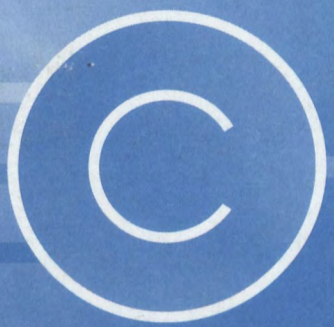
symposium on

# Digital Technology and Copyright



Willson House, Meech Lake, March 3, 1995

Department of Justice
Industry Canada
Canadian Heritage

# Symposium on Digital Technology and Copyright

## March 3, 1995
## Willson House, Meech Lake

A one-day symposium
organized by
the Intellectual Property Secretariat
of the Department of Justice,
with assistance
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# Foreword

This publication is the product of a March 3, 1995, symposium on digital technology and copyright, sponsored by the Department of Justice, the Department of Industry and the Department of Canadian Heritage.

A number of distinguished copyright specialists, both academics and practitioners, were invited to prepare the papers that appear in this volume and to present those papers to a symposium of senior officials from the sponsoring departments and other federal departments with an interest in copyright matters. I am very grateful to those who accepted the invitation to share with us their insights about the legal and social issues arising out of the collision between digital technology and copyright.

The symposium was originally inspired by a perception that digital technology was making it virtually impossible to enforce our copyright regime. In addition to the economic harm that might be occasioned by an unenforceable copyright regime, we at the Department of Justice were beginning to worry about the impact of the digital phenomenon on the institutions of justice. An unenforceable legal regime tends not to be respected and, indeed, in some circumstances, can contribute to bringing the administration of justice into disrepute. There was also a concern that copyright enforcement, both civil and criminal, was at risk of becoming arbitrary and capricious, in the face of virtually universal violation of copyright.

While those were some of the concerns that originally inspired the symposium, the focus evolved into a more generic question as Justice was joined in the project by Industry Canada and Canadian Heritage. The question became: what legal and social policy issues are going to be generated by the collision between copyright and digital technology? In general terms, that was the problem set for our panel of copyright specialists. As you will see from the papers included in this volume, each of the panellists approached the issue in a way that was personal and unique; and each of them has offered their most thoughtful insights into what has to be acknowledged as a very complex question. I very much hope that those insights will assist senior policy makers in Justice and its client departments in anticipating the legal and social implications of the digital phenomenon.

In addition to the persons whose papers appear in this volume, there are a number of others whose contribution to the success of the symposium deserves acknowledgement. Brenda Patterson (of Industry Canada) and Danielle Bouvet (then of Canadian Heritage), for sharing the vision that these were issues of broad significance across the federal government, and for making a generous financial contribution to the symposium on behalf of their respective departments. George Thomson (Deputy Minister of Justice and Deputy Attorney General of Canada), who was kind enough to attend the symposium and deliver the opening remarks. Claude Brunet (of the law firm of Martineau Walker), who presented the symposium with the recommendations of the then just-published report of the Copyright Subcommittee of the National Advisory Council on the Information Highway. Professor Ejan Mackaay (of the Faculty of Law, University of Montreal), who served as commentator and "wrap-up artist" at the symposium. And Mr. Justice Frederick E. Gibson (of the Federal Court, Trial Division), who very generously offered his considerable talents as a chairman and, without once resorting to his powers of contempt, ensured that the proceedings were civil, brisk and timely.

Last, I would like to express my appreciation to the symposium's organizing committee. In addition to Brenda Patterson and Danielle Bouvet, the members of the committee were Claude Lafontaine (Canadian Heritage), Alan Blackwell (Legal Services, National Research Council) and Jeff Richstone (Legal Services, Canadian Heritage).

Cal Becker
Coordinator
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# Opening Remarks

First of all, I would like to welcome our distinguished cast of judges, academics and practitioners.

- Mr. Justice Fred Gibson of the Federal Court of Canada, who has kindly agreed to chair today's symposium;
- Professors Ejan Mackaay and Ysolde Gendreau from the Faculty of Law, University of Montreal;
- Professor Pamela Samuelson from the University of Pittsburgh School of Law;
- Professor David Vaver from Osgoode Hall Law School;
- Claude Brunet from Martineau Walker in Montreal; Maître Brunet of course is Chairman of the Copyright Subcommittee of the National Advisory Council on the Information Highway;
- And we also have Howard Knopf from the Canadian Intellectual Property Institute; Wanda Noel, an Ottawa copyright lawyer and consultant, who is also secretary to the joint Canadian Bar Association/Patent and Trademark Institute committee on copyright; and Lucie Guibault, fresh from the Max Planck Institute in Germany and the University of Montreal and now with the Intellectual Property Policy Directorate of Industry Canada.

I would like to begin by saying a few words about the genesis of this symposium. It started life as an apprehension on the part of the Department of Justice that the collision between digital technology and copyright would prove to be a significant justice issue. The concern was that the facility of reproduction offered by digital technology would make for an *unenforceable* copyright regime — not an *obsolete* copyright regime, but an unenforceable one. Or worse still, perhaps, a copyright regime that was arbitrarily enforced, or enforced in some systemically discriminatory way. The initial concern, in other words, was that an unenforceable legal regime, or an arbitrarily enforced legal regime, had a significant potential for bringing the administration of justice into disrepute. That is, "disrepute" in the sense that people don't respect unenforceable or arbitrary laws.

We also believed that this was not solely a justice issue of concern to the Department of Justice. We saw it as a horizontal issue that concerned a number of federal departments. I'm pleased to see that the horizontal nature of the issue is reflected in the list of the symposium's participants — Industry Canada, Canadian Heritage, Public Works and Government Services Canada, the National Library, the Privy Council Office, Treasury Board, the National Research Council and others.

As a Deputy Minister with limited resources, I was also pleased to see that the horizontal nature of the issue is reflected in the funding arrangements for the symposium. We're grateful for the financial support we've had from Brenda Patterson, who, at the time the funding arrangements were put together, was Director of Product Development and Research in the Strategic Information Branch of the Department of Industry; and Danielle Bouvet, who, at the time, was Director of Copyright Policy at the Department of Canadian Heritage. And, of course, we're all very grateful to Cal Becker and his organizing committee for putting this symposium together.

At the beginning of my remarks, I said something about the genesis of this symposium. Looking over today's program, I think it's a fair observation that the academics and practitioners we've invited have taken the original inspiration for the project, expanded upon it, and turned it into a very sophisticated forum on digital technology and copyright.

Copyright and digital technology. Are they really two distinct concepts, or has the one dissolved into the other? One only has to look at the entertainment industry to see that such a notion is more than a metaphor.

Who will ever forget the image of Sam Neal running away from a herd of dinosaurs in the film *Jurassic Park*? Behind the scenes we learn that this actor was actually photographed against a solid blue screen, while the dinosaurs were all created using digital "synthetic reality" techniques. Afterward, the two streams of images were merged into one.

Significantly, several Canadian companies, including Soft Image and Discreet Logic, have made their mark in such digital image technology, and the technology itself is a hot item in the entertainment industry, because: (a) it cuts the cost of movie-making in two, and (b) no fewer then seven out of the ten highest grossing films of all time have been special effects films.[1] Imagine the fun that copyright lawyers at Apple and Disney must be having right now.

But is the dissolution of copyright into digital technology relevant only to the entertainment industry? Not any more. With the information explosion has come a demand for more and better information products. To a certain extent, this has blurred the dividing line between information and entertainment. Traditional information offerings of text and tables are now being replaced by sophisticated graphics and video images, in the burgeoning multi-media display format. For example, by the end of this year, many of us who currently read newspaper clippings of topical events will probably be getting e-mail messages containing video clips of the Prime Minister's last speech. We will be able to see his lips move and hear his voice right on our own computer screen.

This multimedia technology has profound implications for a government that is moving into the knowledge-based business, and that is trying to assist its citizens to develop an information-based economy. Our information will have to be delivered in entertaining multimedia format simply to compete with all the other information products appearing on the horizon.

This creates a special challenge for lawyers and other professionals who labour in the field of copyright. Although we have learned the rules of the game, the game has now changed. We must start thinking about new rules, and sooner rather than later. To this end we have brought together this distinguished roster of leading academics and practitioners to share with you their ideas and their insights on the collision between digital technology and copyright.

George Thomson,
Deputy Minister of Justice and
Deputy Attorney General of Canada

[1] "Computers come to Tinseltown", *Economist*, December 24, 1994, at p. 87

# Rejuvenating Copyright, Digitally

David Vaver

## Introduction

It is a commonplace to say that the arrival of digital technologies is having an enormous impact throughout society*, perhaps as large an impact as that caused by the advent of electricity. The way in which industries, governments and other institutions operate is being reorganized; new applications of the technologies are being devised and developed, in their turn creating new industries; knowledge, information and advertising are being delivered differently as Internet and other interactive services, e-mail, and virtual reality products supplement the print media, libraries, the mail, the telephone and traditional entertainments; and people are changing their work and play habits as digital technologies present them with new possibilities. Digital technologies are here to stay, and everyone everywhere wants to make sure they are not left behind.

With the new technologies comes pressure for change in the legal regime governing them. As Mihály Ficsor recently put it, in a tone of weary resignation:

> It has become a kind of tradition ... that technological changes time and again serve as bases for attempts to go beyond the truly justified adaptation and modification of certain aspects of the system of protection of copyright and neighboring rights, for attempts to question the reasons for granting certain rights or granting them in a certain way ... or even the reasons for the very existence of the system. This tradition is age-old...[1]

### Justifying copyright: protectionist instincts and false analogies

Ficsor diplomatically avoids saying what changes would go beyond the "truly justified" or what, indeed, copyright's justifications are. Digital technology has been partly responsible for reviving questions that copyright cheerleaders would prefer remain buried. Every word in the nat-

ural law slogan usually trotted out to justify the system — "I made it, therefore I own it" — has been carefully examined and debated:

- Who is "I", i.e., what does it mean to be an author? Who is the author of an interactive work?

- What does "I *made*" denote? Does creative work sprout full-blown from the author's brain and hands, or is it societal, built on the learning and conventions of the past? If the latter, what does society owe the author and what does the author owe society?

- What is this "it" I made: the tangible thing you can touch, the intellectual process that went into it, or the part we can sense visually, aurally or olifactorily?

- What does the "therefore" in "I made it, *therefore* I own it" mean? Is it right to say that *because* I made something, I am entitled to own it? And, if we find that others contributed to the making — i.e., that there are more "I"s than "the" author would care to admit — is it fair to conclude that only one "I" owns it? Is the statement even factually true in an era when employers own their employee's work product and free-lancers, desperate for work, assign their copyright just to get the job? Should not the more realistic slogan be "I *paid for* it, therefore I own it, therefore I can call myself *the* author?"

- And what does "I *own* it" mean? Is this descriptive or prescriptive? Isn't it more accurate to say, "I *should* own it?" Then we can ask whether production truly merits ownership and, if so, what the incidents of ownership should be. For it does not follow that an owner of ideas and expression should, or even can, have the same rights as the owner of tangible property such as land and goods: ideas and expression can be reproduced infinitely, but land and (as we are finding out) the raw materials, from which tangible goods are made, are not infinite resources. And, except in *Star Trek*, we do not yet telecommunicate land and physical objects, as distinct from representations of them.

From all of this, a very modified version of the natural law justification emerges: "I and others were responsible for producing this work, so maybe I and perhaps others should be able to stop, or get payment for, anybody else's use of the work in some way — or maybe not."

At first sight, perhaps all this debate suggests is that there are a lot of scholars out there with a lot of time on their hands. But, at second sight, the debate appears very relevant to the type and degree of protection the participants in digital technology ought to receive. The debate helps expose the assumptions underlying technical questions raised by digital technology. It may discourage the type of spurious, analogical reasoning almost inbred in lawyers confronted with a new phenomenon: just because X is (or is not) protected, the new thing Y should also be (or not be) protected.

Imagine the first person to have spotted an elephant. Untrained in law, she or he would immediately have recognized it as a new species. But the first lawyer to spot it would probably have asked: what is this thing like? It looks like a cow — apart from a few minor details like the trunk, the horns are sideways, it's bigger, a different colour, and it makes a different noise. But it does run, walk, and eat vegetation, and it does have four legs, a head and a tail. So, it's really just a big cow with extras: let's give it the tag "quasi-cow" or something on the borderland of (in-)comprehensibility (perhaps *bos ferox?*). A *soupçon* of disillusionment might set in only when the beast had turned on the lawyer after he had tried to milk it and found it to be male.

Analogical reasoning works so long as the analogy is chosen with an understanding of what one is doing and its consequences: where possible, empirical data should support the choice. Digital technology has already fallen victim to spurious analogy. For example, the Lehman preliminary report on the information highway claimed that a user, downloading a file into her/his computer's temporary memory, "reproduced" the file and so infringed copyright, unless the file's owner had authorized the downloading.[2]

Since the only way, under present technology, to read a file is to download it into one's own computer memory, the effect is to give copyright owners a new right, "the exclusive right to read."[3] The implicit analogy Lehman had in mind was making a photocopy that one reads and then throws away. But there is another equally plausible analogy: that of browsing a book in a library or a bookstore, or hearing buskers play music in the street. Disobeying the sign in a bookstore that tells one not to loiter by the magazine rack does not turn the speed-reader of the *Economist* cover-to-cover into a copyright infringer, any more than the audience of the busker infringes copyright by listening, whether or not SOCAN licensed the busker to perform in public.

There is, however, an extraordinary U.S. decision in 1993 that says downloading is an act within the copyright owner's control. A company that manufactured and serviced computers and software supplied them to users under a licence allowing use of the software "solely to fulfill customer's own internal information processing needs." Some users switched to a rival company to service the software when the computer went down. To repair a malfunctioning program, technicians first had to download it from the computer's permanent storage into temporary memory to diagnose the problem. The manufacturer sued the service company, saying its employees were infringing copyright by this temporary downloading. A federal appeals court agreed: this was a "use" outside the scope of the software licence, and so an infringement of copyright in the programs. The customers were as guilty of infringement as the service company they had called in. The service company had to stop downloading: its repair business was closed down.[4]

This is a far cry from the approach taken in early 20th century U.S. and U.K. cases which were treated as good law in Canada at the time. Well before today's vogue in law-and-economics, judges were keenly aware of the economic impact of extending copyright owners' rights whenever a new technology arose, and they often deferred their power to do so to legislatures. So when music publishers sued the makers of player piano rolls[5] for reproducing their music, courts in both the U.S. and the U.K. found against the publishers. Why close down the perforated roll business when analogous devices, such as music boxes and phonograph records, continued unchecked by copyright owners?[6] "Technological neutrality" — today's buzzword for increasing rights held by copyright owners — meant something very different then! In fact, when U.S. and Commonwealth legislatures reacted to these decisions, they made the new mechanical right for music subject to a compulsory licensing scheme that continues in many countries to this day.[7]

By contrast, the U.S. judges in 1993 seemed unconcerned that they were allowing copyright to be used to foreclose competition in the parts and repair aftermarket, not only in computer programs but in every work protected by copyright. On this theory, anybody can be prevented from trying their hand at repairing anything protected by copyright, even from restoring fading artwork; no business can set up an in-house repair department or ask a knowledgeable employee to make repairs *ad hoc*. The unnecessary costs imposed on users, and the incursion on people's ordinary liberties[8], are brushed aside.

One might hope for better from Canadian judges, although these days many defer to U.S. courts in decisions dealing with the new technologies, as if greater experience necessarily entailed greater wisdom. Still, a Canadian court might refuse to say that downloading was a reproduction "in a material form" under the Canadian *Copyright Act*;[9] a work's temporary presence in volatile memory may not be "material" enough. Or it might bypass the economic result reached in the U.S. case by relying on British jurisprudence, allowing machine parts to be repaired, or even manufactured, by aftermarket suppliers of goods and services: nobody can "derogate from their grant", i.e., use property they retain (land or copyright) to interfere with the enjoyment of other transferred property (land or goods). An owner of tangible property has the legal right to make it fit for its intended use without asking anybody's consent, whatever any contract or copyright licence says.[10] If this is so for parts for cars, so should it be for parts for computers (after all, many car parts are no longer mechanical but comprise computer programs instead).

Should downloading infringe copyright at all? Only if one reads the law very literally — like the apocryphal computer program that translated "nous avions" ("we had") by "we airplanes." Copyright never meant to stop people from repairing or reselling or reading or using material in customary ways. Where the legislature wants to close down an owner's or user's ordinary expected rights, such as renting (as occurred under the Canadian *NAFTA* amendments), it says so explicitly — and then usually carefully targets the activity so as not to inhibit harmless parallel activities.[11] If judges are not sure the legislature had a particular problem in mind, they would do well to stay their hand and let legislatures do their jobs.

## A separate law for digital technology?

I have used downloading as a small example of the need for both judges and legislatures to beware the false gods of spurious analogy and instinctive protection. The same temptations lurk around other digital works on, or off, the information highway: What is the nature of transmissions and offerings on the highway? Are they like private telephone calls, cablecasts, or broadcasts? With convergent technologies, does their nature have to be rethought? What responsibilities do users, service providers, and conference monitors have for what they say? Should digital works be categorized differently from traditional works? Should they have their own law, separate from copyright altogether?

On the last question: no doubt, the federal parliament could validly legislate a separate law under a head of power other than copyright, the same heads as justify its regulation of telephones and broadcasting. But this seems unnecessary. A set of rules for digital works could easily be worked out within the context of copyright. Consider the structure of the present law: it first provides (as, indeed, do all copyright laws) a common set of rules to govern all works (ownership, commercialization, moral rights, what to do with violators etc.). Then comes another set of rules dealing with special cases, e.g., art,[12] music,[13] computer programs.[14] These special rules, though scattered, really amount to a series of "mini"-copyright laws within one copyright umbrella. So a "mini-copyright" law, relating to electronic works, seems quite appropriate and feasible. The live questions are:

- what practices in relation to these works do we wish to support?
- are these practices special to digital works, or do digital works simply highlight practices that already exist in other media, and that ought to be supported across the board?

