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Intellectual property : a
U.S./Canada software & multimedia
perspective. --
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Intellectual Property

A U.S./Canada Software & Multimedia Perspective

Introduction

Society entrusts government with the responsibility for the protection of individual expressions and ideas. Protection typically comes in the form of copyrights, trademarks or patents. However, technology has given society the ability to modify, transfer and disseminate information at an unprecedented pace. As a result, companies in the software and multimedia industries are finding it more difficult to protect competitive advantages. In fact, the envelop of what is legally protected and enforceable, and what is not, is blurred. The reasons are fourfold: rapid commercialization of advanced technology; a decrease in the technology product-life-cycle; the obsession of the global society to embrace the personal computer; and the commercial use of the internet.

For the small enterprise involved in international collaborations, or expecting to license or distribute a product internationally, cross-border intellectual property issues should be a top priority. Therefore, knowing what types of intellectual property protection are available is paramount. The services of patent attorneys are almost always required but understanding their role makes negotiating easier.

The United States and Canada are policy leaders in the regulation and enforcement of intellectual property. Despite many similarities between the legal systems, there are subtle differences. However, recently signed treaties suggest that there is a merging of ideology.

This paper examines today's intellectual property legal protocol in the U.S. and Canada. The focus is on the common legal processes and litigation ramifications for the most pertinent areas of the law. Recent changes to intellectual property law are highlighted and emerging trends within the software industry are reviewed.



The Software Industry

Recently published statistics showed that in 1994 worldwide software piracy rates were above 50% for 69 of the 77 countries listed.¹ Table 1 lists several of the top countries according to piracy rate and estimated market value of the pirated software.

Table 1

1994 SOFTWARE PIRACY STATISTICS AND U.S. DOLLAR VALUE

<u>Country</u>	<u>Software Piracy Rate Estimate Dollar Value</u>	
Kuwait	99%	n/a
Indonesia	99%	n/a
China	98%	n/a
Vietnam	98%	n/a
Philippines	97%	n/a

United States	35%	\$ 2.8 Billion
Japan	67%	\$ 2.0 Billion
Germany	50%	\$ 2.0 Billion
Canada	58%	\$ 250 Million

Source: Computer Reseller News, June 1995, p.23

These statistics indicate that unauthorized duplication of software is an international problem. For the multimedia industry, the technology and distribution channels are analogous to that of software. Therefore, a statistical inference may be suggested: Multimedia piracy rates are fractionally proportional to that of software and the dollar value is a minor percentage as well. Finally, the industrialized nations appear to have much better control over infringement activities than non-industrialized nations, but there remains room for improvement.

¹ Computer Reseller News, (1995) p. 23, Source: *Business Software Alliance*, June 19.



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Intellectual Property Overview

In the U.S., intellectual property is regulated at the state and federal level. In Canada, it is regulated only at the federal level. Increases in international trade, changing technology and use of the internet are placing increasing pressure on both judicial systems. However, for now, the traditional intellectual property system remains intact.

Table 2 gives a summary of the types of intellectual property laws which apply to software and multimedia products.

Table 2

INTELLECTUAL PROPERTY LAW *

Type of Legal Agreement	Governing Law	Enforcement Body
Copyright Law	Federal Only	Fed. & Provinc. Superior
Patent Law	Federal Only	Fed. & Provinc. Superior
Trade Secrets	State Only	State Only **
Federal Trademarks	Federal Only	Federal or State
State Trademarks	State Only	State Only **
False Advertising	Federal or State	Federal & Provincial

* "Federal" implies both United States and Canadian Federal Government. "State" implies United States only. "Provincial" implies Canada only.

** Claims made under state law for trade secrets and trade marks may be brought to federal courts under some circumstances.

Copyright Law

The Canadian and U.S. Copyright Act protects all "original work of authorship fixed in any tangible-medium of expression". This means that the "expression" of the work is protected, and not the idea. A copyright grants protection for 50 years after the death of the author or, in the case of when the author cannot be legally identified as the owner, for 75 years (50 years in Canada) after first publication. An author in the United States must be a U.S. resident. An author in Canada may be a Canadian resident, a British

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subject, a U.S. resident or a subject of a country adhering to the Berne Convention. A corporation has protection for 75 years. Exceptions to the length of copyright include photographs and Canadian Crown works (federal or provincial government works).

