¹⁸ [2002] S.C.R. 336. Gonthier J., writing the dissenting judgment in *Théberge* (which lost by one vote 4 to 3), stated at 386-387 the following on the origins and significance of copyright:

Even though our legislation derives from the common law, it is important to recall the origin and significance of copyright. In 1777, P.-A. Caron de Beaumarchais, who founded the Société des auteurs dramatiques, stated:

[TRANSLATION] *It is said in the theatre lobby that it is not noble for authors to write for the worthless pursuit of money, they who pride themselves on their claim to fame. Indeed,*

they are right, fame is appealing. But they forget that nature condemns us to dine 365 times in order to bask in glory merely for a year. For the authors, they are not defending a privilege, but the sacred right of all rights to retain ownership of their works. . . . (Preface by M. Pagnol in J. Boncompain, Le droit d’auteur au Canada: Étude critique (1971), at p. 9).

¹⁹ *Ibid.* at 356.

²⁰ [2004] 1 S.C.R. 339 at 364.

²¹ *Society of Composers, Authors and Music Publishers of Canada v. Canadian Assn. of Internet Providers*, [2004] 2 S.C.R. 427.

²² *Ibid.* at para 40.

²³ *Ibid.*

²⁴ Geist, *Perfect Storm*, *supra* note 2.

²⁵ Michael Geist, listserv contribution of 17 February 2005 [Geist Listserv]. *This listserv posting is quoted with permission from its author.*

²⁶ For example, in Professor Geist’s *Toronto Star* article published on February 21, 2005, he remarked: “As Canada heads toward yet another round of copyright reform . . . policymakers and politicians should be mindful that they have already used legislative intervention to establish many rights and protections that have tilted the copyright balance heavily toward creators at the expense of users”. Michael Geist, “Music industry doesn’t need more government protection” *Toronto Star* (21 January 2005), online: *Toronto Star* http://www.thestar.com/NASApp/cs/ContentServer?pagename=thestar/Layout/Article_Type1&c=Article&cid=1108942809302&call_pageid=970599119419&col=Colum-nist1036500183695&DPL.

²⁷ *Eldred v. Ashcroft*, 537 U.S. 186 at 212 (2003).

²⁸ *Ibid.*

²⁹ *Bishop v. Stevens*, *supra* note 16.

³⁰ Geist Listserv, *supra* note 26.

³¹ For a description of new services see Canadian Heritage, *The Challenges and Opportunities of Online Music: Technology Measures, Business Models, Stakeholder Impact and Emerging Trends* by Cathy Allison (Ottawa: Heritage Canada, 2004) online: *Heritage Canada* http://www.pch.gc.ca/progs/ac-ca/progs/pda-cpb/pubs/online_music/index_e.cfm [Allison, *Online Music*]; Canadian Heritage, *Technical Protection Measures: Part I—Trends in Technical Protection Measures and Circumvention Technologies* by Ian Kerr et al. (Ottawa: Heritage Canada, 2002) online: *Heritage Canada* http://www.pch.gc.ca/progs/ac-ca/progs/pda-cpb/pubs/protection/index_e.cfm [Kerr *Technical Protection Measures: Part I*].

³² See Thomas Mennecke “P2P Usage — Which Network Consumes the Most Bandwidth?” *Slyck News* (September 29, 2004), online: *Slyck News* <http://www.slyck.com/news.php?story=574>.

³³ See Palisade Systems, News Release, “Palisade Systems’ Dr. Doug Jacobson testify on dangers of pornography and P2P” online: *Palisade Systems* www.palisadesys.com/news&events/press_releases/dougseater-release.shtml.

³⁴ In re: *Charter Communications, Inc Subpoena Enforcement Matter Case No. 03-3802* (8th Cir. Jan. 5, 2005) at para 4. [*Charter Communications*]

³⁵ See, Allison, *Online Music*, supra note 32.

³⁶ Kerr, *Technical Protection Measures: Part I*, supra note 32.

³⁷ *Geist Listserv*, supra note 26.

³⁸ Digital Connections Council of the Committee for Economic Development, *Promoting Innovation and Economic Growth: The Special Problem of Intellectual Property* (Washington: Committee for Economic Development, 2004) at 50 online: *Committee for Economic Development* http://www.ced.org/docs/report/report_dcc_v2.pdf [*CED Report*].