## Giving copyright a transfusion of morality

All this assumes copyright will be the main engine that drives these technologies. This returns us to Fiscor's observation that technological change frequently serves to question "even the reasons for the very existence of the system."[15] Digital technologies have revived this "tradition" on a different plane. While conceding the abstract virtues of copyright, some question whether copyright has, in this new world, already become irrelevant. After all, copyright is premised on the initial production of a tangible original work, which is then exploited either through mass marketing of copies, public performance or broadcast. Unauthorized intrusions into this market are usually relatively quick and easy to detect, and to close down through the use of civil or criminal sanctions — perhaps at some expense, but no more so than for other property rights. But as existing works are digitized (with or without authorization) or new works are made available solely in digital format, copyright becomes powerless to cope with the manipulation and movement of intangible electronic streams. Detection and enforcement become difficult, sometimes nigh impossible — rights that appear on the books are ignored in practice. Access to music, art, literature and other material in digital form, has given users the power to modify these works or data at will, replicate them almost infinitely, and trans-

mit them anywhere in the world to others, who in turn have the same capabilities — and power, once given, will inevitably be used. In this world, the argument goes, every user is a potential re-author and re-distributor of material made available electronically to her or him. In this world, the only way in which an initial provider of a work or information can practically profit from its investment is to rely on shared ethical understandings, encryption technology, and good marketing (e.g., the provision of services such as help lines and regular updates to which users wish to subscribe). In this world, copyright is but a fuddy-duddy spectator, looking in longingly on a glitzy party to which nobody bothered inviting it.[16]

This doomsday scenario of copyright has not been accepted by recent studies by Lehman in the U.S., and NGL Nordicity and Brunet in Canada.[17] All have pronounced the copyright system very much alive and relevant to the digital age. To them, the only serious questions are what activities copyright owners should be able to control, what should users be allowed to do, and how copyright rules should be adapted to achieve these goals.

Whether copyright is or is not on its last legs is yet to be seen. As often happens with polar opposite prophesies, the truth may eventually come out somewhere in the middle. On one point, nonetheless, most seem agreed: under digitization, copyright, however rejigged, will face serious difficulties if it is to function as the main reward mechanism for producers and distributors. It is, therefore, now more than ever, critical for copyright to make sense to all those who operate in its shadow — for it to have "a coherent moral centre the ordinary person can appreciate and accept."[18] Without that, calls for everyone to behave ethically, or to be educated in the virtues of copyright, will founder at the first step.

Developing that moral centre will not be easy. We have to go beyond nostrums like "I made it, therefore I own it," "everyone is entitled to reap where they have sown," "ownership of intellectual property is the same as ownership of land," or other commonly trotted-out one liners — more suitable for a program of Comic Relief than of copyright relief — that raise or beg more questions than they answer. A more plausible inquiry might be to start by imagining a world without copyright, and then to ask: would copying, or using a particular class of product in a particular way, discourage its being produced in the first place, because the producer would be unable to make a fair profit on his/her investment? If so, some further pertinent questions might be:

- Do we want to encourage production in this sector in the first place?

- What sort and degree of stimulus is necessary for the sort and degree of production we want?

- Who should benefit from the stimulus? The initial producer(s)? Later distributors? In what proportions and to what degree?[19]

When copyright law is tested against a template like this, the true extent of its incoherence can be seen — an incoherence that existed even before the digital revolution arrived. Copyright was supposed to reward workers in the fields of art, literature, music and drama. Yet, employers, repackagers and distributors frequently profit much more from the system than the toilers in the field.[20] Copyright law was supposed to stimulate the production of work that would not otherwise have been produced at all, or as well. Yet much routine or trivial material is protected - business and private correspondence, private diaries, simple business logos (amply protected by trademark and passing off laws), even the doodlings of toddlers, who have neither heard of copyright nor, if pressed, could even spell the word.[21] Copyright is supposed to protect products that are, in fact, cultural. Yet, how computer programs (essentially electronic machine parts) or business and legal forms — all classed along with Atwood's and Carrier's writings as original literary works — qualify as culture, except in some trivial sense, has never been explained, indeed, is unexplainable.

Digital technologies have thrown copyright's anomalies into starker relief. Not only have they enhanced the opportunities for, and volume of, this work and so have accentuated existing distortions, they have also thrown into question many assumptions basic to the operation of the copyright system.

Of the many examples one could take, I wish to look at three issues: aboriginal work, home copying, and postmodern artistic practices. These are examples of problems that predate the digital technologies but that may become more pressing as the technologies come to the centre stage of cultural practice.

## Aboriginal work

The present copyright law protects the work of *contemporary* aboriginal artists, writers, and their publishers and distributors, just as it does the work of their non-aboriginal counterparts. *Traditional* aboriginal work, however, is more vulnerable. What is to stop anyone from digitizing and commercializing, with or without embellishment, traditional aboriginal stories and artwork, even when this may be deeply offensive to the group, which feels these stories and art are integral to its culture — part of the glue that binds it together? Yet aboriginal peoples have valid concerns about how their stories and art are being taken and commercialized, sometimes by their own peoples, more often by others. Sometimes the commercialization itself may be offensive, as when the story or piece of art is treated as sacred by the group to which it belongs. At other times, the commercialization, while not in itself offensive, distorts the original story or artwork.

Copyright and moral rights pass these issues by. The objections to protection under the current law are often insuperable: the author of the work may be unidentifiable because she or he is long since dead, or the work may have been communally made; or the work may have been oral and unfixed; or there is no-one who can put forward a plausible claim to be the author or copyright owner, in the sense of having derived title from an identifiable author or authors; or any possible term of copyright may have expired.

Protection of traditional culture in some way raises controversy because it suggests that some areas of thought and expression are off limits except to one identified group - a type of censorship that is anathema to writers and artists. Aboriginal groups may respond that the act of translation itself may be a form of cultural oppression that, intentionally or unintentionally, recreates traditional stories according to the translator's perspective. The reformed stories then may be treated as the authentic expression of the group's culture, even by the group itself.[22] Differences such as these are best resolved through rules not designed in bureaucrats' offices but coming out of discussions involving interested aboriginal and non-aboriginal leaders, writers and artists.

It is important to note that the present situation has come about quite deliberately. The issue of bringing traditional culture ("folklore") under copyright was discussed during the 1967 revision of the Berne convention at Stockholm. An international consensus developed favouring protection and a working group was struck to look further into the matter. This immediately flushed out the Canadian delegate, who is recorded as saying:

> he had been unable to speak earlier on the question of folklore. His country had a very considerable body of folklore, which it had always regarded as falling within the public domain. Canada was therefore opposed to any action likely to restrict the public use of folklore material. His Delegation was extremely unwilling to enter into a discussion as to who owned or was entitled to use such material. He hoped the new Working Group would bear his remarks in mind, since the matter was of great concern to his Delegation.[23]

Given the convention rule of unanimity, this objection was enough for the provision on traditional culture to be watered down to the optional scheme now appearing in the 1971 version of the Berne convention.

In Canada and elsewhere, the first recognition of aboriginal interests has been in the area of land claims. Phase two may very well become the presentation and recognition of cultural claims. The policy of Stockholm in 1967 will not likely survive into the 21st century.

## Staying private: home copying

As earlier noted, digital technology allows users easily to modify texts or art and produce something more or less different from the source work. It also allows them to send instant copies electronically anywhere in the world. Copyright owners and authors claim they should be entitled to control these activities. By control, they mean anything from: (a) completely stopping such production, copying or distribution; (b) licensing these acts for whatever fee the market will bear; or (c) being treated as a co-owner or co-author and sharing in exploitation decisions, royalties, and credit.

Users typically resist attempts to control their creative impulses. If the work is exploited commercially, some may grudgingly accept an obligation to pay for the use of the source work, and/or to credit their product as based on or derived from it.

How the law should treat some aspects of these activities seems, at first sight, clear. What people, hunched over their computer monitors, do in the privacy of their own homes cannot, and therefore should not, be regulated. The copyright law does not care what people do in their living rooms or (within limits) their bathrooms: they can do their Céline Dion, Karen Kane, Roch Carrier or Murray Schaefer imitations there by themselves, or with and for their family and friends, without asking anyone's permission.[24] Similarly, the law should have no business in the computer dens of the nation. There should be no attempt to regulate private home copying nor limited private distribution to family and friends.[25] On the contrary, there are good social and economic reasons why the law should support the attempts of individuals to inform and improve themselves, and to create and strengthen bonds of family and friendship with others.

Whatever the law may now say on the books, this is how it now operates in practice. Does anyone seriously believe today that the millions of Canadians — including, no doubt, otherwise law-abiding government ministers and officials — who regularly use audio and video recorders to record their favourite songs and shows, are infringing copyright every time they push the record button? Read literally, the copyright law may say this is an infringement;[26] the Minister of Canadian Heritage may believe it;[27] so may the copyright owners, who run around claiming the entire populace is infringing their copyrights, without daring to haul anyone into court through fear of public backlash or of being laughed out of court by a judge who is now on his fourth VCR, having worn out the last three taping episodes of *Rumpole of the Bailey* and the O.J. Simpson saga.

The law is a dead letter not just for home taping but for any private copying activity. The artist who lifts text or pictures out of the art-book she has on her CD-ROM, manipulates them with her paintbrush program, and prints out the result out to hang on her living room wall, would consider herself to be working within a long tradition under which artists avail themselves of contemporary technologies — be they pointed stick, charcoal, paints or their electronic equivalents. Similarly, the private circulation of one's work and other items of interest among friends has a long history stretching back at least to ancient Greece and Rome. Yesteryear's delivery by hand is today's delivery of photocopies by post, and hard or electronic copy by fax/modem and telephone channel; and to newspaper or magazine cuttings and photocopies have been added products downloaded off the Internet. Private home copying and limited distribution to family and friends should not infringe anybody's copyright.

Current attempts to bring this sort of distribution within the copyright owner's control are misguided. Even before modems became standard, people photocopied or faxed cuttings from newspapers and magazines for their friends and colleagues. To ask senders to get prior permission from the copyright owner of the source material, or to ask them to claim they are dealing fairly for the purpose of "private study" or "research,"[28] is to cry for the moon. People would rightly consider as an ass a law that technically allows a copyright owner to seize art and keep or destroy it,[29] if the artist is foolish enough to admit she or he made it just to indulge an impulse for creativity, to entertain their family and friends, or just to fill in time.

The suggestion that private home copying should be left alone does not imply:

- the endorsement of unauthorized copying by *commercial* users, of *public* distribution of copied products, computer "hacking" (against which plenty of civil and criminal sanctions already exist), or the cutting back of criminal sanctions against commercial distribution of infringing material;

- the impossibility of claims for compensation by owners, through levies on blank tapes or diskettes, or from distributors who facilitate home copying, where it is provided that initial production would otherwise be discouraged,[30] or

- the impossibility of copyright owners using technological means, such as encryption, to control unwanted copying, or seeking to persuade the public (as the computer software industry now does) that particular copying practices are unethical, or harmful to the public's long term interests.

What the proposal does do is to recognize that an unenforceable and unenforced law is an oxymoronic folly. Both the law and the people who produce and perpetuate it deservedly become objects of public derision.[31]

## Going public: postmodern practice

Once someone takes work public outside her or his home and the homes of their family and friends — to a gallery or electronic bulletin board, or for commercial exploitation — the ethics of the situation become more ambivalent. Unauthorized copying of someone else's work for public distribution obviously infringes copyright. Doing

the electronic equivalent — making material available by mass faxing, or on an electronic bulletin board for downloading, whether for profit or not — should equally be an activity that is the copyright owner's to control. From an enforcement perspective, these activities are relatively easily detectable and involve less invasion of privacy interests.

More troubling is the question of the work an artist or writer has somehow changed. These problems, familiar enough well before digital technology, have been given a new spin in the digital age. Typical is the case of sampling, where a musician with an electronic sampler incorporates into her composition a distinctive instrument or vocal element, sometimes as little as one note, frequently electronically modified, taken from an earlier record. The legality of this practice is supposed to depend upon whether the second user unfairly appropriated the element or took a substantial or essential part of the earlier work.[32] This in turn is said to involve questions of fact and degree that depend more on the *quality* than *quantity* of what was taken. Arguments here shift irresolutely from the aesthetic (a single sound does/should not a composition make) to the economic (the sound must obviously have value, else why take it?) to the slippery slope or floodgates (if this user gets away with it, so may others with other elements, ultimately leaving the first artist with nothing).

Legislatures have so far left the issue to be sorted out in litigation, but the record is spotty. The most activity has, of course, occurred in the United States where, for example, rap musicians sampling "golden oldie" records have had the seventh commandment cited back to them,[33] later glossed by another court to something like: "thou shalt not steal unless thou parodiest and eateth not into the owner's market".[34] Perhaps the most interesting case with an impact on digital practices is *Rogers* v. *Koons* in 1992.[35] There a U.S. court decided that a sculpture by New York artist Jeff Koons, depicting a couple sitting on a bench and holding eight German shepherd puppies, infringed copyright in a photograph of the identical subject taken by an obscure Los Angeles commercial photographer. Koons did not himself work digitally (in fact, he hardly worked at all, having delegated the actual work of making the sculpture to an Italian craft studio), but his art reflects the way many digital artists work, using the flexibility of digitization to manipulate and recontextualize images and text.

Koons's defence — that he was working in a well-established tradition of postmodernist art that comments ironically on modern culture and imagery — was given short shrift. The judges' first message was that postmodernism had to pay its way: Rogers had to be paid liberally for the unauthorized use of the work without authority,[36] and also

got the last remaining copy of the sculpture (worth more than $100,000, and probably a lot more because of the litigation). Their second implicit message was more chilling: legally, Koons-type postmodernism is dead. For, even had Koons sought Rogers's prior permission, Rogers need not have given it, however much money he was offered.[37] As far as postmodernism is concerned, "publish and be enjoined" has eclipsed "publish and be damned."

Decisions like these are neither technology neutral nor art movement neutral. From at least the 1980s, judges, while quick to extend copyright to the products of digital technology (e.g., computer programs, videogames, etc.), have been less adept in recognizing the new practices spawned by the new technologies. Their modernist conceptions of art, centred on the author as Heroic Creator of a stable work, fit uneasily with technologies that encourage everyone to be an author and where the only stable and permanent feature of Everyman's and Everywoman's products is their instability and impermanence.

Judges may be very certain about the value of artistic practices like Koons's but artists and art philosophers themselves are deeply divided. Some share the U.S. court's disapproval of postmodern artists' "quotation" and critical practices, and argue for more expansive protection, even to the point of protecting artists' individual styles. Others recognize the validity and importance of postmodernist practices and dismiss claims of plagiarism as "almost laughably irrelevant."[38] Others offer a compromise: it's all just a question of money and credit; let later artists borrow liberally but make them acknowledge their indebtedness: "pay and acknowledge first, borrow later," should be the postmodernist's credo.[39]

How things have changed! A hundred years ago — perhaps only seventy for Canada — Koons would have won his case. Then, Anglo-Canadian and U.S. lawmakers and judges drew the line between lawful and unlawful activity quite differently. An artist could stop others running his work off as an engraving or a wallpaper design, but could not stop a painting, photograph or engraving being turned into a three-dimensional artwork.[40] Similarly, during the 19th century, nobody suggested that translators,[41] abridgers, parodists and satirists needed anybody's consent to work, and other transmedia borrowing was equally thought unobjectionable, e.g., transferring illustrations from a history book to a different class of book such as a cookbook,[42] or making sound recordings of music.[43] In this conception of art, people who created a new work from existing material were valued as highly as the producers of the work they transformed and were as entitled to their own copyrights as the producer of the source material. And the arts flourished as much then as they do now.

This is not a plea to turn the digital clock back to some notional pre-electric Golden Age of Copyright. Rather, we should recognize that, when new technologies spawn new practices, the norms that worked for earlier technology and earlier practices may not work in the new situation. In one sense, the law should be "technology neutral": it should protect creative work whatever technology an author chooses to works with. But it should equally be technology and art movement responsive.

## Conclusion

How copyright responds to the challenge of the digital technologies will depend on several factors. It will depend upon officials and legislatures developing rules that will allow the new technologies to develop flexibly. It will depend on lawyers and judges resolving disputes with a sensitivity to, and an appreciation of, economics, aesthetics and cultural and technological practices and their histories. And it will very much depend on the principles and rules generated by this process being accepted by most fair-minded users of these technologies. For, without their co-operation, the rules will suffer the fate of unrealistic speed restrictions posted on unpatrolled highways: another piece of irrelevant data for motorists intent on reaching their destination at speeds they — not someone else — judge safe for the conditions.

# Notes

* The ideas expressed in this text are solely those of the author and do not necessarily reflect the views of the Intellectual Property Policy Branch of the Department of Industry.

1 Ficsor, "New Technologies and Copyright: 'The Fundamental Things Apply as Time goes By'", p. 2, paper presented at the *Copyright in Transition* conference, Ottawa, October 13-14, 1994. Ficsor is the assistant director general of the World Intellectual Property Organization, based in Switzerland.

2 Working Group on Intellectual Property Rights, *Intellectual Property and the National Information Infrastructure* (July 1994), pp 35, 65. Lehman, the U.S. Commissioner of Patents, chaired the working group.

3 Litman, "The Exclusive Right to Read" (1994) 13 *Cardozo Arts & Ent.* L.J. 29, 40.

4 *MAI Systems Corp* v. *Peak Computer Inc* 991 F.2d 511 (9th Circ., 1993).

5 The famed "perforated roll .. by means of which sounds may be mechanically reproduced", still found in the Canadian *Copyright act*, R.S.C. 1985, c. C-42, subs. 5(3).

