

The Challenge: Emerging Technologies

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The changes and international solutions to licensing emerging computer-related technologies

One hundred years ago, the American frontiers came to Arizona and the American West in search of new riches, to harvest them and exploit them to better advance their commercial interests.

It is only fitting that we should be gathering here to be discussing the "New Frontiers" of technology: Biotechnology, Medical Technology, Superconductors and Computer-Related Technology.

These areas of technology and science have greatly changed the way we work and the way we live and will, without doubt, greatly influence the lives of our children and grandchildren.

The lawyers of the world are currently struggling to ensure that inventors and developers in these areas of technology are protected. Without suitable forms of protection there can be no rights to be licensed and the distribution of this technology would not be commercially feasible.

Licensing of these emerging technologies depends upon five main things:

1. The right being licensed (both domestic and foreign).

2. The thing being licensed.

It is the theme of my paper that careful attention to detail of these two points in the area of computer-related technology will best serve your company's or your client's needs.

I will deal with the general aspects of these points with occasional reference to some of the international pitfalls and solutions.

To those less enlightened of our brothers and sisters, the licensing of technology is seen as simply copy-

ing up a previously used standard form, substituting the names of the parties and the technology and photocopying sufficient copies for the parties to sign.

To them I say, BEWARE!

In the areas of these "emerging technologies," those of us involved in licensing must keep track of:

1. The changes in the technologies.
2. The changes in the legislation and jurisprudence.
3. The changes in the international scene and how they will affect the importance and reputation of these technologies.

I like to draw the following analogy: It is like trying to change the tire on a moving vehicle. Theoretically it is possible but you had better be very careful during its execution!

The Changes in the Technologies

There is a saying in the area of computer-related technology: If it is in stock, then it is out of date.

The changes are occurring in the areas of hardware (including semiconductor fabrication techniques, computer automated systems for manufacturing and design, and in the area of computer software).

We are all familiar with desktop personal computers such as the IBM PC and its later version the AT, based on Intel's 80286 chip. A couple of years ago, the 386 version arrived on the market. That chip is now standard on many portable machines. The 486 version is due for commercial production in 1989 and is purported to make desktop computers equal in power to mini low-end mainframes.

"Superconductivity" will allow us, to construct even faster computers in the future. I will avoid discussion of the topic of biotech computers and leave that to others

to explore.

Computer technology is truly becoming ubiquitous.

PROGRESSIVE: THE STRUCTURE OF A LICENSE AGREEMENT

To put both this paper and the area of licensing computer-related technology in perspective, I would like to borrow a page from the medical texts and discuss the general anatomy of a license agreement.

The Hand

The "hand" of any license agreement, is the property or right being licensed. This should not be confused with the "thing" or "intangible" being licensed. As an excellent example, when it was thought that the "heart" was the metaphysical center of the body, the "heart" of a license is a metaphysical one: What right is being licensed?

Five years ago, the equivalent of an Ivy League in the area of technology, it was thought that contractual obligations relating to trade secrets would be the "right" which would dominate all license agreements relating to computer-related technology. Copyright was seen as being supplementary. Patents were thought to be virtually useless.

Five years later, copyright is well established as the principle method of protection of computer software, with patent protection a close second. Trade secret protection has become a joint cousin, a last alternative for a licensing company.

New copyright legislation has been enacted in many countries, following the American example of

* Sir-D McFarney, Toronto, Canada, paper presented at L&S U.S.A./Canada Private Regional Meeting, February 1989.

specific statutory treatment of computer software in a literary work. The case law has generally determined that computer software can be protected by copyright, eliminating earlier doubts.

Specific legislation has been enacted or drafted for the protection of semiconductor chip layout designs, the three-dimensional pattern of layers in a semiconductor chip.

Internationally, the "deck is moving" in different countries take different approaches to copyright rights associated with computer-related technology.

Any attempt to explain all of the laws of the world in this area would be an impossible task for a brief paper. Instead, I selected a third-world, developing nation completely at random, and will explain the changes which are taking place there as being typical of what is taking place in the rest of the world.

The nation I have chosen is Canada.

The last calendar year has seen many changes in the area of protection computer-related technology in Canada:

1. Enactment of copyright legislation involving computer programs.
2. Drafting Semiconductor Chip Protection legislation.
3. The finding by the courts of a lack of protection of trade secrets under criminal law.

These changes reflect the differences, not only between the American and Canadian rights, but also the general differences between American and other foreign rights.

Enactment of Copyright Legislation Involving Computer Programs

On June 8, 1986, Royal Assent was given to Bill C-90 "An Act to amend the Copyright Act and other Acts in consequence thereof." Included in the Act were changes that affect computer software related rights and remedies.