³⁹ *Ibid.*

⁴⁰ Letter from the Balanced Copyright Coalition to The Standing Committee on Canadian Heritage (15 September 2003) online: *Canadian Cable Telecommunications Association* <http://www.ccta.ca/CMFiles/DetailsDocuments/09-15c58RPN-972004-812.pdf>.

⁴¹ *Geist Listserv*, supra note 26.

⁴² 2004 F.C. 488

⁴³ See *Charter Communications*, supra note 35, at para 14.

⁴⁴ See, *BMG Music et al v. Gonzalez* 2005 U.S. Dist. LEXIS 910 at para 2 (N.D.Ill. Jan 12, 2005); *A&M Records, Inc. v. Napster*, 239 F.3d 1004 at 1016 (9th Cir. 2001).

⁴⁵ *Geist Listserv*, supra note 26.

⁴⁶ *Ibid.*

⁴⁷ *Digital Millennium Copyright Act*, 17 U.S.C. online: *U.S. Copyright Office* <http://www.copyright.gov/legislation/dmca.pdf>.

⁴⁸ See Industry Canada, *The Canadian Electronic Commerce Strategy* (Ottawa: Industry Canada, 1998) online: *Industry Canada: The Digital Economy In Canada* [http://e-com.ic.gc.ca/epic/internet/inocic-ceac.nsf/vwapj/ecom_eng.pdf/\\$file/ecom_eng.pdf](http://e-com.ic.gc.ca/epic/internet/inocic-ceac.nsf/vwapj/ecom_eng.pdf/$file/ecom_eng.pdf).

⁴⁹ *Personal Information Protection and Electronic Documents Act*, S.C. 2000, c. 5 online: *Justice Canada* [http://laws.justice.gc.ca/en/P-8.6/\[PIPEDA\]](http://laws.justice.gc.ca/en/P-8.6/[PIPEDA]).

⁵⁰ R.S.C. 1985, c. C-5 online: *Justice Canada* <http://laws.justice.gc.ca/en/C-5/>.

⁵¹ Online: *Uniform Law Conference of Canada* <http://www.ulcc.ca/en/us/index.cfm?sec=1&sub=1u2>.

⁵² Online: *Uniform Law Conference of Canada* <http://www.ulcc.ca/en/us/index.cfm?sec=1&sub=1u1>.

⁵³ *Canadian Internet Registration Authority Domain Name Dispute Resolution Policy, Version 1.1*, online: *CIRA* http://www.cira.ca/en/cat_dpr_policy.html.

⁵⁴ *Internet Sales Contract Harmonization Template*, adopted 25 May 2001 online: *Industry Canada* <http://strategis.ic.gc.ca/epic/internet/inocic-ceac.nsf/en/ca01642e.html>.

⁵⁵ United Nations, *UNCITRAL Model Law on Electronic Commerce* (1996), 36 I.L.M. 197 online: *UN* <http://www.uncitral.org/english/texts/electcom/ml-ecom.htm>.

⁵⁶ *WIPO Copyright Treaty 20 December 1996*, 36 I.L.M. 65, online: *WIPO* <http://www.wipo.int/documents/en/diplconf/distrib/94dc.htm> [WCT].

⁵⁷ *WIPO Performances and Phonograms Treaty 20 December 1996*, 36 I.L.M. 76, online: *WIPO* http://www.wipo.int/treaties/en/ip/wppt/trtdocs_wo034.html [WPPT].

⁵⁸ WCT, supra note 57, preamble.

⁵⁹ As of October 2004, 48 nations have ratified the WCT and 44 the WPPT.

⁶⁰ Some of Canada’s options for implementation are discussed in Mark Hayes’ 2001 Memorandum, *Technological Measures Circumvention Provisions* online: *Industry Canada* [http://strategis.ic.gc.ca/epic/internet/inippd-dppi.nsf/vwapj/davieseng.pdf/\\$FILE/davieseng.pdf](http://strategis.ic.gc.ca/epic/internet/inippd-dppi.nsf/vwapj/davieseng.pdf/$FILE/davieseng.pdf).

⁶¹ *Canadian Heritage, Technical Protection Measures: Part II — Trends in Technical Protection Measures and Circumvention Technologies* by Ian Kerr et al. (Ottawa: *Heritage Canada*, 2002) online: *Heritage Canada* http://www.pch.gc.ca/progs/ac-ca/progs/pda-cpb/pubs/protectionII/index_e.cfm [Kerr, *Technical Protection Measures: Part II*].