Copyright protected material inhibits the unauthorized duplication, modification or distribution of material. An author may prepare a derivative work as well as authorize others to do so. "The most important limitation of these exclusive rights is the fair use doctrine, which permits fair use of a copyright for purposes such as criticism, comment, news reporting, teaching, scholarships, or research."² These works include books, songs, motion pictures, sound recordings, computer software, photographs and textile designs.

For computer software to qualify for protection it must be an expression of an idea, and be an original literary work. Stated differently, copyright protects the expression of the concepts and not the underlying ideas themselves. Software is an expression if it exists in the form of screen images, manuals, user interfaces, specifications, source code and accompanying documentation. Originality takes form when substantial skill, or experience of the author is used.

Canadian law differs slightly from U.S. law in disclosure for both published and unpublished works. In Canada there is no need for disclosure. This allows the author to maintain confidentiality of any secret component of work. This is especially significant in both human-readable source code and machine-readable object code, as well as system design specifications. In addition, external storage medium or main memory also qualify for copyright protection.

Registering a copyright is a fairly simple process. Applications are submitted to the U.S. Copyright Office or Canadian Copyright Office. For computer software a completed application includes a modest fee and excerpts of source code (U.S. only). Registration typically takes 3-4 months. An attorney may help to complete the application.

The Universal Copyright Convention requests that copyrighted material contain: the C inside a circle stamp; the year of publication; and the name of the copyright owner. A copyright may or may not be registered; however, registration brings with it certain benefits to the owner. A registered copyright informs the reader of first authorship, forces a challenging party to disprove copyright legitimacy and allows the holder to recover

² Smart, T.A., Desevo, R.A. (1994) US litigation - a panoramic view, *Managing Intellectual Property*, March, p 41.



damages. Finally, registration of unpublished software does not compromise or conflict with the confidentiality necessary for maintaining trade secret status.

For the multimedia developer a multitude of copyright issues surface. The developer must secure copyrights on the software being developed, as well as pay all royalties on licensed copyright media. This could include text, video, sound, graphics, animation, photographs, music, speech, graphs, drawings, diagrams, or data. An oversight of royalty payments may lead to financial loss and cessation of production. Also, data collected by the Government of Canada are not as easily accessed as data collected by the United States government. The reason is that the freedom of information act or privacy legislation is not as liberal in Canada.

Organizations, commonly called clearinghouses, specialize in licensing each segment of a multimedia production. Local software or multimedia associations can answer inquiries as to the names and addresses of local clearinghouses.

Copyright Infringement

When infringement is suspected, and the financial stakes are high, many companies settle copyright disputes in a court of law. However, new methods of mediation common to other areas of law are providing new avenues for dispute resolution.

If a foreign copyright owner applies for a copyright in his or her native country, and if that country belongs to the Berne Convention, then that individual has the right to sue to enforce a copyright, irrespective of registering it in the U.S or Canada. By contrast, the opposite is true only after a registrant has been issued a copyright from either a non-Berne Convention nation or an owner of a copyright first published in the U.S.; the U.S. Congress is currently considering legislation that would change this difference.

In a lawsuit one may sue for preliminary and permanent injunctive relief, future profits, or statutory damages in lieu of damages. Statutory damages could range from \$500 to \$20,000 (or Cdn\$ 25,000) for each work copied. Unwilful intent can have the fine reduced to \$200. In special circumstances, when the court finds that the defendant committed "wilful" copyright infringement the fine may be increased to \$100,000 (or Cdn\$ 1,000,000) plus a jail term of 6 months to 5 years.

An alternative to litigation in infringement disputes that is gaining international momentum is Alternative Dispute Resolution (ADR). Because of the often times highly technical nature of international transactions involving intangible property and tangible goods, it has been found that civil court procedures may be obviated using ADR, saving time and

money. The substance and procedure of an ADR case may be designed by the parties to an agreement at the outset or borrowed from international guidelines. Canadian courts support ADR provisions and enforce ADR awards. The Arbitration Act of Ontario provides blanket support for the award of an arbitrator anywhere in Canada, barring absence of substantial defect or reversal on appeal. However, limitations do exist. Intellectual property aspects of a technology transaction that are governed by statutes may not be subject to ADR enforcement.