6 *Boosey* v. *Whight* [1900] 1 Ch. 122 (C.A.); *White-Smith Music Co v. Apollo Co* (1907) 209 U.S. 1.

7 Canada abolished the scheme only in 1988.

8 I do not suggest that either the U.S. or Canadian constitution entrenches the people's right to pursue repairs, although the home handyman/woman industry in Canada might make this a useful candidate for constitutional amendment. Anyway, not every liberty needs to be constitutionally entrenched for it to be worth recognizing.

9 *Copyright Act*, subs. 3(1).

10 *BLMC* v. *Armstrong Patents Ltd* [1986] A.C. 577 (H.L.).

11 So the *NAFTA* amendments dealt only with *commercial* renting of *computer programs* and *sound recordings*, and even then deliberately allowed nonprofit libraries to continue to lend this material. See, e.g., for programs: *Copyright Act*, ss. 3(1)(h), 3(2), 3(3).

12 E.g., art has a public exhibition right and stronger moral rights; the term of copyright for unpublished art is shorter (author's life plus 50 years) than for other work (potentially perpetual until first posthumous publication or public performance); and there are special provisions allowing artists some latitude to rework old ideas or to include public architecture or sculpture in their work. *Copyright Act*, ss. 3(1)(g), 28.01(2), 7, 27(2)(b) and (c).

13 Thus, a structure dealing with musical performing rights has been in place since the 1930s, together with a list of activities that are outside the control of the copyright owners.

14 Copyright owners have a commercial rental right for their programs, while users have the right to make backup copies and change program language to make them compatible with their computers: *Copyright Act*, ss. 3(1)(h), 27(2)(l) and (m).

15 Text accompanying note 1.

16 E.g., Barlow, "The Economy of Ideas: A framework for rethinking patents and copyright in the Digital Age," *Wired* 2:03 (1994).

[17] See Lehman, note 2, above. NGL Nordicity Ltd. produced a study for Industry Canada in April 1994, *New Media and Copyright*. Brunet chaired a Copyright Subcommittee, under the aegis of the Advisory Council of the Information Highway, producing a "draft final" report, *Copyright and the Information Highway*, dated December, 1994.

[18] Vaver, "Rejuvenating Copyright", p. 14, paper presented at the *Copyright in Transition* conference, Ottawa, October 13-14, 1994, organized by the Canadian Intellectual Property Institute. To be published in (1995) 74 Can. Bar Rev. 000.

[19] I suggested something similar in "Rejuvenating Copyright", previous note, p. 10. Resolving such questions might involve not merely finding out the views of economists or some common ground amongst the usual suspect interest groups; it might also involve convening groups of ordinary producers and users to see what the picture looks like from the ground up.

[20] Some suggest this is nothing more than the laws of economics in action. Perhaps so, but we should then abandon such rules as terms of protection based on the life of the author plus 50 years to recognize that authors and their estates are not benefiting at all under the system as designed. We can then ask the more sensible question: what type of protection does a business need before it risks capital in an enterprise?

[21] The late John Lennon's cartoons, doodled during school hours in an exercise book, have just been put up for auction in the United Kingdom - asking price: $C30,000 to $C40,000 (*Globe & Mail*, Feb. 23, 1995, C4). At this price, does the buyer get their copyright (a written assignment of copyright would be be needed) or does Lennon's estate retain it?

[22] See, e.g., Niranjana, *Siting Translation: History, Post-Structuralism and the Colonial Context* (1992).

[23] *Records of the Berne Convention, Stockholm Conference* (1967), p. 878.

[24] Only performances "in public" are under the control of the copyright owner: *Copyright Act*, subs. 3(1).

[25] In Germany, quite apart from fair dealing exemptions, private internal copying, even of whole works, is permitted: *Copyright Act of 1965* (as am.) s. 53(1), although they may not be redistributed. Compensation for such uses is awarded through royalties imposed on blank tapes and photocopying equipment. See Dietz, *Germany*, in Nimmer & Geller, *International Copyright Law & Practice* (1994), § 8[2][a][i].

[26] Although one might have thought that by now assertions of copyright would be barred by defences of laches or acquiescence if they ever came to court.

[27] In his press release of December 22, 1994, the Hon. Michel Dupuy, Minister of Canadian Heritage, announced his intention to introduce an audio blank tape royalty scheme to compensate the recording industry for its "phenomenal losses" from hitherto unchecked home audiotaping. He noted the scheme would "have the effect of authorizing home copying," implying that home copying was currently illegal under the *Copyright Act*.

[28] *Copyright act*, paras. 27(2)(a), (a.1), repeating with minor amendment, *Copyright Act 1911 (U.K.)*, s. 2(1)(i).

[29] *Copyright Act*, s. 38.

[30] See, e.g., the position in Germany: note 25 above.

[31] Speaking of the 1956 U.K. copyright law that forbade home audiotaping, Britain's highest court said: "From the point of view of society the present position is lamentable. Millions of breaches of the law must be committed by home copiers every year. Some home copiers may break the law in ignorance, despite extensive publicity and warning notices on records, tapes and films. Some home copiers may break the law because they estimate that the chances of detection are non-existent. Some home copiers may consider that the entertainment and recording industries already exhibit all the characteristics of undesirable monopoly, lavish expenses, extravagant earnings and exorbitant profits, and that the blank tape is the only restraint on further increases in the prices of records. Whatever the reason for home copying, the beat of Sergeant Pepper and the soaring sounds of the Miserere from unlawful copies are more powerful than law-abiding instances or twinges of conscience. A law which is treated with such contempt should be amended or repealed." *CBS Songs Ltd* v. *Amstrad Consumer Electronics plc* [1988] 2 All E.R. 484 (H.L.).

[32] The "substantial part" test is used more frequently today since it is the language actually appearing in the *Copyright act*, subs. 3(1), derived from the 1911 U.K. law. "Unfair appropriation" was used indifferently with "substantial taking" before then, and still appears in Commonwealth case law. "Unfair appropriation" appears to be the forerunner of the U.S. "fair use" test before the latter became a formalized checklist of shifting variables in § 107 of the 1976 U.S. Act. There is a major difference: the plaintiff has to prove the defendant "unfairly appropriated" her work, whereas "fair use" in the United States is for the defendant to raise and prove.

[33] *Grand Upright Music Ltd* v. *Warner Bros Records Inc* 22 U.S.P.Q.2d 1556 (D.C.N.Y., 1991).

[34] *Campbell v. Acuff-Rose Music Inc* (1994) 114 S.Ct. 1164.

[35] 22 U.S.P.Q.2d 1492 (2d Circ., 1992). For critiques, see Ames, "Beyond *Rogers* v. *Koons*: A Fair Use Standard for Appropriation" (1993) 93 Columbia L.R. 1473; Woodmansee & Jaszi (eds.), *The Construction of Authorship: Textual Appropriation in Law & Literature* (1994), 41 ff. (by Jaszi); Bowrey, "Copyright, The Paternity of Artistic Works, and the Challenge Posed by Postmodern Artists" (1994) 8 I.P.J. 285, 311 ff.

[36] Rogers was entitled to a reasonable licence fee plus a part of Koons's net profits from the sale of the three sculptures. The court indicated Rogers could also ask the trial judge to award up to $300,000 in statutory damages for Koons's "wilful and egregious behavior": 22 U.S.P.Q.2d at 1502; *Copyright Act of 1976*, 17 U.S.C. § 504(c)(2).

[37] It is unclear whether, had Koons gone ahead after having been refused permission, the court would have been more or less sympathetic to his case. Would it adjudicate the "reasonableness" of Rogers's refusal ("I don't want my serious art being mocked by the likes of Koons")? Would Koons's going ahead after receiving a definite "no" be even more egregious and wilful behaviour than not asking at all?

[38] Danto, *The Transfiguration of the Commonplace: A Philosophy of Art* (1981), 142-4, discussing Roy Lichtenstein's 1963 painting appropriating art historian's Erle Loran's compositional diagram of Cézanne's *Portrait of Mme Cézanne*: an appropriation of an appropriation of an original.

[39] Perhaps cases like *Rogers* v. *Koons* stirred a senior U.S. judge recently to suggest that only monetary awards, not injunctions, should be awarded for works "with originality and independent value [that] represent a sufficiently small threat to the economic entitlements of the author of the original": Leval, "*Campbell* v. *Acuff-Rose*: Justice Souter's Rescue of Fair Use" (1994) 13 *Cardozo Arts & Ent.* L.J. 19, 24. At best, this means Rogers would not have got Koons's last sculpture but some further money for allowing Koons to retain it. In Canada, the view that damages are more appropriate a remedy than an injunction has been dismissed by the federal court of appeal, which claimed that accepting such a view was to impose a compulsory licence without statutory authority: *R.* v. *James Lorimer & Co Ltd* (1984) 77 C.P.R.(2d) 262, 269.

[40] *Hanfstaengl* v. *Empire Palace* [1894] 2 Ch. 1 (C.A.): a *tableau vivant* does not infringe copyright in a painting, drawing or photograph it reproduces. Infringement occurs only if the copy is itself in the nature of a painting, drawing or photograph. The opposite decision was reached under the apparently more expansive language of the U.K. *Copyright Act 1911* (*Bradbury Agnew & Co* v. *Day* (1916) 32 T.L.R. 349); this no doubt applied to Canada after 1924 when the present *Copyright act*, appropriating the 1911 British language, came into force.

[41] However, from 1868 on Canadian translators needed consent from the copyright owner of the source work — if that copyright was recognized in Canada. International recognition of foreign copyrights was, of course, far from complete in Canada and elsewhere until well into the first quarter of the 20th century: Vaver, "Translation and Copyright: A Canadian Focus" (1994) 16 E.I.P.R. 159.

[42] *Bradbury* v. *Hotten* (1872) L.R. 8 Ex. 1.

[43] *Boosey* v. *Whight*; *White-Smith Music Co* v. *Apollo Co*; both above, note 6.

# Copyright and the Infoway: Catalyst for Progress or Cause of Gridlock?

## Howard P. Knopf, M.S., LL.M.,

*Contents*

## *POLITICS OF INTELLECTUAL PROPERTY*



## *TECHNOLOGY CONSIDERATIONS*



## *THE BAD NEWS*



## *THE GOOD NEWS — POSSIBLE SOLUTIONS*

*Laws do not persuade because they threaten*[1].

*Less is more*[2].

I am pleased and honoured to be here today. In many respects, this event originated as a follow up to the conference entitled Copyright in Transition, which I organized on behalf of the Canadian Intellectual Property Institute (CIPI/ICPI) and which took place on October 13 and 14, in Ottawa. Several of the speakers and several of the audience are overlapping. That may not be a complete coincidence. I am pleased to be part of that overlap, and grateful to the management of the Department of Justice for inviting me.

The Internet was started in large measure by the U.S. military to serve as a communications link that could withstand nuclear attack.

Q: What can do more harm to the Information Highway than a hacker from hell, a psychotic terrorist, a bungling bureaucrat, a corporate conspiracy, or even global thermonuclear war?

A: A hungry copyright lawyer.

## *THE ISSUE*

- ***"Infoway" potential can, in principle, make virtually all works subject to digitization available for use more or less anywhere, anytime, along with software and data bases that will better enable one to find and access such works. Copyright law has the potential to make or break the Information Highway.***

In this case, the emperor's new clothes are both real and remarkable, although still somewhat flimsy, ill-fitting and far from finished. But that is part of the elegance of it all. The clothes will constantly finish themselves and then evolve to suit the emperor's ever-changing figure and needs. I am speaking of the information highway - the Infoway - as my colleague Paul Hoffert prefers to call it. The Infoway is, but it is much more than the following:

- an almost instantaneous worldwide mail and news/views distribution system that permits one to send and receive the kind of material one wants, to and from one with whom one wants to communicate;

- a library of libraries that is constantly improving its organization, updating its indexing and adding to its collection - all at more than exponential rates;

- a forum of forums, where like-minded souls on everything from "sci.physics.plasma" to "alt.sex.bondage" can compare notes and trade secrets (pun intentional);

- a source of searchable and downloadable files that covers everything from acupuncture to zoology;

- a network of networks that gives anyone with a basic computer and modem access to anything intended to be accessible (and often much more than is intended to be accessible) on any other computer, anywhere, anytime - really, it's that simple; and

- all that came before it, and more than the sum of it all, including cable television, newspapers, and other sources of art and information. Interestingly, all of these sources are now very much interlinked and cross-owned.

▶ ***The problem about all of this is that there is a huge turf war going on in this wild western "Cyberia" between two main and strange coalitions.***

At the risk of over-simplification there is, on the one hand, an odd melange of squatters, pirates and hackers who have something in common with ideologues, academics, librarians and scholars and, indeed, many businesses. They all want as little regulation as possible, with maximum access and the least possible cost. On the other hand, there are copyright owners (mainly publishers, computer software developers and entertainment companies) and information distributors that have an historical aversion to any loss of control whatsoever over reproduction, market segmentation, resale, rental, display and, ultimately, all other aspects of a new right of "distribution" that they feel is essential to a valid and naturally deserved monopoly. The latter group is generally in favour of more regulation and higher levels of intellectual property (copyright in particular) protection. Higher levels of intellectual property protection are, in many respects, ironically consistent with more government intervention and regulation, because of the inherent nature of such rights as "monopoly grants".

It is important to note that there have been two main models up to now of the evolving Infoway. On the one hand, there have been privately "owned" proprietary systems that require some form of paid or limited subscription to access the data base and to be interactive. These include such examples as CompuServe, Quicklaw, Infoglobe and countless others. Frequently, these services act as "gateways" to one another, with appropriate collection mechanisms. To a greater or lesser extent, the owners of these services take responsibility for what is available and what is not, and under what terms. Typically, they are reasonably user-friendly. Indeed, they must be user-friendly to attract customers. This is because many of them are simply in the business of repackaging material that is in the public domain, available on a non-exclusive basis, or otherwise reasonably available though non-electronic or other electronic (but inconvenient or uneconomic) means. Therefore, there must be a reason for people to pay for something they can otherwise get for free, or at a lesser cost, albeit with some inconvenience.

The other model is that of the Internet, which has historically been an unorganized, disorganized, not-for-profit, ungoverned, spontaneous and not very user-friendly environment. Up to now, the Internet has been something in the nature of a "public good." It has cost little to operate.[3] Indeed there has been little in the way of concerted "governance". The initial capital costs were largely incurred by the U.S. government and military, which wanted a secure and redundant communications system that could reach anywhere in the world, even after a nuclear war. Its most recent "owners" have been universities and governments. It has been built on an architecture involving small computers, many of which cannot talk to each other directly because of compatibility problems. Hence, the Internet's universality and reliance on lowest common denominator interfaces, protocols, and language. It has also been, virtually entirely, a "non-profit" endeavour, devoid of any obvious commercial transactions or intent. The genius of its architecture and its conception is that it is not solely dependent upon ultra-expensive mainframes or other high-cost facilities. It uses your computer and mine and the one down the hall, medium and low-technology telecommunications links (i.e., phone and data lines), and common protocols and software (mostly in the public domain) to achieve one organic world-wide whole.

Difficult as this may be in terms of comprehension to those motivated by money, the Internet has "taken off," in large part spontaneously, on the basis of volunteer effort and intellectual contribution. There are many dedicated individuals who believe that the Infoway is a good thing and that it should be allowed to flourish without the imposition of commercial models and metaphors.

All this is changing as governments and big business realize the immense political and commercial potential of the Internet. The Infoway is the ultimate example to date in human evolution of MacLuhan's aphorism that "the medium is the message". The Internet is redefining democracy in the United States.[4] For example, a provision in a bill that would have had a very positive effect on the West legal publishing empire was recently introduced and withdrawn in a matter of a few days when the members of an influential copyright news group and the Electronic Freedom Foundation (about which you will hear more) got wind of it and besieged the appropriate committee members with E-Mail.[5]

The Infoway is the next Wild West, to be tamed, exploited, and possibly ultimately ruined by those with the fastest guns or the most expensive gunslingers (i.e., lawyers). But it is to be hoped that some considerable good will be irrevocably accomplished before all this happens.

- ***Most of the "Info" on the "Infoway" is capable of being protected by copyright. Copyright is the most obvious available instrument of private and public governance.***

Naturally, when one thinks of the Infoway, one thinks about copyright. Much of the material out there - in many instances the selection or compilation of the material and the software used to find, access, and deal with it - are capable of protection by copyright. Indeed copyright is, predictably enough, becoming the principle potential instrument of regulation of conduct in the Infoway Wild West.

There are not many other obvious regulatory tools in place that clearly pertain to the Infoway. Apart from politicians, bureaucrats, protected cultural institutions (such as the CBC), and their various lawyers, there is little support for a regulatory mode based upon traditional broadcasting or telecommunications law. As I shall argue, the Infoway essentially does not involve "broadcasting" in the literal or purposive sense of the word. If it does involve telecommunication, the horse is too long gone out of the barn. After all, there have been thousands of unlicensed providers, ranging from small BBS systems

to large commercial data bases, situated both in and outside of Canada, carrying on operations here for years. Besides, this latter avenue permits very little, if any, substantial control over content.

Libel and slander laws apply, of course, and have already been used to some extent in the new media in Canada. Ironically, Canada is a favourite jurisdiction for allegedly corrupt foreign politicians who cannot get the time of day in U.S. courts but who feel they have been libelled by U.S.-based media. Ontario is generally a forum of choice for any plaintiff who is a public person. In the notorious lawsuit launched by Sir Lyndon Pindling, former Prime Minister of the Bahamas, against NBC for alleging that Pindling profited from illegal drug running activities, Pindling pursued the action only in Ontario, whereas NBC's broadcast originated from New York. This was because, under American law, the onus was on Pindling to prove that NBC acted with malice, whereas under Ontario law, the presumptions favour the plaintiff. Although the case never went to trial, it is reported in some aspects.[6] Media tycoons (Conrad Black) and wealthy business persons (the Reichmans) have frequently resorted to Canada's unique libel laws to avoid unwanted publicity.