The amendments in the Act made specific mention of computer program as a literary work in which copyright may subsist. A "computer program" is defined as:

"...all instructions or statements or program, text, instructions or other means, that is to be read directly or indirectly by a computer in order to

bring about a specific result."

No amendment was made in the text of copyright protection for a computer program as a literary work. In turn, like that for other literary works would be the life of the author plus 50 years.

Section 17(2)(1) of the revised Act created a right for someone to copy or modify computer software under certain situations. A person who owns a copy of a computer program, which copy is authorized by the owner of the copyright, is entitled to make a single reproduction of the copy by adapting, modifying, or converting the computer program or translating it into another computer language given certain conditions:

1. That the reproduction is essentially for the compatibility of the computer program with a particular computer;
2. That the reproduction is solely for the person's own use;
3. That the reproduction is immediately destroyed when the person ceases to be the owner of the copy of the computer program.

The making of a single reproduction of a copy of a computer program for backup purposes is permitted if conditions #1 above is met is 17(2)(2). The amendments are limited to allowing copies to be made in the rare situation where someone owns the copy of the software rather than lease it.

Moral Rights

Sections 11.1 and 11.2 of the revised Copyright Act provides a "moral right" to an author to protect the "integrity of a work" where certain acts prejudice the "honor or reputation" of the author. The provisions allowing for modification of software may run afoul of the moral rights that allow authors to prevent damage to the "integrity of the work," where the work is "altered, mutilated or otherwise modified, or used in association with a product, service, cause or institution." The sections appear to have been primarily intended for artistic works rather than literary works or computer programs but nevertheless would have an effect on such works.

The impact of "moral rights"

should not be overlooked. An example of its effect in Canada occurred several Christmases ago. One of Toronto's main tourist attractions is a glass-fronted shopping center called the Eaton Centre. Suspended from the ceiling at the south end of the complex are a flock of life-like fiberglass Canadian geese, approximately 60 of them, in various stages of a simulated landing. The work of sculpture entitled "Flight Stop," was done by a Canadian artist, appropriately named Mr. Snow. The work was a favorite for tourists who often posed for pictures in front of it. The Eaton Centre adapted the geese as useful mascots, using them in a logo for the Centre. At Christmas time in 1982, someone decided that tying red lines around the necks of such of the geese would add a festive touch and the bow-tied geese were featured in an advertising campaign for the Eaton Centre. Mr. Snow sought and obtained an injunctive injunction, based on his moral rights in the work, and late pre-Christmas evening, a work crew removed all of the bows.

The original provisions for copyright infringement have been amended significantly to increase the penalties:

For summary conviction proceedings (a fine not exceeding \$20,000 or a term of fine \$10 for every copy to a maximum of \$400 or \$200 depending upon the type of work copied or its importation for a term not exceeding 6 months, or to both to 20% of the value).

For conviction on indictment, is a fine not exceeding \$1,000,000 or imprisonment for a term not exceeding 5 years, or to both to 250% of the value.

The new definition and the protection of computer software apply to programs that were made prior to the date of enactment of the legislation (s.20). With respect to those programs made prior to May 21, 1987, where copyright subsists only by virtue of the inclusion of the new provisions described above, nothing done in respect of the computer program before May 21, 1987, constitutes an infringement of the copyright (s.22). Computer programs created prior to

May 17, 1987, are presumably covered by the Copyright Act, given the decision in *Apple v. Macintosh*.

DERIVATIVE WORKS

A licensee sometimes becomes the surrogate author of derivative works of computer software. The licensed software is modified and in some instances becomes a new work.

Who owns the child? The licensor or the licensee? Much will depend on the laws of the local jurisdiction.

The problem arises when a licensor provides software to a licensee, and the licensee makes modifications in the way of improvements or "customizations" in the software. The license should specify who owns the improvements. If it is not the licensee, then the licensor should be certain to have a license back from the licensee.

Patent

Patents are sometimes referred to as "legal monopolies." This is a myth perpetuated by patent attorneys around the world. Patents are monopolies only when they are enforced; they are licenses to litigate.

Some companies use patents as "corporate baseball bats," holding the right to use technology they own for the licensee to use the technology they want.

The best kept secret among today's computer-related technology companies are patents.

It was once thought that it would be impossible to patent any invention dealing with computer software. Patent protection has now become the preferred way of protecting industrial applications of computer programs and other computer-related technology.

Ironically, in Canada, the case that opened the floodgates permitting patents on inventions involving computer software was one where the application was rejected. In the *Schreiber* decision,¹ however, the Federal Court of Appeal established the following two-step test to determine the patentability

of computer-related inventions.