Patent Law

Patents can protect computer hardware and some forms of computer software. Hardware functionality places it under the traditional patent umbrella of machines and compositions of matter, but software is a much more subtle. In software not only are the program algorithms protected (the mathematical lines of code that are used to create a program), but so are the subroutine flow structures that tie the application together. This is a combination of an inventive process and an inventive machine. Standing alone, mathematical algorithms are excluded from patent protection.

The U.S. patent system is unique from almost every other country in the world. The difference exists in the manner in which the U.S. system grants a patent. In the U.S., a patent is granted based on "first-to-invent". This means that an inventor must prove, through declarations, that he or she was the first to conceive of the idea and to reduce it to practice. As such, among several inventors, an inventor who invents first but files last is given priority. The United States Patent Office grants patents for new, useful and non-obvious inventions.

Throughout the rest of the world and in Canada patents are granted based on "first-to-file". Under this system an inventor who first files a patent application receives patent protection over a subsequently filing inventor who may have invented first.

As of June 8, 1995 a patent has a term of 20 years from its U.S. filing date. Submission of a patent must meet certain disclosure requirements. For example it must disclose the best mode of practicing the invention and must show a person of ordinary skill level in the relevant art how to make and use the patented device. The change from the traditional 17 year U.S. patent was a result of the General Agreement on Tariffs and Trade (GATT) bill.

Other negotiated compromises proposed by the U.S. senate may include publishing U.S. patent applicants 18 months from the priority filing date. This is similar to what is done in the majority of the world and in Canada. Also, a more lenient term of 17 years from



the patent's issuance or 20 years for filing - whichever is longer. [This is a transitional provision presently in force.] Both of the amendments will ensure public knowledge of issued patents and limit the subversive tactics of some firms who cry product infringement only after a product life cycle is at its peak.

In addition, a provisional patent application was also introduced with the June 8, 1995 legislation. "Provisional patent applications have the advantage of not requiring "claims" - the specific statements that define the invention. Provisional applications still require the invention's full disclosure - enabling one of ordinary skill in the art to practice it."³ A provisional patent gives the applicant time, up to one year, to gather further information for filing a U.S. or international patent application.

A patent may be applied for at the U.S. Patent and Trademark Office (PTO) or at the Canadian Patent Office. The application is generally filed using the services of a professional patent attorney. After a series of correspondence between the attorney and PTO a computer-related patent is typically granted in two to three years from date of filing. A single international Patent Cooperation Treaty applications can be filed that will cover any or all of the 76 member countries, including his or her own country.

Patent Infringement

Patent holders may seek to enforce a patent whenever they believe an infringement has occurred; however, the burden of proof of infringement relies solely on the patent holder who must present a preponderance of evidence to the court. When damages are sought, there is a right to a jury trial (in U.S. only), no matter how technical the case. The alleged infringer may choose a defense by claiming no-infringement, an invalid patent or both.

If the defense elects invalidity, the burden of proof is by clear and convincing evidence because under current patent laws in Canada and the United States patents are presumed valid. "Since the U.S. court of Appeals for the Federal Circuit, which has exclusive jurisdiction over patent appeals, was created in 1982, it has exhibited a stronger tendency to uphold the validity of patents and to find that they have been infringed, than was the case before the court was created."⁴

"If a dispute occurs over the first-to-invent, and is based on activities that have occurred

³ Enayati, E. (1995) "Intellectual Property Under GATT", *Bio/Technology*, Vol. 13 May, pp. 460-463.

⁴ Smart T.A., Desevo R.A. (1994) "*Managing Intellectual Property*" March, p. 44.



outside U.S. territory, that evidence cannot be presented in a court of law to prove invention."⁵ This means that foreign inventors involved in a U.S. dispute are unable to reference data obtained, or activities performed, outside the U.S. to prove a date of invention prior to their U.S. filing date. "This protectionist provision in U.S. patent law will change on January 1, 1996. From that point forward, evidence of inventive activities occurring in the World Trade Organization (WTO, Geneva - successor organization to GATT) and the North American Free Trade Agreement countries will be admissible during an interference proceeding. The new law will also allow foreign-language documents to be considered as part of this process. Foreign inventors will need to collect and preserve their data according to the unique United States first-to-invent patent systems if they want to extend their rights to the U.S. under this new law."⁶

A unique feature of the January 1, 1996 protectionist revision will be that the holder of a U.S. patent has the right to exclude others from offering for sale and from importing products that are protected by U.S. patents. This enhances the value of a U.S. patent and may permit preemptive legal manoeuvring against potential patent violators.