Mischief, fraud, and other criminal offences in relation to telecommunications seem to be available in cases such as that of Kevin Mitnick and other notorious "hackers." However, in other cases such as that of *United States* v. *LaMacchia*,[7] discussed below, the criminal system may be seen by some as wanting. Still others see the criminal system as too draconian, particularly in Canada (see below). Moreover, hackers have achieved a certain perverse romantic and folk-hero mystique.[8]

As is well documented, attempts to control content dissemination are technologically and politically difficult, if not impossible, to enforce. Despite heroic efforts by the Canadian police to enforce the inherently unenforceable Homolka ban, and a surprising degree of extra-territorial acquiescence, there have always been several well-marked detours around Attorney General Marion Boyd's unprecedented, unsuccessful, and predictably futile attempt at an Infoway roadblock.

We shall see that copyright law in some ways is surprisingly appropriate, as it now stands, to serve as a model of governance of proprietary claims. On the other hand, we shall see that, in other respects, it is singularly inapplicable, and probably not capable of easy adaptation. In the worst cases, some of which now may be unfolding, copyright law as we know it has the potential to bring most traffic on the Infoway to a grinding halt, or at least a state of perpetual gridlock.

When I say that "most" of the works available on the Infoway are capable of protection by copyright, I am deliberately refraining from saying "all". There is a strong trend underway, in U.S. courts and elsewhere, to deny protection to works that are simple collections of data or other manifestations of "sweat of the brow".[9] This trend is working its way up through the creative and judicial chain to include challenges to the copyrightability of computer programs.[10] There is also, in the case of Canada, a strong move afoot to eliminate copyright in much of the material produced by or for government. That, of course, is a long resolved dilemma in the United States, although West publishing is trying to reclaim some aspect of copyright in "value added" pagination, etc. (see above).

- ***Not all of these works have been made available on the Infoway with the consent of the owner. It is a relatively simple and inexpensive process to "scan in" the text of a book, a photograph, or even a piece of music, without the help or permission of the copyright owner. The odd thing is that there is so little of this going on.***

In principle, it is quite easy to "upload" and "download" copyrighted works onto the Internet without due permission. However, one does not see a lot of this going on. The absence of such behaviour in a flagrant way is probably due in large part to "netiquette",[11] which is quite strict about such things. But it can be done very easily, with the help of a $500 scanner, or even less expensive tools. The other reason is doubtless rooted in pure fear of civil or criminal prosecution, the "chill factor", which will be discussed below.

It is relatively simple to set up an Internet site - for Gopher[12], FTP[13], WWW[14], etc. - that enables rapid dissemination of material. Such sites are growing at incredible rates - literally by the minute. Each site has the potential to be a library, a publisher, and a political action group all in one.

As well, Internet administrators (typically university bureaucrats), are extraordinarily cautious, even by bureaucratic, politically correct, academic standards. For example, the University of Ottawa Internet service does not allow for subscription to "Alt" news groups because some of them are potentially offensive to some people. However, there are several thousand "Alt" groups that are not the slightest bit

offensive to anyone. They deal in everything from wine-making to ethno-musicology. The simple bureaucratic response, however, is to delete all "Alt" groups from the Usenet reader. No value judgments are required for such a decision. The imposition of such censorship policies with respect to hard copy books in libraries has, in the past, resulted in major social upheaval.

The fact that there is not an abundance of copyrighted material available for free and without authorization is probably a testament to the fact that our existing legal framework is probably fairly effective in deterring systematic infringement. This paper will show this framwork may be erring on the high side of deterrence and that this is not something of which we should be proud.

- ***We already have laws in place that deal with most aspects of Infoway technology, behaviour and transactions. Why the fuss, then, about copyright and the Infoway?***

It is true that, at one time, there was some doubt as to whether a piano roll was a reproduction of a musical work (see *Boosey* v. *Whight*)[15] or, whether the placement of a work on a diskette "read only memory" (ROM), or in a computer memory, might constitute copyright infringement.[16]

It really was not necessary that various governments retain many experts and strike many committees to come to the conclusion that uploading a work without permission is an infringing act. Downloading it to a hard disk or printing it is also an infringing act. To "publish" a work electronically without permission, especially in a commercial sense, is to invite all sorts of civil and criminal remedies that already exist.

By focussing the questioning on whether laws in place are adequate to deal with practices and possibilities on the Infoway, there has been a reasonably consistent bias in favour of answers that range from "the present system is essentially adequate but could use adjustment" to "we need major new rights and remedies to combat the threat of digitization and easy copying/transmission". This is a predictable bias, given the very conservative nature of copyright owners and the relatively recent but pronounced tendency of government to serve as an advocate for intellectual property owners, rather than as an arbitrator between the interests of owners and users.

▶ *What are the fears of copyright owners?*

Copyright owners historically have often reacted to new technology by some variation of:

- first, attempting to suppress it, or at least inhibit it;
- next, attempting to outlaw it;
- next, attempting to impose levies, licenses or other copyright-based solutions;
- buying it out; or
- finally, learning how to live with it and profit handsomely, despite one's best efforts at the foregoing.

A classic example is that of Hollywood's approach to the video cassette phenomenon in the early 1980s. Hollywood producers and distributors were upset that they could not control the rental of video cassettes. They campaigned hard to repeal the "first sale doctrine"[17] in the United States and to impose a new copyright system that would enable them to collect royalties based upon rentals. Due largely to antitrust concerns, the U.S. Congress was sceptical. The bid failed.[18] The interesting result was that Hollywood quickly began to do what the antitrust economists told them they should have done in the first place. They drastically and quickly lowered prices on video cassettes - from typically over $100 wholesale to typically under $20 retail - so that both video store owners and members of the public wanted to buy more of them. They sold a lot more units. They ended up making more money from the sale of video cassettes to dealers and directly to the public ("sell through") than they make in the box office. Everyone was happy. The marketplace provided a solution without new legislation. The predicted rampant piracy did not materialize. Other false gloom-and-doom scenarios proffered by the record and film industry have involved the advent of television, reel-to-reel tape recorders, cassette recorders, satellite distribution, digital tape recorders, etc. The really disconcerting aspect of new technological advances in the eyes of copyright owners is, however, that of perceived loss of control. There are many aspects of control, but the most important for present purposes concern technological control and economic control.

New technology can certainly appear to threaten this control. In the old days, it was not easy to go into the piracy business. The facilities needed to counterfeit books or records, or particularly films, were very expensive. Legitimate distribution channels were very tightly controlled. There were a lot of technological "barriers to entry" for pirates. There are many fewer barriers today.

Pirated video cassettes, compact discs, and computer programs can be made quite efficiently, especially offshore. The equipment is not expensive. However, tough criminal sanctions against piracy have been remarkably effective in North America and Europe and there are far fewer reports of organized piracy than there were ten or fifteen years ago. The problem has shifted offshore, mainly to China in the view of the United States.

## *POLITICS OF INTELLECTUAL PROPERTY*

### ▸ *Role of the United States*

One of the lasting legacies of the election of Ronald Reagan to the Presidency of the United States in 1984 may be the elevation of copyright law to that of a world-class economic and legal issue. Reagan, of course, was of and from Hollywood. The motion picture industry and Jack Valenti are among the most powerful and feared lobbying forces in the United States. Copyright was always important to Hollywood, but it quickly became centre stage in the Reagan years. Allies such as Bill Gates of Microsoft, IBM and the music industry were also important.

Today, even with a Democratic White House, the Hollywood influence is still very strong. Mickey Kantor is a former entertainment lawyer. He, as USTR (United States Trade Representative), is now leading the charge with respect to the WTO, W.I.P.O., China and in other fora where intellectual property looms large.

Ironically, Canada's efforts to boost cultural nationalism and encourage our creator community through higher levels of copyright protection have a very high probability of playing straight into the hands of the U.S. entertainment, publishing and computer industries. This is simply because copyright law requires "national treatment". We cannot give copyright protection to our nationals that we do not give to nationals from other countries. There is some thinking, which has clearly attracted hostile U.S. attention, to the effect that we may be able to use "neighbouring rights" (performers rights, rights in sound recordings, etc.,) or a home taping scheme in such a way as to favour Canadians more than others. This may or may not require recourse to the controversial cultural exemption in NAFTA.[19] Such recourse, whether or not legally possible, is bound to provoke retaliation (whether or not legal). It seems that not all readers of the legal texts agree on what these provisions mean. We will surely pay now or later.

There are safer, faster, lower cost, more efficient ways to help deserving Canadian creators than hoisting up the copyright system beyond even what the Americans will support in their own country. If we wish to favour Canadian cultural interests and to pursue Canadian cultural goals, we must recognize that we had few economically sound options before NAFTA and GATT and fewer now. However, we still have the available instrument of direct and strategically directed programs and subsidies, now apparently back in favour with the Bureau of Competition Policy.[20] An effective example of such a program is that of the public lending scheme to remunerate authors for the usage of their books by library borrowers. The problem, of course, is that such subsidies are not politically timely in the current severe climate of deficit reduction.

Time after time, whether it be in respect of cable retransmission rights, educational exemptions, rental rights, home taping or other issues, we see our government being persuaded to accord copyright schemes that are far more generous to owners than those in the U.S., invariably in situations where 80 to 90 percent or more of the royalties generated will accrue to the benefit of U.S. interests. We ought to consider more often following the maxim, *vis-à-vis* the United States, of imitation being the best form of flattery. How can they complain if our copyright laws are similar to theirs?

There still remains the question as to whether copyright has any significant role to play in "serious," or "high" or "classical" culture. It must be borne in mind that the copyright system, as it has evolved, tends to reward popularity rather than merit. This, of course, is probably inevitable and, indeed, egalitarian. However, this fact is the source of a great deal of underlying tension in the jurisprudential and policy debates that are emerging. The problem was well stated by one of Canada's leading cultural statesmen, Mr. Louis Applebaum, O.C., in his important 1982 study:

> ... At the same time, nobody should be under the delusion that copyright legislation, by itself, will solve either the economic or social problems of all authors. Copyright legislation serves best those authors whose works appeal to large segments of the public, wherever in the world they may be. It cannot solve the social and economic problems of those authors whose works, although they may have great aesthetic or academic value, will earn very little because they appeal to relatively small numbers of users. The value to a society of its poets, composers of classical music, writers of essays, historians, philosophers, and their like must be measured and paid for through means found outside the realm of copyright.[21]

There are numerous important Canadian "serious" composers and scholars, for example, who are well respected and who have had tremendous influence on our culture and learning. They may enjoy considerable prestige and various high honours. However, many make only a few hundred dollars - or even less than $100 — a year from copyright royalties. Fortunately, there are other ways for some of these people to make a living - as teachers, arts administrators, professors, performers, civil servants, etc. Fortunately, we still have the CBC, Canada Council, and SSHRC - for a while at least.

Unfortunately, there is not a lot that we can do to the copyright system to better the lot of non-commercial creators without either generating grossly large economic rents for those who least need them, or creating elitist, invidious and artificial categories of rights or distribution rules that would offend the vast majority of those in the middle, and on the right of, the bell curve of commercial success.

▸ ***Ambiguity of U.S. position: the China syndrome***

A good illustration of the ambiguity and difficulty of the U.S. agenda in intellectual property can be seen in what is going on with respect to China. Once, there were opium wars with China. Up until just now, it seemed as if there was a copyright war looming.

The United States fired the first broadside in a potentially huge and pyrrhic trade war with China. They said that China fails to provide "adequate and effective" protection to copyrighted works of U.S. corporations, particularly in the film, computer program and music industries. This is no doubt true in most respects. However, there are some intense ironies that should not be lost upon those who believe that a knowledge of law and history can be useful in avoiding the mistakes of the past.

- In the last century and well into this, the United States was a copyright pirate haven.[22] U.S. libraries, universities, business and scholars had access to cheap American editions of European books and other works. Indeed, until the late 1980s, the United States was highly protectionist in its copyright policy. It was only after 1984 that they abolished their notorious "manufacturing" clause, which required a book to be printed in the United States to achieve copyright protection. It was only in 1988 that the United States joined the Berne Convention, at that time the world standard for 102 years for copyright protection, based upon the

"national treatment" principle, and lack of the need for formalities such as registration. It was only in 1972 that the United States provided federal copyright protection to sound recordings. The United States is still far behind other countries, particularly Canada, in the provision of transparent and efficient "moral rights" protection for its creators.

- China has several layers in its economy. There is vast wealth concentrated in the hands of a very few who can easily pay "western" prices for compact discs, computer programs, etc. On the other hand, $100 (U.S.) for a legitimate copy of a computer program may represent more hard currency than a peasant family can earn in a year, or a city factory worker family in a month. It is still a lot of money for many legitimate Chinese businesses and the Chinese Government.

- U.S. interests are able, but reluctant, to sell their products at much lower prices in China and other "developing" countries, while still making a handsome profit. The marginal manufacturing cost of these products is often extremely low (i.e., less than $1.00 U.S. for a compact disc). U.S. interests understandably fear the re-importation through the "grey market" of such cheap legitimate products into the United States and other "high price" economies, such as Canada and Europe. In theory, multinational corporations can solve the grey market problem on their own, if they really want to do so. Evidence suggests, however, that many multinationals are somewhat ambiguous, and often inconsistent on this point. The same can be said of U.S. government domestic policy on this particular issue. Overly tough measures against grey market goods can lead quickly to antitrust abuse and consumer discontent with high prices.

- It should be noted that threat of the Internet to the ability to achieve market segmentation is enormous, for the simple reason that there is no readily obvious way of asserting jurisdiction over a "server" or a person operating one abroad, and that there is no known effective and politically acceptable means of monitoring or controlling the transborder flow of data, especially between private parties.

- The United States wants China to move very quickly to rectify all perceived defects in enforcement. No doubt enforcement is uneven. Reported offers by China in 1994 to actually execute some copyright pirates did not seem to impress U.S. interests, no doubt to the relief of those few still interested in the cause of human rights in China. Some might point out that it took the United States more than 100 years to come around in its copyright deficiencies.

Now that the U.S. has achieved world dominance in intellectual property-based industries, it may not want others to imitate its past success, to the extent that such success was based on piracy. The U.S. does not see imitation as flattery when it comes to intellectual property rights, or even policy. But, to be fair, past sinners should not necessarily be precluded from being present proselytizers. Otherwise, there would be no such thing as international law or diplomacy.

However, the reluctance of a country such as China (with thousands of years of "intellectual property" creation in its history) to see the obviousness, or the inevitability, of the current U.S. position is perhaps somewhat understandable. At the very least, the high level of economic sabre rattling and the billions of U.S. dollars being bandied about in discussion show just how important intellectual property has become to international trade. It is also clear in the intellectual property field that what is good for Bill Gates and Bill Clinton is not necessarily good for China and many other countries with far less bargaining strength. These and related issues will doubtless dominate the next GATT/WTO round.

### ▸ *Competition law concerns*

Copyright law reform and the quest for higher rights has achieved a certain momentum and legitimacy, on the basis that it is all intended to help creators. This would be wonderful if only it were true.

The merger trend, and the possible concentration of many roles under one roof, is threatening to both individual users and individual creators. The latter have a difficult time now in dealing with record companies, for example, who now largely own and control the publishing end of the music business. At one time, a music publisher would fight with a record company on behalf of a composer. And so on, up, down and across the intellectual property "food chain", as Paul Hoffert calls it. With corporate realignment (mergers and cross-ownership), this is now rare. This pattern is likely to become pervasive in other media areas. Both consumers and creators will be victims.

This type of issue - vertical and horizontal integration of intellectual property based industries, and the whole matter of intellectual property based "convergence" - is one that should be a high priority of competition/antitrust authorities. However, this has not been the case in North America in recent times.

I mention competition law in the context of the politics of intellectual property because, frankly, competition or antitrust law has recently been much more based in politics than it has been in law or economics. A euphemistic way of saying this is that it has become more of an art than a science, more based upon a "rule of reason" than on a rigid list of "no-no's".

In the mid-1980s, two Japanese hardware firms (Sony and Matsushita) took over two American entertainment "software" firms (CBS and MCA) with scarcely a murmur of protest from an antitrust standpoint. A number of high profile media mergers took place in the early 1990s, again with little apparent concern. Some were not consummated, but it was not the trust busters so much as it was the market that was to blame for this.

In Canada, both the Bureau of Competition Policy (BCP), in the person of the Director of Investigations and Research (DIR), and the CRTC have approved, without serious concern, a major Infoway merger (that of Rogers and Maclean Hunter). The new entity has substantial integrated communications interests that include alarm systems, video stores, broadcasting, long distance and cellular telephony and, of course, distribution.

The rationale for all of this approval is that of global competitiveness - the notion that bigger is better and that big business is efficient business in the "Chicago School" sense of efficiency. However, there are some significant signs of changing attitudes in policy and enforcement.

Canadian consumers and U.S. Judge Stanley Sporkin are fighting back. The revolt against Rogers has been much commented upon, and little need be added here. What people are really upset about is that Rogers was attempting to foist upon them a "tied sale," although the term was not used often, or at all, in this context. Clearly, the CRTC and the Bureau of Competition Policy had little or no concern about this prior to the events of January 1995 (when there was a consumer "revolt" over the Rogers marketing scheme for new channels).

Judge Stanley Sporkin, of the U.S. District Court of the District of Columbia, rejected the negotiated settlement between the U.S. department of Justice's Antitrust Division and Microsoft Corporation. In my view, this judgment (which is being appealed by both parties) is of immense potential significance for the following reasons.

- Microsoft's extraordinary success is built upon intellectual property rights in certain phenomenally successful products in a market where they hold a monopoly or a dominant position.

- Judge Sporkin found that the negotiated settlement was not in the public interest.