⁶² *Geist Listserv*, supra note 26.

⁶³ EC, *Proposal for a Directive of the European Parliament and of the Council on measures and procedures to ensure the enforcement of intellectual property rights*, 30 January 2003, COM (2003) 46 final, COD 2003/0024 online: *Europa* http://europa.eu.int/eur-lex/en/com/pdf/2003/com2003_0046en01.pdf [EU IPR Protection Proposal].

⁶⁴ *Ibid.* at 8-9.

⁶⁵ *Ibid.* at 9.

⁶⁶ *Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society* [2001] O.J. LL 167/10, online: *Europa* http://europa.eu.int/information_society/eeurope/2005/all_about/digital_rights_man/doc/directive_copyright_en.pdf [EU Copyright Directive].

⁶⁷ *Ibid.* preamble para. 5.

⁶⁸ *Ibid.* paras. 9-12.

⁶⁹ *Ibid.* para. 13.

⁷⁰ *Ibid.* para. 47.

⁷¹ Article 6 of the *EU Copyright Directive*, supra note 67, reads as follows:

Obligations as to technological measures

1. Member States shall provide adequate legal protection against the circumvention of any effective technological measures, which the person concerned carries out in the knowledge, or with reasonable grounds to know, that he or she is pursuing that objective.
2. Member States shall provide adequate legal protection against the manufacture, import, distribution, sale, rental, advertisement for sale or rental, or possession for commercial purposes of devices, products or components or the provision of services which: (a) are promoted, advertised or marketed for the purpose of circumvention of, or (b) have only a limited commercially significant purpose or use other than to circumvent, or (c) are primarily designed, produced, adapted or performed for the purpose of enabling or facilitating the circumvention of, any effective technological measures.
3. For the purposes of this Directive, the expression “technological measures” means any technology, device or component that, in the normal course of its operation, is designed to prevent or restrict acts, in respect of works or other subject matter, which are not authorised by the rightholder of any copyright or any right related to copyright as provided for by law or the *sui generis right provided for in Chapter III of Directive 96/9/EC*. Technological measures shall be deemed “effective” where the use of a protected work or other subject matter is controlled by the rightholders through application of an access control or protection process, such as encryption, scrambling or other transformation of the work or other subject-matter or a copy control mechanism, which achieves the protection objective.

⁷² See, Ministry of Economic Development, *Digital Technology and the Copyright Act 1994: A Discussion Paper, Competition and Enterprise Branch* (Wellington: *Ministry of Economic Development*, 2001) online: *New Zealand Ministry of Economic Development* http://www.med.govt.nz/buslt/int_prop/digital/discussion/.

⁷³ *Ibid.* at 48.

⁷⁴ *Ibid.* at 6.

⁷⁵ *EU IPR Protection Proposal*, supra note 64 at 9.

⁷⁶ *Ibid.* at 10. See, *Directive 2004/48/EC of the European Parliament and of the Council of 29 April 2004 on the enforcement of intellectual property rights*, [2004] O.J. L. 157/45 which implemented the proposal online: *Europa* http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/l_195/l_19520040602en00160025.pdf.

⁷⁷ *Geist, Perfect Storm*, supra note 2.

⁷⁸ Kerr, *Technical Protection Measures: Part I*, *supra* note 32.

⁷⁹ Natali Helberger ed. *Digital Rights Management and Consumer Acceptability: A Multi-Disciplinary Discussion of Consumer Concerns and Expectations 2004* online: Indicare http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/L_195/L_19520040602en00160025.pdf [Indicare Study].

⁸⁰ For a discussion of their potential see *Indicare Study*, *ibid.* and Kerr *Technical Protection Measures: Part I*, *supra* note 32.

⁸¹ *Ibid.*

⁸² *Indicare Study*, *supra* note 80 at 99.

⁸³ *Ibid.* at 80-81.

⁸⁴ *Ibid.* at 41.

⁸⁵ Geist, *Perfect Storm*, *supra* note 2.

⁸⁶ *Supra* note 50.

⁸⁷ See, European Union, Data Protection Working Party, *Working document on data protection issues related to intellectual property rights*, 05/EN WP 104, 18 January 2005 online: Europa http://europa.eu.int/comm/internal_market/privacy/docs/wpdocs/2005/wp104_en.pdf.