Another defense available to the alleged infringer is that the current patent holder engaged in inequitable conduct in procuring its patent. If such a position is taken it is recommended that separate legal counsel be retained for the defense. This will preclude the disqualification of counsel should the attorney involved in the patent application process become implicated.

Typically, once a court finds infringement, an injunction will be issued. An injunction enables the patent holder to maintain its market exclusivity, or to license it to a third party. Should the product be "life-saving" (used in a medical environment where discontinued use may produce loss of life) the court may not issue an injunction and request that the patent holder be paid a royalty on future sales, as well as past damages. The value of past damages is usually at least equal to a reasonable royalty that the parties would have negotiated at a neutral setting.

Lost profits may be another category for award damages. In the U.S., a patentee seeking lost profits must show: Product demand for the patented device; an absence of competitors other than themselves; the manufacturing capability and marketing expertise to exploit product demand; and a reasonable estimate of the lost profit in U.S. dollars.

⁵ 35 U.S.C. §104.

⁶ Enayati, E. (1995) Intellectual Property Under GATT, *Bio/Technology*, Vol. 13 May, p. 460



In the end, it is up to the discretion of the court to summarize the damages. In Canada, a patentee need only prove lost sales and profits as a result of the infringement.

Trade Secrets

Because trade secrets are protected under state law in the U.S. there is a range of variation among states. "Trade secret law protects a company from the misappropriation of valuable confidential information. Misappropriation arises from either the unauthorized use or disclosure of the trade secret or its acquisition by improper means such as theft, misrepresentation or breach of a duty to maintain secrecy."⁷

Trade secrets are considered anything that gives a company a competitive advantage and has not been publicly disclosed. For example, in the software and multimedia development field any type of algorithms, logic diagrams or customer list may be a trade secret. In addition, those aspects of one's research that did not function properly and never developed into a commercial product would also be considered trade secrets.

To obtain a trade secret no formal procedures have to be followed. Instead, any information that may meet these loose subject matter requirements and which a company has taken reasonable steps to protect may be considered a trade secret. "Reasonable steps vary depending on the value of the information, but typically include the use of signed non-disclosure agreements from those who are given access to the secret information."⁸

Trade secret is the most fragile of all forms of protection, particularly to software. The reason is that reverse engineering of object-oriented code is not prohibited by trade secret law. To protect the code other forms of intellectual property law, such as copyright or patent should be invoked.

Trademark Law

The Lanham Act protects all trademarks used in interstate or foreign commerce in the United States. This is a broad reaching law and effects almost every business transaction but the most local of transactions. A federal registration is obtained when an individual

⁷ Noble, L. (1995) *Maximize Your Return on R&D: Protect Your Intellectual Property*, Software Publishers Association Market Watch, Spring, pp. 17-23.

⁸ Noble, L. (1995) *Maximize Your Return on R&D: Protect Your Intellectual Property*, Software Publishers Association Market Watch, Spring, pp. 17-23.



or business has a *bona fide* intent to use the trademark. The trademark may not already exist or the application will be denied.

In the personal computer software industry trademarks are a means by which companies build brand awareness. Everyone knows "Windows 95" is a registered trade mark of Microsoft Corporation. Name recognition conveys quality and consistence.

In the highly competitive PC market the value placed on a trademark, or brand name, may be worth millions of dollars. Therefore, it is well worth the time and effort to register and protect a trademark. The submission process of a trade mark is as follows: 1) Seek the profession services of a Patent Attorney for document preparation; 2) Application is submitted to the U.S. Patent and Trademark Office (PTO) or the Canadian Trademarks Office; 3) PTO publishes the trademark for opposition; 4) If no objections are received the trademark is granted; 5) If objections are raised; a) Opposing party has the right to subpoena documents and take testimony; b) Evaluate evidence to determine if mark will create confusion with existing mark; c) Losing party may appeal (to: PTO Board, U.S. Court of Appeals, U.S. Supreme Court, or Canadian Federal Court)

Trademark Infringement

A party possessing a federally registered (or unregistered) trademark may sue an individual or business for trademark infringement if they believe their trademark has been wrongfully used. Preliminary and permanent injunction for relief can be sought. Damages typically include the defendant's profits attributable to the infringement.