- The *in rem* (effect on the public) significance of this matter clearly transcended the effect of the immense amount of adversarial negotiation that took place between the parties, one of which was a very high profile government agency charged with responsibility for such matters.

- Finally, the Court was not about to be treated as a "rubber stamp."

Although Canada's competition and regulatory framework laws are, of course, different from those of the United States, there are many clear and not so obvious possible implications for Canada in this ruling. These effects may manifest themselves in terms of both compliance oriented proceedings and more formally, or procedurally, adversarial or regulatory matters involving a public interest.

I mention some illustrative quotes from Judge Sporkin, guaranteed to send shivers down the spine of every traditional bureaucrat:

> The Antitrust Division of the Department of Justice, while no doubt among the most competent and dedicated groups of professionals in Government service, nevertheless is made up of human beings and, unfortunately, human beings occasionally make mistakes...[23]
>
> ... The Government itself is so anxious to close this deal that it has interpreted certain anti-competitive practices so narrowly that it possibly has given the green light for persons to engage in anti-competitive practices with impunity[24]

> The Court fully understands the role the judiciary plays in this society. It has no interest in intruding on the prerogatives of the executive branch. The Court's only reason for being involved in this case is because of the dictates of the Tunney Act. To make the public interest finding required by the Tunney Act, the Court has to be confident of its decision. It does not have the confidence in the proposed antitrust decree that has been presented to it. In part, this lack of confidence is a result of the Government's "stonewalling" position.[25]

- ***Canadian competition authorities***

There are some signs of the re-emergence of interest in more classic competition policy principles in Ottawa. In two recent interventions, the Director of Investigations and Research has shown some sensitivity to the existence of potential competition concerns in respect of the Infoway.[26]

However, policy interventions are not the same things as enforcement. The approval of controversial mergers still seems to be routine in situations involving intellectual property issues and Infoway issues (e.g., Rogers takeover of Maclean Hunter and the merger of Smith Books and Coles bookstore chains). Moreover, there are few signs of any vigorous head on enforcement of abuse of intellectual property rights since the one-of-a-kind fact situation in the *NutraSweet*[27] case, based upon ss. 78 and 79 of the *Competition Act*.

Another problem lies in the fact that certain of the current provisions *Copyright Act* appear to contain a drafting ellipsis, if not a flaw. There is a scheme in ss. 70.5 and 70.6 to encourage the filing of agreements between private parties with the Copyright Board. The incentive for this is limited immunity for the conspiracy provisions of the *Competition Act*. However, there is no requirements that these agreements be brought to the attention of the Competition Bureau by anyone, including the Copyright Board. Even if the Director does somehow find out about them, there is no apparent duty on his part to become involved.

## *TECHNOLOGY CONSIDERATIONS*

- ***Can technology solve the problems it creates?***

The basic problem presented by digital technology is that it is all too easy to make copies. Indeed, the copies of a digitally stored work are identical with the original. There is no degradation in successive generations of copies.

Various schemes have been tried in the past decade or so since digitally stored works in the form of mass marketed computer programs have been on the market. It is a relatively simple matter to encode a program so that it cannot be copied without authorization. It is also relatively easy to buy programs that get around this feature. It is also relatively simple to encode programs so that they cease to function after a certain date, or do not become fully operational unless a fee is paid, etc. In any case, bright young children and even adults find these protection devices to be amusing puzzles and challenges to be overcome.

However, the main reason that these types of protection schemes have not been used as widely as they could be is simply because consumers do not like them. Anyone who has spent any time installing even the best computer software knows that complications can ensue, installations need to be repeated, old and new versions must be run simultaneously for transition purposes, etc. Many years ago, Lotus marketed a version of 1-2-3 that could be installed only once, and only with a valid serial number. Few would buy it, for the foregoing reasons.

Another important point to remember is that the ability of users to copy does not mean that they will copy. Seven or eight years ago, there was great doom and gloom, propounded by the record industry, about the Digital Audio Tape (DAT) format. They said that any consumer could become an instant pirate, making and seeding many generations of perfect copies. It was feared that there would only be a handful of legitimate sales, and that pirated copies would spread, like nasty rumours, throughout the world.

This did not happen. Digital audio recording has been available in the home in various formats dating from the 1980 PCM (pulse code modulation) device to the more recent DAT microcassette, at prices less than $1,000, for a long time. There have simply been few takers. Either consumers have better things to do, or they are not interested in going into the piracy business. The format, even though legal in Canada and most countries to date, has simply never caught on.

The Americans developed an elaborate legislative scheme to deal with home digital recording called the Serial Copy Management System (SCMS) and to collect royalties in consequence of the home copying that was to have been the result of the DAT phenomenon. The royalties are a pittance. The whole phenomenon is largely a non-issue. It is also a great inconvenience for professional musicians and hobbyists, such as the Dean of Harvard Law School, who need to make digital copies of their own creations for perfectly legitimate reasons.[28]

However, technology does hold the potential to offer more creative solutions to some of these problems, rather than destructive or inconvenient ones.

*Encryption: Clipper Chip*

Encryption is as old as the Tower of Babel. Mankind has always used codes and signals to render private otherwise public communication. In the computer world, this takes the form of encryption software.

Most word processing programs offer the ability to put a password on a file. It is said that it is quite difficult to bypass this feature. On a more elaborate level, there are many commercial programs and systems to enable encrypted communication over very public network facilities.

A very familiar example of encryption on the Infoway is that of Pay TV. The addressable decoder box that one rents in perpetuity from Mr. Rogers will descramble movies for you, if you pay Mr. Rogers. Pay per view enables this to be done on demand.

It would be relatively simple to have encryption in place on the Infoway so that only "authorized" net-surfers would be permitted to read or, in turn, download encrypted files or use encrypted services. Indeed, many services on the Internet already require some form of payment via credit card for full access, but this is a different concept. In principle, copyright owners can ensure authorized access and users can ensure absolute privacy with encryption software. The software is available. The developers are even eager to give it away in some cases.[29]

The problem with encryption is that it works so well that the U.S. Government has become afraid of it. In 1993, the U.S. Government - at the highest level - proudly announced the "Clipper Chip" initiative. This scheme would have resulted in a standardized chip or program being encouraged, and perhaps required, that would permit a high level of encryption and privacy. That was the good news for all concerned. The bad news was that the Government would have had access to the necessary codes to defeat encryption and would have controlled the export of this technology outside of the United States, lest it fall in the hands of terrorists, drug dealers, etc. The U.S. already asserts export control laws on higher level, commercially available, and frequently used software - to the extent that even travellers carrying laptop computers may be inadvertently breaking such laws.

The Government proposed that the codes be held in pieces by a few trusted "escrow agents" who could only put together the necessary tools to unlock an encrypted communication under stringent safeguards. This was the "key escrow" proposal.

There has been a great backlash against the Clipper Chip, spearheaded in large part by the EFF (Electronic Freedom Foundation), probably also with a great deal of commercial backing. The Clipper Chip initiative rapidly came to be seen as something akin to the government holding a pass key to every house in the land, with the ability to enter, search and seize invisibly, without a warrant. Promises of due process did not seem to satisfy critics.

It is arguably problematic that U.S. concern with foreign security, export controls and domestic crime prevention should have been injected into the forum of an otherwise promising development. Many devices are capable of being used for both legitimate and illegitimate purposes. If copyright owners, network operators and users all want encryption, should the marketplace not be allowed to set the rules? Is a little bit of privacy really such a dangerous thing for society? [30]

*Tagging and Fingerprinting*

In principle, digital works can be "tagged" or "fingerprinted" in order to establish a copyright claim and to help trace a trail of piracy. Codes or, indeed, visible emblems, can be inserted, such as the CBC or CNN logos on news footage. Invisible or inaudible sub-codes can be inserted in audio-visual works.

This is slightly more problematic on the Internet, where files are generally stored and transmitted in ASCII - which is the lowest common denominator of modern alpha-numeric coding. ASCII is very transparent. It is also very efficient in terms of bytes consumed in relation to information transmitted. But, it does not support sophisticated techniques such as tagging or fingerprinting.

Binary encoding, and more sophisticated compression techniques facilitate this type of tagging or fingerprinting in a way that is not easy to defeat. However, the lack of standardization, or at least compatibility, between various proprietary formats is inhibiting the use of such devices. Anyone who has tried to receive a highly formatted Macintosh file on an Windows based PC over the Internet will understand the nature of the problems.

*E - Cash*

On the commercial networks, collection of money for particular services is quite simple. On CompuServe, for example, certain premium services carry surcharges typically based on time. They could also be based upon bytes down-loaded, or any number of other criteria. In principle, CompuServe can allocate royalties to the content copyright owner.

This ability of CompuServe to collect and allocate royalties, and their lack of apparent interest in so doing voluntarily, may have been a factor in part for the lawsuit by Frank Music. (see below)

There are many experiments and trials now ongoing with credit card debits, fund transfers, and other means of collecting money for particular transactions over the Internet. The main reason that these trials are not progressing faster is due to concern about fraud. The Internet is said to be not very secure and that there is a perception of some considerable risk involved in entering into credit card transactions on the Net.

Cryptography holds the answer for secure funds transfer. But, as mentioned earlier, the U.S. Government wants to hold the master key to all the locks.

*The Intellectual Property Engine Concept*

Using a combination of the above techniques, plus some others, a network provider can, in principle, devise a system that permits complete flexibility and a choice of arrangements that suit any provider, owner, or user. Company "A" can allow works to be used freely. Company "B" can charge for browsing. Company "C" can charge on a time base. Company "D" can charge on a byte base. Company "E" can pay the user, because the user will be subjected to advertising.

The Intercom trial in Newmarket, Ontario, developed by the Cultech Collaborative Research Centre, is building an "intellectual property engine" that will accommodate all of these models.[31] It will use what they call a trusted intermediary concept, whereby collectives can become involved. Credit card agencies or banks can play a role. Encryption and privacy schemes could be used.

The network provider can facilitate a direct or indirect relationship to which it is not privy, involving the copyright owner/provider, and/or a collective and/or a "clearing house" such as VISA or Mastercharge. This is the Electronic Mall concept - whereby Intercom Ontario functions as the Rideau Mall management, with no direct involvement necessary in transactions between merchants and customers.

The Electronic Mall concept is also attractive because it is a good metaphor for a discussion of when liability should attach to the network provider. Surely, no one would suggest that the mall management of the Eaton Centre in Toronto should be held liable for occasional shoplifting, drug trafficking, assault or all the other unpleasant little things that take place in a large mall. They cannot police every action and transaction. If, however, an open and notorious flea market in stolen or counterfeit goods leases premises and carries on business conspicuously, that is a different matter. Our criminal and civil laws already can deal with this model of levels of contribution and authorization.

Recent developments with respect to Internet publishing have suggested that the feasibility of tracking and accounting for the resale of works will be made available on the Internet. The Information Access Company (recently bought by Canada's Thomson Corporation for U.S. $465 million) has advised that they "remain pre-

pared to support our providers with whatever information we can (including a transaction-based date) in order to abide by their financial obligations to their authors".[32] As well, the CARL Corporation has been making thousands of journal articles available through Internet, with a credit card-based system of payment for those who need copies.[33]

*THE BAD NEWS*

- ***The danger is that a new horde of politically correct copyright zealots and their eager attorneys on the Infoway will seek to make all sorts of useful marketplace behaviour subject to a requirement for permission, or even criminal prosecution, and countless new causes of action will be devised that inhibit or prevent the development of the facility.***

Overzealous, heavy handed and bad faith enforcement of criminal laws is not only problematic for the hapless accused, who find themselves as inadvertent cannon fodder in complex wars in which they have no interest. Such practices can also ultimately backfire badly on responsible copyright owners and responsible prosecutors. Deputy Minister George Thomson mentioned the dangers of the law falling into disrepute. We, in Canada, may be well on the way to this undesirable situation.

Canada has had some examples of very controversial prosecutions. These include *R. v. Miles of Music*, *R.* v. *Rexcan* and *R.* v. *Laurier Office Mart*. The latter is currently under appeal.

In *R.* v. *Miles of Music*, the Canadian Recording Industries Association (CRIA) was instrumental in causing the RCMP to prosecute a disc jockey who made compilation tapes, based upon information and a complaint of a disgruntled former employee. The value of the license in question was very small. Despite evidence of attempts by the defendant to be licensed, a great deal of personal animosity on the part of some of those behind the scenes, intent to put the defendant out of business, intent to set a punitive example, etc., the Ontario Court of Appeal in a judgment of Kreever, J.A. declined to find this to be an example of abuse of process. There was a strong dissent by Blair, J.A. Interestingly, the Crown did not in fact proceed with a new trial, the original conviction having been overturned. The decision of Mr. Justice Kreever[34] has been strongly criticized.[35] The defendant in the criminal action launched a civil action for abuse of process and conspiracy to injure. It is, according to Mr. Scott's paper,

"probably safe to assume that the accused received some degree of satisfaction before he agreed to dismiss his action".[36]

In *R.* v. *Rexcan*,[37] the accused was fined $50,000 (not a misprint!) on a guilty plea for infringement by distribution within a small firm of software worth a fraction of that amount at retail. The agreed upon facts disclosed sloppiness, at the most, on the part of the accused, more than deliberation. In fact, the only evidence as to knowledge presented was a memo directing employees to get rid of infringing software, which pre-dated the RCMP raid by three months. There was very clear involvement of a powerful trade association helping the police and Crown. In the reported transcript of the proceedings, it is not easy to distinguish the submissions of the Crown and the defence. The "hook" for the Crown - because this was all intra-firm activity - was that there was a supposedly "criminal" distribution taking place. A critical comment on this case can be found in David Scott's excellent paper.[38] The trouble with such a case is that, even though it may mean little from a precedential standpoint in our courts, it has a disproportionate chilling effect and may inhibit perfectly legitimate behaviour in classrooms or corporations.

The most recent controversial case is that of *R.* v. *Laurier Office Mart*. Because it is under appeal, my remarks will be more circumspect than they might be otherwise. The defendant is a small family-owned office supply/copy shop that mainly services the University of Ottawa campus. As a result of an investigation initiated by an RCMP officer taking a course in criminology, it was determined that some of the material in some of the course packs, designed by the University of Ottawa professors and offered for sale by Laurier, were allegedly not properly cleared as to reproduction rights. Laurier was quick to seek a license from CanCopy, the Toronto based collective that has established itself as the source for licensing of photocopy shops, universities, governments and others involved in photocopying.

Actually, CanCopy may not license so much as it sells indemnity. It turns out that CanCopy, in many cases of published print material, may have very little basis in terms of actual ownership, or licensee status, for the rights in which it purports to deal. CanCopy's "chain of title," or lack thereof, was a major issue in the *Laurier* case. CanCopy reportedly played a major role in the prosecution, and a CanCopy official, one Ms. White, the compliance manager, was a key prosecution witness and was frequently quoted in the press on the matter.

The decision in *R.* v. *Laurier Office Mart* (which was heard on October 17 and 18, 1994) was released on November 15, 1994. The defendant was found not guilty on all counts of criminal copyright infringement. The judgment is of some interest with respect to procedure, proof of "chain of title," *mens rea* and fair dealing in the context of criminal prosecutions in Canada. Of particular significance, in my view, is the finding that it is essential for the Crown to disprove the applicability of the fair dealing aspect in a criminal case. As well, CanCopy was unable to prove an adequate "chain of title".[39]

I would have thought that this judgement would have an impact primarily in the academic and research context where fair dealing is a potential issue. However, those representing other copyright interests (e.g., in the entertainment industries) seem to be very concerned as well, particularly about the finding that certificates of registration under s. 53 of the *Copyright Act* must be registered **before** charges are laid. They view this as an unreasonable impediment to criminal enforcement.[40]

There is a clear potential for abusive enforcement of the criminal law in Canada in the area of copyright. The policy issues involved, and most of the readily available and known data pertaining to this issue were presented at the CIPI "Copyright in Transition" conference in Ottawa, October 13 and 14, 1994 in papers by David Scott, Q.C., Donald Piragoff, Prof. Ray Patterson, Frank Monteleone, Prof. Ronald Melchers and Corporal Vern Rose of the RCMP.

Several clear points emerged from the papers, even though there was considerable disagreement between the presenters on some issues.

- There is no clearly understood demarcation between civil and criminal enforcement in Canada.

- There are large amounts of taxpayer resources being used to combat copyright piracy - probably in the hundreds of person years.[41]

- Not all copyright owners are quick to use the criminal law. For example, SOCAN and its predecessors have had a criminal remedy available for performing rights infringement for decades. It has never been used. Civil remedies have presumably sufficed.

- One of the reasons that certain associations prefer tough criminal sanctions and enforcement is that a deterrent effect is established. However, just as there is no bright line in principle between a civil and a criminal matter, there can be no clear demarcation between a deterrent and a "chill."

- The current regime is prone to "abuse," although not everyone would agree on what constitutes abuse in either the political sense or the technical sense of "abuse of process" sufficient to stay or quash a proceeding.

Canada's criminal provisions for copyright enforcement are already more draconian than necessary under modern democratic criminal law policy rationales, or any international treaty to which we are bound, and they exceed those of the United States, whose interests we seem mostly to be protecting. This author disagrees with the suggestion of one consultant, presented at this symposium, that more study and education are needed to better enforce the current criminal law provisions. Rather, it is suggested that it is now clear that most independent expert commentators see a pressing need for legislative reform with respect to criminal enforcement measures.

For example, if some of the best legal minds in Canada and elsewhere, including those on the bench, cannot achieve even a rudimentary consensus on what should constitute "fair dealing" or "fair use," how is it feasible to "educate" rank and file investigative officers on such complex matters? Even if procedures are established for better review of discretionary decisions to prosecute, it must be remembered that a primary purpose of the police is to prosecute. That is their proper culture and mandate. The ultimate and essential check on honest mistakes, or occasionally less well-intentioned acts of malfeasance by the state, is that of the courts and ultimately parliament - through the safeguards of laws that are not readily capable of official misinterpretation, misuse or even abuse.