⁸⁸ Geist, *Perfect Storm*, *supra* note 2.

⁸⁹ See *CED Report*, *supra* note 39.

⁹⁰ 740 F. Supp. 37 at 78 (D. Mass. 1990).

⁹¹ *CED Report*, *supra* note 39 at 6-7.

⁹² Geist, *Perfect Storm*, *supra* note 2.

⁹³ Marybeth Peters "Copyright Enters the Public Domain: The 33rd Donald C. Brace Memorial Lecture", April 29, 2004 Journal, Copyright Society of the USA, 701 at 723.

⁹⁴ Copyright Office, *Exemption to Prohibition on Circumvention of Copyright Protection Systems for access Control Technologies*, 68 Fed. Reg. 62011 (31 October 2003) at 62016 online: Federal Register <http://www.gpoaccess.gov/fr/search.html>.

⁹⁵ *Ibid.* at 62017.

⁹⁶ *CED Report*, *supra* note 39 at 2.

⁹⁷ *Ibid.* at 51.

⁹⁸ *Campbell v. Acuff-Rose Music Inc.* 510 U.S. 569 (1994). In a footnote in the *Bateman v. Mnemonics, Inc.*, 79 F.3d 1532 (11th Cir. 1996) case it was suggested that fair use should be regarded as an affirmative right. In view of the *Acuff-Rose* precedent to the contrary, this view was been rejected. See, *Suntrust Bank v. Houghton Mifflin Co.*, 268 F.3d 1257 (11th Cir. 2001).

⁹⁹ *Universal City Studios v. Corley*, 273 F.3d 429 at 459 (2d Cir. 2001) [Corley].

¹⁰⁰ 203 F. Supp. 3d 1111 at 1131 (N.D. Cal. 2002).

¹⁰¹ See, *Bowers v. Baystate Technologies, Inc.* 65 U.S.P.Q. 2d 1746 (Fed. Cir. 2003), *Frontline Test Equipment Inc. v. Greenleaf Software, Inc.*, 10 F. Supp. 2d 583 (W.D. Va. 1998), *Davidson & Associates, Inc. v. Internet Gateway* 334 F.Supp. 2d 1164 (E.D. Miss.2004).

¹⁰² *Chamberlain Group, Inc. v. Skylink Technologies, Inc.* 381 F.3d 1178 (Fed.Cir. 2004) [Chamberlain].

¹⁰³ *Lexmark Int'l Inc. v. Static Control Components Inc.* 387 F.3d 522 (6th.Cir. 2004) [Lexmark].

¹⁰⁴ WCT, *supra* note 57 Article 11.

¹⁰⁵ Quoted in *Lexmark*, *supra* note 104 at 549.

¹⁰⁶ See, *Chamberlain*, *supra* note 103, *Lexmark*, *ibid.*, and *Corley*, *supra* note 100 for a summary of the legislative history of the DMCA.

¹⁰⁷ *Ibid.*

¹⁰⁸ *Chamberlain*, *supra* note 103 at 1196.

¹⁰⁹ Portions of § 1201 of the DMCA (Circumvention of copyright protection systems) are set out below:

VIOLATIONS REGARDING CIRCUMVENTION OF TECHNOLOGICAL MEASURES —

(1)(A) No person shall circumvent a technological measure that effectively controls access to a work protected under this title ...

(2) No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that —

(A) is primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a work protected under this title;

(B) has only limited commercially significant purpose or use other than to circumvent a technological measure that effectively controls access to a work protected under this title; or

(C) is marketed by that person or another acting in concert with that person with that person's knowledge for use in circumventing a technological measure that effectively controls access to a work protected under this title.

(3) As used in this subsection —

(A) to "circumvent a technological measure" means to descramble a scrambled work, to decrypt an encrypted work, or otherwise to avoid, bypass, remove, deactivate, or impair a technological measure, without the authority of the copyright owner; and

(B) a technological measure "effectively controls access to a work" if the measure, in the ordinary course of its operation, requires the application of information, or a process or a treatment, with the authority of the copyright owner, to gain access to the work.