Evaluation is a labor intensive process and one in which evidence is gathered to clearly show that the defendant's mark is likely to create confusion as to the source of the goods or services. This analysis is largely based on: 1) Trademark appearance; 2) The relationship mimicked by the products or services and the respective trademarks; 3) Whether the plaintiff expects to expand trademark use to products similar to defendants; 4) The intent of the defendant in adopting the trademark; 5) The degree of care a consumer might use when selecting a product or service; 6) Consumer survey evidence.

Both parties rely heavily on consumer surveys to plead their case. Expert witnesses are typically called by both sides.

In addition, intellectual property owners also may protect their trademark through threat of litigation to prevent use of a mark when the plaintiff believes consumers may be misled due to product or service association (ie. product endorsement, sponsorship or affiliation). This varies slightly from the traditional definition of infringement that assumes



the two sources of a product or service are one in the same.

False Advertising

A little known branch of intellectual property law that may be effectively used by the small developer to combat unfair advertising is also contained in the Lanham Act.

If an advertisement causes confusion as to source, sponsorship, approval, endorsement or affiliation of product through a false statement of fact then it is considered to fall under a false advertising pretense. Whether the advertisement affects a plaintiff's or defendant's goods or services, a suit can be filed. No comparative claim is necessary.

When a statement is merely ambiguous, which is often the case with commercial advertising, the plaintiff must first establish the consumer's understanding of the statement by using consumer surveys, and build a case around that evidence. This is costly and many small companies cannot afford such a process.

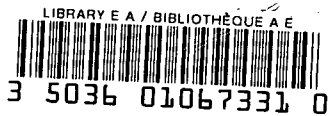
Despite the murky waters of false advertising the U.S. marketplace remains a free market economy. Accordingly, the Lanham Act ensures truthful comparative advertising, irrespective of directness. Therefore, provided that a firm's advertisement is not confusing and makes no explicit or implicit false statements of fact, comparative advertising is permitted. Use of the competitor's name, pictures of products, or price have now become common in many forums of commercial advertising.

Future Industry Trends

A whole new area of federal law dealing with information-provider, information-users, content ownership, first amendment rights and the internet are under consideration. The next several years will be a transitional period for both state and federal legislators. Some of the most interesting proposals are summarized below.

Some software developers are attempting to conform to the cost/payment structure outlined in the traditional "copyright clearinghouse model". Based on this principal every time material is used, copied or transmitted a royalty is paid to the clearinghouse. That royalty payment is then subdivided between the author, the publisher and the clearinghouse. Contracts are typically negotiated up front and attorneys are involved.

The most radical proposal suggests the abandonment of intellectual property as it exists today for a concept known as "relationships". This is a concept in which the user of copyrighted material has close ties to the developer and provides the copyright holder



with periodic royalties. Enforcement can take the form of a software "jacket" that periodically updates a server over the internet, or a hardware component that physically and electronically ties the users to the developer.

A technological breakthrough known as an "electronic watermark" suggests a more creative solution. Any form of electronic information may be identified using this marking system. The watermark is an undetectable imbedded code to which the user of the information does not have access. Companies or individuals could be licensed to use the image and turn the watermark on or off by entering coded commands. The only inhibiting factor of this technology is that it would require modifying current copyright law. Currently, copyright cannot be altered or removed once placed on material.

Lastly, a process called "transcopyright" has been proposed. This scenario expresses information in a distributed network. A map is supplied to the user indicating where the information may be purchased. In effect, this process segments payments into smaller and smaller pieces. It is believed that if the payments are "insignificant" - or pennies, then the customer would be more likely to pay the royalty. However, transcopyright infringes on current copyright law which gives the holder exclusive rights to control the context in which material appears. In addition, transcopyright technology gives no free use of any sort which is in conflict with the copyright fair use doctrine.

Conclusion

For the small business it is important to be focused. Intellectual property strategies may be applied to gain market credibility, limit competition, increase market share, or maintain a strong and effective defense. As a frame of reference, note the legal maneuvers of the competition, particularly the larger firms. They usually have the inside track on industry trends and have the financial wherewithal to set the pace.

**Information contained herein is meant to assist only
and should not be regarded as legal advice.**

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