The current system makes most of us and our children technical criminals every time we photocopy something interesting and distribute around the office or school, make a tape for one's own car and one's spouse's car, give a friend a copy of a computer program to try out, or tape a TV show and give the tape to someone else. It is a highly problematic situation to leave such laws in place, when they are inevitably broken in the course of normal and socially acceptable behaviour. True, even shoplifting of a candy bar can bring a criminal conviction. But most Canadians never shoplift. Technical copyright infringement is almost inevitable and highly common in most of our lives and our careers.

Experience has shown that overly harsh laws capable of being abused will surely be abused.[42] It does not take too many such cases to bring the overall scheme into disrepute, to the detriment of even those who have never taken undue advantage of it. What is required is a less blunt statutory mechanism that simply cannot be abused by imprudent prosecutorial discretion (either at the behest of the police or the crown) or overly zealous private sector lobbying directed at state authorities. Specific solutions are suggested below. Essentially, these suggestions entail the decriminalization of minor and petty infringement.

In contrast to the largely simplistic and uncritical approach taken to date in Canada in many prosecutions and judgments, the recent American decision in *United States* v. *LaMacchia* should be examined.[43] This case involved an M.I.T. student who set up a server to distribute copies of protected software. There was no proof that he personally made any profit whatsoever. In this decision the Court stated:

> What the government is seeking to do is to punish conduct that reasonable people might agree deserves the sanctions of the criminal law. But as Justice Blackman observed in Dowling, copyright is an area in which Congress has chosen to tread cautiously, relying "chiefly . . . on an array of civil remedies to provide copyright holders protection against infringement," while mandating "studiously graded penalties" in those instances where Congress has concluded that the deterrent effect of criminal sanctions are required. Dowling, *supra* at 221, 225. "This step-by-step, carefully considered approach is consistent with Congress' traditional sensitivity to the special concerns implicated by the copyright laws." *Id.* at 225. Indeed, the responsiveness of Congress to the impact of new technology on the law of copyright limned earlier in this opinion, confirms Justice Blackman's conviction of "the wisdom of leaving it to the legislature to define crime and prescribe penalties". Dowling, *supra* at 228.
>
> "The judiciary's reluctance to expand the protections afforded by the copyright without explicit legislative guidance is a recurring theme. Sound policy, as well as history, supports our consistent deference to Congress when major technological innovations alter the market for copyrighted materials. Congress has the institutional authority and the institutional ability to accommodate fully the varied permutations of competing interests that are inevitably implicated by such new technology." *Sony Corporation of America* v. *Universal City Studios, Inc.*, 464 U.S. 417, 431 (1984) (citations omitted).

> This is not, of course, to suggest that there is anything edifying about what LaMacchia is alleged to have done. If the indictment is to be believed, one might at best describe his actions as heedlessly irresponsible and at worst as nihilistic, self-indulgent, and lacking in any fundamental sense of values. Criminal as well as civil penalties should probably attach to wilful, multiple infringements of copyrighted software even absent a commercial motive on the part of the infringer. One can envision ways that the copyright law could be modified to permit such prosecution. But, "'[it is the legislature, not the Court which is to define a crime, and ordain its punishment.'" *Dowling, supra* at 214 (quoting *United States* v. *Wiltberger*, 5 Wheat. 76, 95 (1820)).

There are other readily apparent excesses in enforcement and policy that threaten to backfire on copyright owners.

The Compton patent is an example of overzealous corporate opportunism and patent office myopia that almost put a private tax on every multimedia activity and has called into question the very appropriateness of patent law for computer related-technology.[44] The United States grants almost 5,000 software-related patents every year. Officially, software cannot be patented as such. It must be part of a device or method of doing something useful, such as operating an accounting system or a fuel pump, etc. This requirement of incorporation into a device, or method, is an easy one to meet in practice before the U.S. and Canadian patent offices.

The validity of many of these patents is probably very dubious. However, to all except intellectual property lawyers, a patent is seen as a fearsome and absolute instrument. In fact, it is only a presumption of validity. The trouble is that an attack on a patent in the course of defending a lawsuit, especially against a financially strong plaintiff, is a very expensive proposition, one that will often require a decision to "bet the company" on the outcome. Accordingly, many palpably bad patents remain on the books and are used to extrapolate royalties and other concessions from those unable to litigate or unable to negotiate on equal terms.

The recent lawsuit against CompuServe is an example of a legitimate attempt by the music industry to defend itself which could interfere with useful musical educational activities.[45] The lawsuit styled as *Frank* v. *CompuServe* involves issues of fair use, what constitutes reproduction, and the concept of authorization and contributory infringement (see note 9). The "MIDI FORUM" on CompuServe provided a means for composers and students to exchange their experiments with the use of synthesizers for arranging and modifying well-

known compositions. This is how musicians learn. Primarily, the FORUM saved the very tedious work involved in "inputting" musical works into computers by hand. Ironically, this will soon be done very efficiently by music scanning software, in a manner not capable of technical or legal prevention.

### ▶ *Potential overreactions on the copyright front*

*The Lehman Report*

The Lehman Report[46] is the most important of recent studies that examine copyright issues in the light of the information highway and vice versa. To its credit, it is quite specific for a government report in terms of what it recommends, and very learned in the U.S. law. On the other hand, its recommendations could lead to confusion or even a slowing down of development of the information highway. Arguably, it tilts heavily in favour of copyright owners, ignores commonplace technical realities of the Infoway, and poses the potential to seriously deter progress if acted upon.

Too much copyright protection could well stop the information highway dead in its tracks. To flog the metaphor: if we prohibit expressways, if we impose unreasonable speed limits, if we abuse photo radar technology, if we put governors on car engines, if we required the permission of the vendor of gasoline to buy a new car - then we will invite the populace to avoid the law.

Most of the studies by, or commissioned by, the copyright establishment to date are talking about what we need to beef up copyright law - and some of the questions are valid. But there has not been adequate examination of whether we may need to do to "lighten up" on increases in copyright law protection in certain respects to permit the information highway to go forward. Could it be that "less is more" in some respects?

The following are my specific comments on the Lehman Report.

1. The report recommends that there be a right to prohibit distribution of phonorecords by transmission. Will this be an additional right to that of reproduction? Why is it necessary? Beyond much obvious litigation, will it also generate double payments for the same act?

2. The report recommends that transmission be defined in terms of distribution beyond the place from which it was sent. Further, the

recommendation is to the effect that where an act could constitute transmission by communication of performance or display and a distribution of a reproduction, it shall be considered the latter if distribution is the primary purpose. To paraphrase but slightly, the test of whether this is communication of a performance or display on the one hand and a reproduction on the other hand depends on the *primary* purpose of the transmission. But how is one to ascertain the intention of the "transmitter"? Will this not add even further confusion to already overlapping rights? Recent Canadian litigation in the area of retransmissions rights and cable television (i.e., confusion and overlap between "communication to the public" and "performing" right) show that such an ambiguity will generate tremendous opportunities for litigation.[47]

3. Importation by transmission will constitute infringement. The problem is that transborder data flows do not recognize geographical boundaries. The Report concedes as much. Nor does market segmentation fit well with the spirit of free trade. This recommendation would seem difficult, if not impossible, to enforce. It could create a new and potentially very lucrative temptation for market segmentation and price discrimination. Similar comments can be made for the recommendation that the act of transmission not trigger the application of the first sale doctrine - an ancient and securely established common law notion that, once a work is put on the market with the consent of the copyright owner, it can thereafter be freely traded. On the other hand, many believe that territorial divisibility is essential to the integrity of the copyright system. This entails the whole question of "grey marketing" and parallel importation, which is quite possibly the most complex, controversial and important unsolved item for the recent NAFTA and GATT negotiations. It may be unwise to dispose of it, *en passant*, and in haste, as a quick reaction to the information highway phenomenon.

4. The Lehman Report also has a far-reaching proposal to outlaw any devices of which the "primary purpose or effect" of which is to avoid or bypass copyright owners intentions, etc. The Report specifically indicates that the present U.S. law of contributory infringement (as stated in *Universal* v. *Sony* by the U.S. Supreme Court ten years ago) is inadequate in their view. This is a well intentioned proposal with some positive potential insofar as it

may be aimed at illicit "black boxes" that have only one useful and clearly illegal purpose. However, at first glance, this recommendation is so sweeping - and so uncertain insofar as it depends upon the meaning of "primary" purpose or effect - that it will, at the least, create great difficulties for hardware manufacturers and possibly cause serious disruption overall. It may be that if such a law had been in place in 1950, there would have been a serious impediment to the developments of reel-to-reel tape recorders, cassette tape recorders, VCR, computers and numerous other useful products, which have benefitted society as a whole, and copyright owners in particular, by creating vastly larger markets. The report notes that precedents for this type of law exist in the area of theft of telecommunications. It may be that existing laws can be used or adapted with less potentially disruptive effect. Wilful acts of defeasance, subterfuge or fraud should be punished by the criminal law. However, useful technology should not be prohibited *ab initio*. The issues raised by this recommendation go beyond mere drafting difficulties. They involve profound policy questions as to the interplay of law, technology and the rights of copyright owners and users.

*IHAC Report*

Less potentially doctrinal and problematic than the Lehman Report, but still containing some serious potential over-reaction, is Canada's recent Information Highway Advisory Committee Report, entitled Copyright and the Information Highway, under the distinguished leadership of Claude Brunet, a presenter at this symposium. This report was first released as a "Green Paper" in December 1994. My comments (in italics) on the key recommendations in the report (in bold face) are as follows.

A. USE OF WORKS

A.1 COMMUNICATION TO THE PUBLIC BY TELECOMMUNICATION

**The Subcommittee is of the view that the right embraces the communication to the public of material regardless of whether that material is made available on an 'on-demand' basis. If further consideration establishes that this is not clear, the *Copyright Act* should be amended to provide clearly that a communication offered to the public by means of telecommunication is subject to the authorization of the copyright owner, even where such communication is made on-demand to separate individual users.**

*No. Similar comments to those concerning the Lehman Report with respect to additional layering of rights. The very concept of "communication by telecommunication," and its totally encompassing reach, and its application above and beyond other rights that may apply, such as performing right, or reproduction right (in the case of computer networks), is not only unnecessary to protect owners but is actually harmful in that it produces copious litigation. Numerous recent cases in Canada, mentioned above in the context of the Lehman Report, are evidence of this. A work cannot be uploaded now without consent. The consent would normally involve a negotiation based upon the nature of the network use that will take place.*

A.2 RENTAL RIGHT

**Criminal remedies should be applied to the rental right as is currently the case for other rights.**

*No. The current civil provisions in SS. 3(1)h) and 3(2) and 3(3) are already loosely drafted. They may catch normal renting and leasing practices, where the machines perforce contain operating and some applications software. These provisions show lack of familiarity with commercial and technical realities. To criminalize an already ill-conceived and loosely drafted scheme is dangerous and unnecessary, and will exacerbate the current drafting problems in these provisions.*

**The statutory language of the Act should be tightened to impede or prohibit hidden and unauthorized acts of commercial rental in the case of computer programs and sound recordings.**

**There should be provisions for statutory damages based on the U.S. model.**

*No. This is a poor example of what to emulate in American law. It is subject to flagrant abuse by plaintiffs, who can lie in wait and collect damages on a per-infringement basis that far exceeds actual damages. If the concern is with small infringement, the better answer is a "small claims" mechanism attached to an appropriate intellectual property tribunal.*

**Given that 'browsing' constitutes an act of reproduction and is subject to the reproduction right, the Subcommittee is of the view that further consideration should be given to adjusting the fair dealing defence to accommodate for browsing in certain circumstances.**

*No. Browsing does not necessarily involve any reproduction. If so, it should be deemed to be non-infringing. If an owner does not want a work to be browsed, it can be made available only on "pay" services, or encrypted. The new right would be a nightmare of complexity. There is no "browsing right" in bookstores, and users would see this as an intolerable and unnecessary extension of a monopoly.*

### B. Moral Rights

**The propriety of a waiver of moral rights should be reexamined in the context of revisions of the *Copyright Act*.**

*No. Moral rights that cannot be waived would thrust a "Civiliste" concept into Canada that would create a major adverse reaction on the part of North American business interests, who perceive that they cannot operate with open-ended liability for moral rights infringement. Such a proposal is paternalistic.*

### C. Ownership

**The first sale doctrine should be introduced in the *Copyright Act* if, and only if, a right of distribution is introduced.**

*A distribution right should not be considered. It would be close to an absolute monopoly. Copyright was never intended to cover reading a book, looking at an art work, etc. We already have a first sale right in our common law, in any case.*

### D. Fair Dealing

**The Subcommittee will give further consideration as to whether fair dealing should be allowable as a valid defence in certain cases of browsing;**

*No. See comment above. All browsing should be legal.*

**The Subcommittee sees no need to otherwise review the fair dealing provisions of the Act as these provisions appear capable of offering sufficient protection to users of copyright material on the Information Highway.**

## E. ADMINISTRATION

### E.1 ENFORCEMENT

**The federal government should assist in the development and standardization of user-acceptable ways to track use of protected works;**

**The federal government should assist in the development and use of 'identifiers' to be included in the distribution of protected works in a digital format to make it easier to trace copyright ownership and unauthorized use of protected materials;**

**A joint government/industry public education campaign on copyright and the responsible use of creative works in a digital world should be implemented.**

**Government should consider the full range of policy instruments at its disposal to ensure effective copyright protection in order to support the creation of new Canadian works.**

**Tampering or bypassing encryption or copyguards of any kind should be made a criminal offense under the Copyright Act.**

### E. 2 RIGHTS CLEARANCE:

**The federal government should encourage the industry in the creation of administrative systems to streamline the clearance of rights for use of works in a digital medium.**

**The Subcommittee is not convinced that compulsory licensing need be considered in the commercial marketplace.**

## F. PUBLIC EDUCATION

**Users and creators must assume greater responsibility for informing themselves on copyright and the application of various rights in a digital world.**

**The federal government should lead by example as both a model 'user' and 'creator'.**

**The federal government should take an active role, in partnership with industry, in a public education campaign to better inform both users and creators about the use of copyright.**

*Yes, but in such a way that taxpayer's resources are not used to promote an unbalanced view, primarily representing that of copyright owners. There should be appropriate involvement of the academic community and independent organizations.*

**Tampering or bypassing encryption or copyguards of any kind should be made a criminal offense under the *Copyright Act*.**

*Maybe, but with very great care. See comment on Lehman.*

### G. International

**Canada should ensure that audio-visual programming services offered to the public on the Information Highway continue to be classified as broadcasting, whether or not exempt from licensing.**

*Absolutely not. Networks have nothing to do with broadcasting for the reason mentioned above. In any case, it cannot be done from a technology standpoint.*

*CRTC Broadcasting "Hook"*

A significant political movement is underway to extend Canada's model of cultural protectionism to the Infoway. Such a policy is in the short-term interest of those who have benefitted from Canadian content regulation in the past, as well as many bureaucratic interests in Ottawa. However, it is not technically or politically realistic.

Already, a typically Canadian dilemma is beginning to emerge as to whether to treat the various activities proposed on the Information Highway as broadcasting or telecommunications phenomena. Many bureaucratic turf interests are at stake. If the former route is chosen, the government may have much more of a temptation and a jurisdiction to regulate "Canadian content," because of the cultural industries' exemption under NAFTA. A determination that a specific activity is one of "enhanced telecommunication services" or "computer services" means that the CRTC cannot control its "Canadian" content and is prevented from requiring the filing of tariffs, etc., except in certain cases of anti-competitive practices or monopoly abuse.[48]

Moreover, the "broadcast" mode could imply that there is a commu-

nication of the work to the public by telecommunication within the meaning of the *Copyright Act*, leading to an arguably unnecessary new layer of rights (without the addition of any substantive rights), additional clearances and likely endless litigation, based upon recent experience with the difficulties in the drafting of the retransmission scheme. While the CRTC can exempt broadcast undertakings from its Canadian content and cultural regulatory power, there is still a protective umbrella of regulatory oversight involved. Early indications are that the CRTC and the responsible ministers may tend to treat the activities of telephone companies and others on the information highway as broadcasting rather than telecommunications.[49]

Given the lack of options open to the Government to deal with content following NAFTA, it is understandable that there would be an attempt to keep sovereign jurisdiction in the only apparently possible way - by classifying information highway activities as "broadcasting." However, this appears to contradict both facts and intuition.

"Broadcasting" regulation dates back to the notion that there are limited spectrum resources that must be allocated in the best interests of the "public" and of Canadian society. This concept of a scarce resource does not translate well to the information highway. There are virtually unlimited resources available for network operators and users - and more being made available daily. Lack of bandwidth is the least of the obstacles in the way of progress on the Infoway. Moreover, the "one at a time" and "interactive" nature of the information highway make the disanalogy with broadcasting even more striking.

It would seem from the published agenda and reports of the recent G-7 meeting on the information highway that Canada (with the partial support of France) is pushing the cultural/protectionist viewpoint. If that is our national agenda, then we may have to grab onto the broadcasting hook, illogical as it may seem.

I personally have a great deal of difficulty understanding how we can either technically or politically enforce menu structures, limitation of choices, content quotas, or other means to encourage Canadian culture on the Infoway. It is also intensely ironic that, even at the present time, the best free Internet "sites" now for Canadian law (for example) are on U.S.-based servers.

## *THE GOOD NEWS - POSSIBLE SOLUTIONS*

### ▶ *Specific Phase II Suggestions*

On the eternally optimistic assumption that well drafted Phase II legislation capable of passage will be introduced in the near future, there are certain manageable and not particularly controversial steps that could be taken to improve traffic flow on the information highway.