1. According to the patent application, what has been discovered?
2. Is that discovery patentable regardless of whether a computer is or should be used to implement the discovery?

Many applicants have subsequently used this test to great advantage to obtain patent protection for their computer-related inventions.

Drafting Semiconductor Chip Protection Legislation

Pressure to enact Canadian Semiconductor Chip legislation comes from other countries and in particular, the United States, as a result of enactment of the American Semiconductor Chip Protection Act in 1984.

Canadian semiconductor chip designs have received interim protection under the U.S. Semiconductor Chip Protection Act due to the efforts made to date by the Canadian Government in moving toward the enactment of new legislation.

The legislation now being drafted in Canada is unique from a Canadian perspective. Exact copying of semiconductor topography would be prohibited but a competitor would be permitted to "reverse-engineer" the design of a chip. Reverse-engineering would not be an infringement of a chip topography so long as the resulting chip was only substantially similar to the original chip topography but was not virtually identical to it.

A chip topography would be protected for 10 years commencing with the first commercial exploitation of the chip topography anywhere in the world. An owner would have the usual remedies of injunctions and damages as well as the right to have Canada Customs prohibit the importation of infringing chips.

The government is proposing that those in "violation" of the topography's rights, in other words, once the topography owner introduces a chip on to the market anywhere in the world, that chip would be allowed to be imported into Canada. This would prohibit a chip topography owner from charging what they call a "global price" for their chip. "Grey marketing" of semiconductor chips, the importation of legiti-

mately product by someone other than the owner of the rights in the chip topography, would be permitted.

It is proposed that Canada's chip law would occupy a *no growth* chapter in the Canadian Copyright Act.

Copies of the draft legislation were circulated among a limited number of practitioners in September 1986 and comments were received concerning it. A two-legal review process will follow.

What is perhaps of most interest are the differences between what the United States would like to do: the rest of the world have in the way of protection of semiconductor chip designs and what Canada and what the rest of the world is considering enacting.

The proposals for Canadian legislation are considering having an exclusive right in the owner to "use or lease" a chip embodying the work. What happens if you rent a car with a cellular telephone containing a protected chip design? Does there have to get a license from Intel, the owner of the chip design?

Definition of "Topography"

So as not to be confusing with the American "mask work," our protection would be given to the "topography" of a chip. And if further confusion is necessary, we would have an optional marking provision. The chip incorporating the topography would be marked with the letter "T".

We are concerned about what it is we are protecting: the chicken or the egg? This rapidly divides into a rhetorical debate: do we want to protect the masks and data used to generate the three-dimensional pattern in the chip, or do we want to protect the three-dimensional pattern in the chip?

We are also considering the complementary licensing of chip designs in cases where our competition laws have been breached.

"Reverse-engineering," permitted (but not defined) under the U.S. legislation, is a further concern and we are not certain whether we should attempt to define the term, or leave it to the courts to determine.

1. [1986] 2 C.F.R. 288 (P.C.).

Lack of Protection of Trade Secrets Under Criminal Law

In the fall of 1982 a union was attempting to form a bargaining unit at the Constellation Hotel near the Toronto-International Airport. The hotel management kept a confidential list of its 600 employees for payroll purposes. The list was in the form of a computer print-out. Wayne John Stewart, a consultant, was approached by someone else, he inferred, was associated with the union, to help in obtaining a list of the hotel employees to assist the union in selecting employees to obtain a bargaining unit at the hotel. Mr. Stewart asked Ian Williams Hart, an employee of the hotel employed as a security person, to procure the information and suggest various methods of obtaining the information. The information was to be copied from the confidential computer records of the hotel without meaning or otherwise affecting the records themselves.

Mr. Stewart was charged with counselling Mr. Hart to commit three criminal offences:

1. Fraud under s.208,
2. Theft under s.280(1),
3. Mislead under s.287.

The count of mischief alleged that the taking of the confidential information from the hotel would interfere with the normal operation and the physical premises of the hotel. At trial, the court held that Mr. Stewart was not guilty of mischief since it had not been shown that the loss of confidentiality of the list would have interfered with the hotel's physical premises. It should be noted that the count of mischief was not allowed at the property, if any, in the confidential information contained in the list. The charge of mischief was not pursued on appeal.

With respect to the count of theft, the issue was whether confidential information was "anything" under s.280(1). The court held that to be "anything" within the meaning of s.280(1), the thing must be:

1. Property of some sort;
2. Property capable of being:
 - (a) taken (otherwise intangibles were excluded);
 - or
 - (b) converted (and may be an

intangible);

(c) taken or converted in a way that deprives the owner of his proprietary interest in some way.

The court concluded that confidential information is not property. It is not capable of being taken or converted because the owner still retains the information.