(b) ADDITIONAL VIOLATIONS — (1) No person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that —

(A) is primarily designed or produced for the purpose of circumventing protection afforded by a technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof;

(B) has only limited commercially significant purpose or use other than to circumvent protection afforded by a technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof;

(C) is marketed by that person or another acting in concert with that person with that person's knowledge for use in circumventing protection afforded by a technological measure that effectively protects a right of a copyright owner under this title in a work or a portion thereof.

(2) As used in this subsection —

(A) to "circumvent protection afforded by a technological measure" means avoiding, bypassing, removing, deactivating, or otherwise impairing a technological measure; and

(B) a technological measure "effectively protects a right of a copyright owner under this title" if the measure, in the ordinary course of its operation, prevents, restricts, or otherwise limits the exercise of a right of a copyright owner under this title.

¹¹⁰ The *Digital Millennium Copyright Act of 1998: U.S. Copyright Office Summary* (Washington: Copyright Office, 1998) online: U.S. Copyright Office <http://www.copyright.gov/legislation/dmca.pdf>.

¹¹¹ DMCA, *supra* note 48 § 1201(c)(3). Section 1201 contains language clarifying that the prohibition on circumvention devices does not require manufacturers of consumer electronics, telecommunications or computing equipment to design their products affirmatively to respond to any particular technological measure.

¹¹² *Ibid.* § 1201(d).

¹¹³ *Ibid.* § 1201(f).

¹¹⁴ *Ibid.* § 1201(g).

¹¹⁵ *Ibid.* § 1201(h).

¹¹⁶ *Ibid.* § 1201(i).

¹¹⁷ *Ibid.* § 1201(j).

¹¹⁸ *Chamberlain*, *supra* note 103 at 1194.

¹¹⁹ *Ibid.* at 1200.

¹²⁰ *Ibid.* at 1201.

¹²¹ *Ibid.* at 1202-1203.

¹²² *Ibid.* at 1204.

¹²³ Case No. 02 C 6320 (N.D. Ill. 13 January 2005).

¹²⁴ *Ibid.*

¹²⁵ *Geist Listserv*, *supra* note 26.

¹²⁶ “Year in Review” (2005) 10:2 *Electronic Commerce & Law Report* 22.
Note: Professor Geist is on its Advisory Board.

¹²⁷ *Ibid.* at 22-23.

¹²⁸ *Geist, Perfect Storm*, *supra* note 2.

¹²⁹ *Lexmark*, *supra* note 104 at 549.

¹³⁰ *Ibid.* at 550.

¹³¹ *Geist, Perfect Storm*, *supra* note 2.

¹³² See, for example, *Franklin v. Giddins*, [1978] Qd. R. 72 (Q. Sup. Ct.).

¹³³ *PIPEDA*, *supra* note 50. See Schedule 1, Principle 7.

¹³⁴ *Criminal Code*, R.S. 1985, c. C-46, s. 193.1.

¹³⁵ *Ibid.* ss. 342.1, 342.2.

¹³⁶ R.S. 1985, c. R-2.

¹³⁷ The above statutory provisions are described in detail by Christian Tacit in his study prepared for the Department of Heritage entitled *The Current Status of Legal Protection for Technology Protection Measures*

in Canada online: *Canadian Heritage* http://www.pch.gc.ca/progs/ac-ca/progs/pda-cpb/pubs/juridique/index_e.cfm.

¹³⁸ *Geist, Perfect Storm*, *supra* note 2.

¹³⁹ Electronic Frontier Foundation, “Frequently Asked Questions (and Answers) About the Dmitry Sklyarov & ElcomSoft Prosecution” online: *EFF* http://www.eff.org/IP/DMCA/US_v_Elcomsoft/us_v_elcomsoft_faq.html.

¹⁴⁰ Lisa M. Bowman, “ElcomSoft verdict: Not guilty” *CNet News.com* (17 December 2002), online: *CNet News.com* <http://news.com.com/2100-1023-978176.html>.

¹⁴¹ *Ibid.*

¹⁴² *Ibid.*

¹⁴³ *Geist, Perfect Storm*, *supra* note 2.

¹⁴⁴ Electronic Frontier Foundation, News Release, “Security Researchers Drop Scientific Censorship Case: Government, Industry Claim DMCA Not a Threat to Science” (6 February 2002) online: *EFF* http://www.eff.org/IP/DMCA/Felten_v_RIAA/20020206_eff_felten_pr.html.

¹⁴⁵ *Geist, Perfect Storm*, *supra* note 2.