1. The matter of criminal remedies needs to be urgently addressed (some might say "redressed") in the view of most expert and independent commentators. The potentially draconian nature of the statutory penalties and the excessively aggressive, and even allegedly abusive, nature of some of the prosecutions to date call for reform. Even some copyright owners may be afraid that the current situation could backfire against them.

   a. It may be advisable to effectively "decriminalize" all small-scale or petty infringement and all private infringement not involving commercial gain. This might entail the establishment of a minimum threshold of commercial activity in the legislation for the criminal process to be involved, perhaps $5,000 in terms of actual damages per "transaction."[50] Additionally, there might be a redrafted provision that emphasizes a requirement of wilful intent to deprive the copyright owner of just profits, or deliberate dishonesty, clear intent to make a profit, and the dealing in actual counterfeit or piratical copies (in contrast to copies or activities that may involve fair dealing or parallel imports, etc.) Further, the maximum fines could be significantly lowered, perhaps to $2,500 for summary conviction offenses and $250,000 for indictable offenses. These steps would make Canada's approach much more consistent with that of the United States than it is at present. The U.S. criminal remedy regime, revised as recently as 1992, appears to be much less harsh than that of Canada.

   b. Other fixes to the criminal issue should also be considered as part of this exercise, such as the transferral of the provisions to the *Criminal Code*, removal of the application of the presumption under s. 53 of the *Copyright Act* in criminal cases, and complete decriminalization of parallel importation (where the goods are by definition not counterfeit). Last, but not least, serious consideration should be given to the possibility of repealing all specific copyright criminal provisions and relying instead on the fraud provisions of s. 380 of the *Criminal Code*,

which have proven successful in copyright cases, an option suggested in the paper by Mr. Piragoff of the Department of Justice.

c. These proposals would have the additional advantage of saving considerable RCMP resources that could presumably be devoted to more urgent priorities, such as immigration enforcement. The RCMP spokesman at the CIPI "Copyright in Transition" conference held on October 13 -14, 1994, came from a section that had responsibilities that concerned both immigration and copyright. His presentation confirmed the rather notable fact that the RCMP handles more than 1,000 cases on average per year of copyright infringement (1,078 in 1991; 2,182 in 1992; and 740 in 1993). This must involve dozens, if not hundreds, of person years of work. Many of these are arguably matters that could or should have been resolved through civil litigation outside of the criminal process and not at taxpayers' expense. Not all collectives or trade associations utilize the criminal law. SOCAN, for example, has never used the criminal law to enforce rights on behalf of its members, as far as we know.

d. This approach would somewhat alleviate the "chill" in effect in Canadian educational institutions (at all levels) with respect to activity that, in many cases, is perfectly legitimate, or is likely to be so when Phase II is enacted.

e. Finally, these suggestions with respect to the criminal regime are believed to be consistent with the thrust of the important 1982 report entitled *Criminal Law in Canadian Society,* published by the Honourable Jean Chrétien, then Minister of Justice.

2. At the same time, consideration should be given to eliminating the possibility of a plaintiff in a civil action receiving both conversion and actual damages. This can result in a windfall double, or even more than double, recovery of actual damages and can bring undue hardship on a defendant. This is because the plaintiff receives not only lost profits but, in addition, the actual goods or the actual value of them. This is overkill, and has been criticized as such by Gordon F. Henderson and others (see page 55 of the Henderson Report). Some of our foreign experts at the October 1994 CIPI conference expressed surprise at the severe nature of the civil remedies in Canada.

3. A small change to s. 70.5 and 70.6 of the *Copyright Act* (added in 1988) would ensure that filed tariffs are actually brought to the attention of the Director of Investigation and Research under the *Competition Act*. Currently, there is no requirement that any tariffs be filed with that office, and there is no mechanism by which the Director can become aware of an issue, unless a complaint is made, or he is otherwise informed by some interested persons. This appears to be a void in the legislative regime. To bring a copyright tariff, especially those filed under s. 70, to the Director's attention, filing of all tariffs with that office should be mandatory. It would then be up to the Director as to whether further action is warranted. Such a change would be a big step towards ensuring a perception that the public interest is being looked after.

4. Consideration could be given to enacting a requirement for a minimal degree of creativity for copyright to subsist. Canada is providing protection to all sorts of basic business forms, lists, telephone listing, etc., that even the United States does not protect. The problem is coming to the fore in areas as diverse as computer programs and other technology and the business practices of certain telephone companies with respect to charges to the public and competitors for information concerning directory assistance, especially long distance directory assistance. Many experts have observed over the years that such developments impose a great strain on the copyright system, insofar as it is intended to protect traditional categories of literary, artistic, dramatic and musical works as the terms are normally understood. This is not a radical proposal. It would simply bring Canada in line with the United States after their important Supreme Court Decision in *Feist* v. *Rural Telephone,* (where the Court referred to the threshold of a "modicum of creativity"), as well as most of the European Union. The courts will likely go in this direction in Canada in any case. Early statutory recognition would save much wasteful litigation, consistent with the spirit of the *Henderson Report* (p. 101).

▶ ***Phase II and/or beyond***

1. Explicitly state in copyright legislation that contractual rights override copyright law and that, in the absence of a contract, the *Copyright Act* will govern. This may not be legally necessary but it would have an important demonstrative effect. Such an approach was taken with respect to software copyright exemptions in the 1988 legislation. This will encourage private interests to negotiate property rights rather than rely on state enforcement. State laws are a fallback, not a goal. Likewise, users may wish to contract out of the statute in return for service and convenience.

2. Create an American style fair use (i.e., commercial expectation test) provision that specifically includes reference to private study, research and other scholarly activities in relation to material retrieved, stored and printed for similar private use via network facilities (note that contractual and technological overrides are possible). If users are willing to agree by contract to less "fair use" than the law would otherwise allow in exchange for better and more convenient service and access at a reasonable cost, many of the debates over fair use would be settled.

3. Create civil and perhaps limited criminal liability for wilful defeasance of reasonable technological schemes to protect copyrighted information - analogous to the theft of to telecommunications provision of the *Criminal Code*.

4. In order to prevent possible competition/antitrust "abuse", define commercial "network" and provide that the filing of full disclosure of subscription terms, and other tombstone data, from time to time will serve as immunization from s. 45 of *Competition Act*, similar to the scheme under s. 70 of the *Copyright Act*. However, there should be a requirement that the Bureau of Competition Policy be actually notified, and they should have a clear mandate, together with an obligation to devote active resources, to ensuring that interests of individual creators and users are protected.

# Notes

1 Seneca

2 Robert Browning, *Andrea Del Sarto*

3 There is a popular misconception that the Internet is costless and "free". The capital costs have largely been paid for a long time ago, in terms of adequate data-grade links between main sites, etc. There is little in the way of organization. Such costs as there are seem to be borne by universities, governments, IBM, etc. Most large users provide free access to employees, accredited students, etc. Commercial providers are offering time at the rate of $0.25 per minute or less to the public, suggesting that the actual marginal cost of operation of the Internet is a few pennies per minute, much of which may well be telecommunications costs.

4 Time Magazine, "Wired Democracy," January 23, 1995.

5 Paperwork Reduction Act Bill (HR 830) introduced February 6, 1995 containing a special interest provision for West Publishing (Sec. 3518 (f)) re value added input to public domain law reports.

6 See *Pindling* v. *National Broadcasting Corporation*, 49 OR(2d) 58.

7 *United States of America* v. *David LaMacchia*, No. CRIM.A. 94-10092-RGS,United States District Court, D. Massachusetts. Dec. 28, 1994. (1994 WL 725216 (D.Mass.))

8 M. Slatalla and J. Quittner, "Gang War in Cyberspace,' Wired Magazine, Dec. 1995, p. 146 ff.

9 See *Feist* v. *Rural Telephone*, (1991) 111 S. Ct. . 1282. (U.S. Supreme Court)., and the many cases that follow it.

10 *Computer Associates* v. *Altai*, 775 F. Supp. 554 (1991), aff'd 23 U.S.P.Q. 2d (2d Cir. 1992), vacated in part 982 F.2d 693 (2d Cir. Court of Appeal). The *Apple* v. *Microsoft* "look and feel" litigation would appear to finally be at an end. The Supreme Court, without comment, denied Apple's appeal of lower court rulings. (New York Times 2/22/95 C6). Of considerable importance is the recent victory of the defendant Borland in the *Lotus* v. *Borland* "look and feel" law suit in the US first circuit Court of Appeals, released March 9, 1995.

11 A set of written and unwritten guidelines that are enforced partly by system operators ("sysops") and partly by peer pressure. Respect of copyright is a high priority in most contexts.

12 A classic vertical menu structure, that also features search services for fields and other "gopher" sites world wide.

13 "File Transfer Protocol"

14 "World Wide Web" which permits hyper text links to other information and services, and multimedia features.

15 *Boosey* v. *Whight*, [1899] 1 Ch. 836; affirmed [1900] 1 Ch. 122, (C.A.)

16 *Apple* v. *Macintosh* [1987] FC 173, 10 C.P.R. (3d) 1, 18 C.P.R. (3d) 129, Aff'd (1990) 30 C.P.R. (3d) 257 (SCC)

[17] Under Canadian common law, and under the U.S. *Copyright Act*, the owner of a physical object such as a book, phonograph record or computer program historically could not be prevented from further dealing by way of sale or rental involving the actual object. Once the "first sale" took place, the copyright owner lost control over the physical embodiment of the copyrighted work, which was then treated the same as any other tangible personal property (except, of course, for reproduction or other unique intellectual property rights). This is a cornerstone of Anglo-American law. Recent erosions of the principle have taken place with respect to the rental of sound recordings and computer programs, in consequence of the trade treaties. This arose as a response to perceived fear of rental being used to facilitate piracy.

[18] Howard P. Knopf, The Proposed Rental Right for Video and Audio Recordings, Consumer and Corporate Affairs, mimeo, 1985.

[19] See Chapters 17 and 21 of NAFTA and Article 2005 of the FTA.

[20] See Competition Policy, Regulation and the information Economy, Submission of the Director of Investigations and Research to the CRTC dated January 16, 1995, page ii.

[21] Applebaum/Hébert, Report of Federal Cultural Policy Review Committee, Ottawa, 1982, p. 98.

[22] D. A. Redmond, Sherlock Homes Among the Pirates: Copyright and Conan Doyle in America 1890-1930, Greenwood Press, Westport, Conn., 1990.

[23] *U.S.* v. *Microsoft*, 1995 WL 59480 (D.D.C.)), p. 5

[24] Ibid. p. 18

[25] Ibid. p. 18

[26] See Director's submission of January 10, 1995, on Direct to Home Satellite Distribution Undertakings and re: Competition Policy, Regulation and the Information Economy, dated January 16, 1995, to CRTC

[27] *NutraSweet* v. *Director of Investigation and Research* (1989), 27 C.P.R. (3d) 449.

[28] See intro to 1993 WIPO Harvard Symposium.

[29] Simon L. Garfinkel, "Cypher Wars," Wired Magazine, November, 1994, p. 129

[30] In a move aimed at expanding the growth and spread of privacy and security technologies, the Electronic Frontier Foundation (EFF) is sponsoring a federal lawsuit seeking to bar the government from restricting publication of cryptographic documents and software. EFF argues that the export control laws, both on their face and as applied to users of cryptographic materials, are unconstitutional. (EFF press release February 21, 1995)

[31] Paul Hoffert, Accounting for Content on the Infoway: Evolution or Revolution, paper presented at CIPI Copyright in Transition Conference, Oct. 13 -14,1994.

[32] Letter of February 2, 1995, by J.W. Shelton of IAC.

[33] (Muchnick letter of February 10, 1995, to cni-copyright listserve) Information Access Company Confirms Writers' Rights Issue In Database Marketing.

[34] (1989) 24 C.P.R. (3d) 301.

[35] See Alan Young, Catching Copyright Criminals: R. Miles of Music Ltd., (1990) 5 I.P.J. 257 and D. Scott and T. Collins., Criminal Copyright Defences: The Defence Perspective, paper presented to CIPI Conference "Copyright Transition", October 13 and 14, 1994.

[36] Scott, op. cit, p. 26.

[37] *R. v. Rexcan Circuits Inc.*, [1993] O.J. No. 1896 DRS 93-11244

[38] D. Scott, op. cit.

[39] See pages 17 and 18.

[40] See pages 12-15 of Mme Justice Ratushny's typed reasons.

[41] This author has been advised that the RCMP employs about 10 full time officers in Montreal alone to deal exclusively with copyright and trademark matters.

[42] See G. F. Henderson, Intellectual Property: Litigation, Legislation and Education, Consumer and Corporate Affairs, 1991, p. 78

[43] *U.S. v. David LaMacchia*, criminal action no. 9410092-RGS, U.S. District Court of District of Massachusetts, December 28, 1994, per Stearns, D.J.

[44] Simson L. Garfinkel, "Patently Absurd," Wired, San Francisco, California, July 1994, p. 104 ff.

[45] *Frank v. CompuServe* (a recent lawsuit directed at the uploading and downloading of digitized music on the CompuServe™ network).

[46] Bruce Lehman, et al., Intellectual Property and the National Information Infrastructure, Information Infrastructure Task Force, Washington D.C., 1994.

[47] *Canadian Cable Television Assn. v. Canada* (Copyright Board), 46 C.P.R. (3d) 359, Federal Court of Appeal, 1993; [Note: Canadian Cable Television Association filed an application for leave to appeal to the Supreme Court of Canada, March 8, 1993 (Court File No. 23457). The Supreme Court of Canada denied leave to appeal in this on December 23, 1993. As well, the NAFTA implementation legislation S.C. 1993, c. 44 came into effect on January 1, 1994. *Society of Composers, Authors and Music Publishers of Canada v. Landmark Cinemas of Canada Ltd. et al.*, 45 C.P.R. (3d) 346; SOCAN (Re) Statement of Royalties to Be Collected for the Performance in Canada of Dramatico-musical or Musical Works for the calendar year 1991 for which SOCAN Holds the Performing Rights , 7 C.P.R. (3d) 385; Canadian Cable Television Assn. v. Canada (Copyright Board) Canadian *Cable Television Association v. Copyright Board et al.* [See Note: * Notice of appeal filed in the Federal Court of Appeal , (File No. A-69-91)., 34 C.P.R. (3d) 521, 25 A.C.W.S. (3d) 253, Federal Court, Trial Division, Strayer J., January 16, 1991; *Bishop v. Stevens*, 31 C.P.R. (3d) 394, 72 D.L.R. (4th) 97, 22 A.C.W.S. (3d) 568, Supreme Court of Canada, August 16, 1990).

[48] An excellent discussion of these issues can be found in H. Intven, Traffic Rules on Canada's Information Highway: The Regulatory Framework for a New Cable and Telephone Services, in Developing Multimedia Products, Insight, Toronto, 1994, p. 91 ff.

[49] See CRTC Decisions 94-`8, `94-`9 and Press Release Dated September 16, 1994, and "Regulator May Police Culture at Infohighway Phone Booths", Ottawa Citizen October 1, 1994, p. D-1.

[50] "Transaction" is a well understood concept in criminal law. Numerous single infringements that together comprise the threshold amount would be considered a transaction if they are, taken together, one continuous course of deliberate action.

# Adapting Copyright to Meet the Challenges Posed by Digital Technologies

Pamela Samuelson[1]

## Introduction

The perception that digital technologies pose a significant threat to copyright law and to copyright owners is widespread.[2] The threat arises from an awareness that uncontrolled copying and distribution of copyrighted works in digital networked environments could make copyright law unenforceable, substantially undermining incentives to invest in the creation and dissemination of artistic and literary works.[3] In response to this threat, a number of governments, including those in Canada and the United States, have recently issued reports to address the challenges posed by digital technologies for copyright law.[4] In view of the fearful mood in which these reports were written, it is perhaps not surprising that their principal focus has been on making recommendations to strengthen the rights of copyright owners (e.g., proposing adoption of a digital transmission right to be added to the exclusive rights already granted to copyright owners).[5]

Perhaps this fearful mood also explains why the authors of these reports have been so reluctant to articulate how the legitimate interests of users of copyrighted materials might need to evolve or be accorded legal protection as well.[6] Although it speaks of public access to knowledge as the principal purpose of copyright law,[7] the U.S. Green Paper makes no recommendations specifically aimed at enhancing this access and does not explain how the extensions of rights of copyright owners for which it argues will promote public access to knowledge. While also speaking of the need for copyright law to balance the interests of copyright owners and the public,[8] the U.S. Green Paper acts as though every use of copyrighted material in digital form will infringe because of incidental copying of digital works in a computer memory is necessary, even if only temporarily, for the work to be used.[9] At the same time, it regards fair use as a doctrine unlikely to apply in digital networked environments, apparently in the view that all uses of copyrighted materials can be licensed in these environments.[10]

The Canadian Copyright and Information Highway Report similarly speaks of the need for a balancing of interests,[11] but like the U.S. Green Paper, its recommendations largely aim to expand the rights of copyright owners.[12] Although it expresses a willingness to consider whether some browsing of copyrighted materials in digital form might be fair dealing in some circumstances,[13] the Information Highway Report does not give any examples of uses of digital materials that might be fair dealing. Indeed, it rejects the idea of articulating such examples on the theory that the fair dealing doctrine "can only serve its purpose if it remains vague enough to be invoked in a variety of situations."[14]

The principal goal of this report is to explore the neglected terrain of user rights to make legitimate uses of copyrighted material in digital networked environments. It will provide numerous detailed examples of how traditional copyright doctrines, such as the "fair dealing" and "fair use" provisions of Canadian and U.S. copyright law,[15] can be used to mediate between interests of copyright owners and of the public when new technologies pose questions for which traditional copyright law does not provide straightforward answers. Canada is fortunate to have a number of copyright doctrines that can supplement fair dealing in mediating disputes involving copyrighted works in digital form. These include copyright rules applicable when copyrighted material is used for certain nonprofit purposes or for news reporting, or where the author has impliedly consented to the use, or where for reasons of public policy or freedom of expression, it makes sense to withhold copyright liability or limit remedies.[16]

There are several reasons for undertaking an exploration of this sort. One is to show government policymakers the desirability of overcoming their reluctance to address user rights issues. The consuming public may be more willing to accept and adjust to extensions of copyright law if they are persuaded that their legitimate interests are also being taken into account. If the law of copyright is to exert moral force on the public as to uses they are permitted to make of copyrighted material in digital form, this law must have the public's respect. A perception that the law of copyright is providing overbroad protection to copyright owners can breed disrespect for the law that is not in the long term interest of copyright owners.[17]

Moreover, without fair use, fair dealing, and similar doctrines to serve as flexible mechanisms for balancing the interests of copyright owners and the public, copyright law may become too brittle and rigid in application. This may put it at more risk of extinction or obsolescence in response to challenges posed by digital technologies than if it can show some suppleness and adaptability through a well-reasoned and balanced application of these kinds of limiting doctrines.