Mr. Stewart was also found not guilty of fraud. The two essential elements of fraud (as set out by the Supreme Court of Canada in *R. v. Dick, Hutton and Alcorn*)¹ are "deception" and "Appropriation," the latter element being satisfied by proof of detriment, prejudice or risk of prejudice to the economic interests of the victim.

Although the requisite element of detriment was present, there was not proven to be any deprivation of "any property, money or valuable property" as required by the statute. There was no intention of the hotel to deal in a commercial way with the confidential information. All that the hotel lost was the confidentiality of the information.

There is a great problem with trade secrets in Canada, at least, there appears to be no remedy against those who "steal" trade secrets who are not given the information under some contractual or other obligation of confidence.

How Are Their Rights Changing Internationally?

Free Trade Agreement between Canada and the United States.

As of January 1, 1989, Canada and the United States embarked on a tradition of trade barriers toward a North American "Common Market."

The proposed enactment of the Free Trade legislation prompted a national election in Canada last fall and several months of court-going by Canadians. The "Free Trade" issue became the only issue at the election, resulting in many Canadians becoming fearful of future American domination of our economy. One week before our election, on November 7, 1988, when Mr. Bush was the American election

and said that he most wanted a "binder, gentler nation," many Canadians feared he was talking about Canada!

Nevertheless, the legislation was enacted, and as a result of the Free Trade Agreement, we now have dropped the 3.9% tariff on computer hardware.

General Agreement on Tariffs and Trade. The General Agreement on Tariffs and Trade (or "GATT") is an agreement designed to reduce trade barriers.

Of concern to members of GATT, and in particular the United States, Japan and European business communities, is the absence of an international dispute settlement mechanism for intellectual property. They say that inadequate protection for intellectual property results in cloning, counterfeit goods and other misappropriation of industrial property; 180 U.S. firms estimate these losses to total \$24 billion. In the United Kingdom, it is estimated that 100,000 jobs are lost due to copyright and patent infringement. In terms of international trade, money means trade.

In Montreal last fall, at the Uruguay round of the GATT meetings, the U.S., Japan and Europe pushed for the imposition of a basic framework on intellectual property — a sort of minimum standard for protection. Although no consensus was reached, the world is slowly moving toward a more harmonized approach to intellectual property protection.

Retain Good Local Counsel.

The following advice may seem odd, but it is most often ignored by otherwise sensible people: When dealing with lawsuits or lawsuits in a foreign country, hire good local counsel.

As in the case of medicine, one does not hire a general practitioner to conduct brain surgery. In the case of licensing computer-related technology, hire someone with experience in the area.

This advice can not be better followed than in the case of hiring lawyers, or as some people refer to them "local" counsel. No matter how many speeches you hear from

1. [1980] 2 S.C.R. 490.

panels, you lose many articles you read on practice in a foreign country, you cannot serve your client better than by retaining good foreign counsel.

I also suggest that you do more than forward to foreign counsel a copy of your license agreement and ask him or her to "domesticate it" to the laws of the local jurisdiction. You should discuss your client's plans in that foreign market with foreign counsel because there may be local solutions to local problems that do not exist in your native country. Believe it or not, some countries provide better protection in some areas than do our American or Canadian laws.

A discussion with foreign counsel will also alert you to acts that may be perfectly legal at home but which may be prohibited abroad. For example, the Australian Trade Practices Commission recently issued a statement to the effect that standard "shrink-wrap" license agreements — the type that are

commonly found inside mass-marketed computer software — are void and may subject the software licensor to fines.

You will also be alerted to differences between your domestic law and the laws of those other countries, which may have disastrous effects on your business plans. In some Latin American countries, the property being licensed can, under some circumstances, become the property of the licensee.

Learn not only from Dorothy in the Wizard of Oz when she said, "There's no place like home." As well, remember the immortal words of Earl Maiben concerning good foreign counsel, "Don't leave home without it."

WHAT IS TO BE DONE WITH EVOLVING TECHNOLOGY?

In the area of computer-related technology, the technology is changing almost overnight. Hardware comes in new versions. Pa-

tents issue on technology that was once a trade secret. Trade secrets evaporate.

How does a licensing party keep track of what technology is available for licensing and what technology it has acquired in its "stable"?

The answer is "inventory control." Inventory control requires a great deal of communication between the person responsible for licensing the technology and the user or developer of the software. Maintaining a dialogue between the two parties will ensure that the licensing keeps up to the changes in the technology.

In summary:

1. Be aware of the rights being licensed. They change almost daily.
2. Keep track of international changes, but rely on the expertise of local counsel to incorporate these changes in your licenses.
3. Maintain good communication with your licensee or creator to maintain good control over your inventory.