The law of copyright should remain focused on market-destructive appropriations of copyrighted material. When uses of copyrighted materials in digital networked environments undermine in a nontrivial way, the incentives needed to invest in the creation and dissemination of artistic and literary works, the law of copyright can and should intervene to stop this. As the U.S. Supreme Court recognized in Sony Corp. v. Universal Studios, Inc.:

> [t]he purpose of copyright is to create incentives for creative effort. Even copying for noncommercial purposes may impair the copyright holder's ability to obtain the rewards that Congress intended him [sic] to have. But a use that has no demonstrable effect upon the potential market for, or value of, the copyrighted work need not be prohibited in order to protect the author's incentive to create. The prohibition of such noncommercial uses would merely inhibit access to ideas without any countervailing benefit.[18]

Keeping these principles in mind can aid policymakers in the development of balanced copyright policy and can aid courts in reaching balanced decisions in copyright disputes involving uses of copyright materials in digital networks.[19]

The first section of this paper will discuss a number of copyright questions that have arisen in the context of computer bulletin board systems (BBS). When BBS activities substantially undermine incentives to invest in creative activity, copyright infringement can and should be found. There are, however, some uses of copyrighted material on BBS or other online services that should be regarded as noninfringing on fair dealing, fair use, implied consent, or other grounds. Neither courts nor policymakers should overreact to the relatively few cases of piracy in digital networked environments by adopting copyright rules that would make virtually all uses of copyrighted materials in digital networked environments be infringements.

The second section of the paper will show how the market-preservation principles discussed here can aid in formulating a balanced copyright policy when addressing a number of new questions posed by various software tools designed to interact with other copyrighted works in digital form. Here, too, copyright doctrines such as fair dealing, fair use, and implied consent can be helpful in distinguishing between those uses of electronic information tools that should be regulated by copyright and those that should not. These doctrines can help copyright evolve to deal with new technology questions.

The third section of the paper will discuss a set of copyright issues not addressed in the Canadian Copyright and the Information Highway Report that will profoundly affect the ability of Canadian firms to participate in the worldwide information highway. The Report does not discuss whether copyright protection is or should be available to interfaces of computer programs, or whether copyright law should prohibit the intermediate copying of program code when necessary to obtain access to interface information. In order to promote the creation of new, noninfringing works that can interact with existing software, Canadian copyright law ought not to protect interfaces or regard the intermediate copying of copyrighted programs necessary to get access to interface information as infringing. This section addresses the public policy concerns arising not only from decompilation of program codes, but also the more general public policy issues arising from attempts to use copyright law as a way to protect the content of copyrighted works as trade secrets.

The final section of the paper will explain why *sui generis* legislation to protect a number of digital information products may eventually be necessary in order to create the proper incentives environment for the production and commercial distribution of these works. It will also explain why, over time, copyright law may need to evolve more than is presently contemplated by Canadian or U.S. policymakers to deal with the challenges posed by digital technologies, and may even become obsolete. For the present, however, the best option is to plan to adapt copyright law to deal with the challenges posed by digital technologies in a manner that comports with the public policy balances that have been achieved in the nearly 300 years of copyright law.

## 1. Adapting Copyright To Deal With Electronic Bulletin Board Systems

To assure ourselves that copyright law can successfully cope with abuses of copyrighted material in digital networked environments, it may be helpful to review some recent U.S. decisions involving these environments. These cases have involved the use of electronic bulletin board systems to make copyrighted materials available to subscribers. As will become clear, resolution of the two cases involving commercial BBS activities on traditional copyright grounds has been relatively untroublesome. There is, however, considerable disagreement about the implications of these decisions for a number of other potential infringement claims involving BBS systems. The section will employ some of the principles discussed in the introduction to offer proposed resolutions to these controversies.

### a. Frena, MAPHIA, and LaMacchia

In *Playboy Enterprises, Inc.* v. *Frena*,[20] the system operator of a commercial BBS was found liable for infringement arising from his role in providing subscribers of the BBS with access to unauthorized digital copies of one hundred seventy photographs from Playboy magazine.[21] In *Sega Enterprises, Ltd.* v. *MAPHIA*,[22] the operator of a commercial BBS who knew that Sega games were being uploaded and downloaded by subscribers of his BBS and in fact actively encouraged such activity, was enjoined from further operation of the BBS for this purpose.[23] Given that Frena's BBS was clearly interfering with Playboy's potential market for a commercial BBS offering user access to Playboy photographic images, and MAPHIA was providing users with copies of Sega programs that it knew displaced their need to purchase copies of the game, the infringement rulings in these cases were not surprising.[24]

Another U.S. case involved charges of criminal liability of BBS operators whose systems are used to facilitate copyright infringement. A student at the Massachusetts Institute of Technology, David LaMacchia, operated a BBS on an MIT computer onto which many commercial software products were uploaded and downloaded by users of the BBS. LaMacchia was indicted for wire fraud on the theory that he had participated in a scheme to deprive owners of software copyrights of the "money or property" that was rightfully theirs, and that federally regulated "wires" (i.e., telephone lines) had been used to effectuate the scheme.[25] LaMacchia was not charged with criminal copyright infringement because he had not made infringing copies himself, nor had he financially benefited from any copying done by users of the BBS.[26]

LaMacchia's lawyers successfully moved to dismiss the wire fraud claim, arguing that existing criminal laws should not be stretched to deal with activities that are essentially copyright matters and for which Congress had not yet decided to impose criminal liability.[27] The U.S. government has decided not to appeal the dismissal in this case.[28] It is likely, however, to propose new legislation to extend criminal copyright liability to "Robin Hood" system operators such as LaMacchia.

Notwithstanding the bad conduct of LaMacchia, Frena, and MAPHIA, it is important to realize that, in relation to the content available in digital networked environments, pirate BBS systems such as those involved in these three cases are actually quite rare. It is important not to overreact to the problems these cases present.

### b. Implications of Frena and MAPHIA For Online Service Provider Liability

As straightforward as the rulings in the Frena and MAPHIA cases might seem, there has been some debate in the U.S. about their implications. Some would argue that these cases should be understood as cases establishing the liability of online service providers for all infringements that might occur on their systems because these providers financially benefit from infringements done on their systems and they could and should do more to control infringing activity. Proponents of this position point out that copyright infringement is a strict liability offense; one need not intend to infringe to be an infringer.[29] Others argue that the Frena and MAPHIA decisions do not or should not be understood as providing a basis for making all system operators of BBS's or other information service providers liable for copyright infringement. Copyright liability for these persons and entities should arise, in their view, only if, like Frena and MAPHIA, the systems operators or online service providers knew that infringing activity was taking place on the system, and benefited from it.[30]

Presently pending in the U.S. courts is a case in which music publishers are seeking damages for copyright infringement from CompuServe, an online service provider, arising from the unauthorized reproductions of musical compositions done by CompuServe's customers while using CompuServe's online services.[31] There is no allegation in the case that CompuServe was aware of the alleged infringement. While some would argue that this is an easy case of noninfringement,[32] publishers of copyrighted materials are understandably testing the limits of existing law. Their interests would obviously be well-served if courts or policymakers put the burden on

all operators of online information services to be, in effect, "copyright police."

Recent U.S. decisions on the responsibilities of conference organizers for infringements done by exhibitors at the conference suggest that an important factor in decisions about the liability of online service providers for copyright infringement may be the feasibility and extent of monitoring of customers.[33] Online service providers that do not monitor customer accounts may escape copyright liability, just as they now do from liability for defamation.[34] However, it is unclear whether an online service provider that monitors customer accounts to detect obscene or threatening content, should have an obligation to monitor accounts for copyright infringement as well. This sort of screening may not be as feasible as the obscenity and threat monitoring has been.

The Canadian Copyright Subcommittee's Draft Final Report on Copyright and the Information Highway recommends that an online service provider should be liable for copyright infringement by customers or users only if they knew about, knowingly facilitated, and/or knowingly benefited from the infringing activity.[35] This position balances the interests of copyright owners and the public more fairly than the strict liability position adopted in the U.S. Green Paper on Intellectual Property and the National Information Infrastructure.[36]

### c. Implications of Frena and MAPHIA For User Liability

The Playboy and Sega decisions have some uncertain implications for users of BBS systems as well for online service providers. It is easy to understand why a system operator should be liable for copyright infringement when he or she participates in or actively encourages the making of infringing copies of commercially valuable materials on the system. It is equally apparent that a user who deliberately uploads or downloads a copy of a commercially distributed computer program to a BBS should be held liable for making an unauthorized reproduction of the program. But it is somewhat less certain whether the uploading of copyrighted material to a BBS is, in and of itself and in all circumstances, also a violation of the U.S. exclusive right to distribute copies of the work or the Canadian right to control communication of the work to the public. Also uncertain is whether uploading copyrighted material to a BBS constitutes a public performance or display of it. There is language in the *Frena* decision suggesting that uploading or downloading violates not only the reproduction right but a number of other exclusive rights as well.[37] On this subject, more careful thought and analysis is needed. Even more careful thought is needed about whether copyright liabili-

ty should be imposed when users merely view copyrighted material on a BBS or other online service. To view anything on a BBS, whether it is copyrighted or not, one must make a temporary reproduction of it in the memory of one's computer. Some would argue that such temporary reproductions are not "fixed" enough to be infringing copies;[38] however, others would argue that a temporary reproduction of copyrighted material for the purpose of viewing it in digital form is infringing unless it has been authorized by the copyright owner.[39] If temporary reproductions of this kind are infringements, then the act of viewing a work itself becomes an act of infringement. Users of copyrighted material have historically not been liable for copyright infringement arising from merely observing an infringing copy or performance. If unauthorized viewing is a copyright infringement, so is any unauthorized use of a copyrighted work, at least when it is in digital form. While it is a fair topic of discussion whether unauthorized use and viewing of copyrighted material should be controlled by copyright owners, it is worth realizing that this substantially extends the reach of copyright law, and asking whether this extension is necessary or desirable.[40]

A few examples may illustrate why potential user liability based on viewing copyrighted works on BBS's might be troublesome. If an online service subscriber named Joan forwards a copy of the latest issue one of the electronic journals to which she subscribes to a fellow online service subscriber Doris, because it has a story on Amazon rain forests in which Doris will be interested, does Doris become an infringer by looking at this journal when it shows up in her mailbox? Does Doris's liability for copyright infringement turn on whether Joan deleted her copy from the system after reading it? How could Doris know whether Joan had deleted her copy when she first looked at her mail, which included this journal?

Suppose Joan instead makes a digital copy of a portion of the Amazon rain forest story from the journal and posts it and a commentary on it in a newsgroup on the online service. Are all of the readers of the newsgroup infringers by virtue of their viewing of Joan's message, if it turns out that Joan has posted a little too much of the story on the BBS? Should a viewer's liability depend on whether he knew the material was infringing, or should society maintain the rule that copyright is a strict liability system. Thus, is an unauthorized reproduction is infringement regardless of knowledge?

It is not enough to respond to these questions by saying that copyright owners would be unlikely to sue "innocent" viewers. The question is what the law should provide. By saying that all unauthorized viewing of works in digital form is an infringing reproduction, society confers power on copyright owners to take action against those who have not paid for a "look" at the copyrighted material. Advocates for such a rule should bear the burden of persuading the consuming public that it would serve the public interest and is necessary to protect the legitimate interests of authors. The outcome of this important policy question should not turn on the incidental fact that computer memories must make copies in order for someone to use works in digital form.

The Canadian Copyright Subcommittee's Draft Final Report on Copyright and the Information Highway suggests that some unauthorized viewing of copyrighted works might be fair dealing.[41] This observation is a promising start. However, the report expresses some reluctance to provide guidelines or examples of circumstances in which viewings might be fair dealings.[42] This leaves less clarity than is desirable in a law aimed at regulating behavior that members of the public can be expected to engage in with considerable frequency.

One obvious example of browsing of copyrighted material that can easily be justified on fair dealing, or implied consent grounds, is user browsing of the home pages and related content put up by those who establish sites on the World Wide Web. The very purpose of putting documents up on the Web is to let other people take a look at them. Web browsing can surely not be copyright infringement, even if temporary copies of content put up at a Web site must be made in the memory of the browser's computer to view the work.

### d. Other Constraints on User Behavior

Policymakers should be aware that the law is not the only — indeed, it may not be the principal — way in which user behavior in digital networked environments can be regulated. Those who frequent today's Internet have established a set of community norms ("netiquette") that constrain user behavior in cyberspace to a considerable degree. Quoting some portions of someone else's text in responding to his or her comments on BBS or listserv systems is acceptable as a matter of netiquette and as a matter of copyright law. It is not, however, good netiquette to post someone else's message on other BBS's without permission, and people who violate these unwritten rules are likely to be chastised ("flamed") for it. Nor is it good netiquette to post someone else's message and then just say "I agree." This wastes net resources and fellow users' valuable time.

It is also regarded as fair for users to extract portions of postings on a BBS or a listserv for private study or research when it involves an issue of concern. Such practices would generally be regarded as fair dealings or fair uses under copyright law as well. Another common practice on the net is making documents available for user downloading, as when someone establishes an anonymous file transfer protocol ("FTP") site on a computer linked to the network and an index of available documents. By setting up an anonymous FTP site, the poster of the documents is impliedly consenting to any copying or viewing that might be done of them at that site by users who traverse to the site. This should shield users from infringement claims for downloading, at least so long as the initial posting of the documents was noninfringing.

Many online service providers also designate certain kinds of behavior, such as copyright infringement, to be unacceptable on the system. System operators for these services routinely enforce system rules against such unacceptable behavior. When deemed necessary, they expel subscribers from the system for misbehavior. For many users in digital networked environments, the threat of exile from an online service may be a much more powerful deterrent against wrongful behavior than is the threat of copyright infringement. In addition, professional societies are educating people about their legal responsibilities in digital networked environments.[43]

## 2. Electronic Information Tools

An extraordinary array of electronic information tools now available in the commercial market permit users to experience and take advantage of the plastic nature of works in digital form.[44] By plastic, I mean the ease with which such works can be transformed, manipulated, and/or inserted into other works.[45] Although many authors might prefer for their works to remain as fixed as they have traditionally been in printed form, the genie of plasticity cannot be pushed back into the bottle.[46] As will become apparent from a number of examples discussed in this section, the manipulability of digital data is one of the key advantages of the digital medium.

There will unquestionably be many digital manipulations of copyrighted works that cannot be justified under fair use, fair dealing or similar doctrines because they will pose too much of a threat to the ability of owners of copyrights to obtain a fair return arising from commercial appropriations of their work.[47] Left unchecked, such appropriations could result in market failure because copyright owners would be unable to recoup the costs of producing and distributing creative works. This is the very market failure that the copyright system aims to avoid.[48]

But there will just as surely be some uses of these tools that can be justified under fair use, fair dealing, and similar principles. Countries such as Canada and the United States, which have fair use or fair dealing provisions in their copyright laws, may find it easier to adapt to the challenges that electronic information tools present for regulation of uses that can be made of copyrighted materials than countries without such doctrines. It will often be in the public interest for electronic information tools to be available in the marketplace and to be used in ways that do not undermine incentives to engage in creative activity. Some examples are given below.

### a. Copyright and Electronic Information Tools: The Game Genie Cases

Both Canadian and U.S. courts have already dealt with a case in which claims of copyright infringement arose from the distribution of an electronic information tool, permitting users to take advantage of the plastic nature of works in digital form.[49] Nintendo sued both the Canadian and U.S. distributors of a computer program known as the Game Genie. When attached to cartridges in a Nintendo Entertainment System, the Game Genie could be programmed to make a number of changes to the play of Nintendo games, such as by increasing the number of lives of a particular videogame character.[50] The Game Genie accomplished these changes by intercepting certain signals from the Nintendo program and substituting other signals in the place of the Nintendo signals.[51] Nintendo's principal theory was that the distributor of the Game Genie provided consumers with the device knowing that consumers would use it to alter the audiovisual sequences of the Nintendo games, thereby infringing Nintendo's copyrights.[52]

Facing essentially the same factual dispute, the Canadian and U.S. courts reached the same conclusion: that no infringement had occurred. They did so, however, on somewhat different grounds. The U.S. decision relied principally on the fair use doctrine.[53] The Canadian decision focused on the lack of harm to Nintendo's market arising from the sale of Game Genies.[54] The differences between the two decisions should not be overemphasized, however, because lack of harm to Nintendo's market was an important factor in the fair use ruling in the U.S. decision as well.[55] Because the U.S. decision was somewhat more elaborate in its explanation of the noninfringement ruling than was the Canadian decision, it may be helpful to review the analysis in the U.S. decision. In the aftermath of the North American Free Trade Agreement, it is also conceivable that U.S. and Canadian decisions on fair use/fair dealing issues may achieve greater convergence than has occurred to date.[56]

In the American case, Lewis Galoob Toys successfully raised a fair use defense to Nintendo's claim that the Game Genie contributed to the creation of an unauthorized derivative work. The court ignored Galoob's obvious commercial purpose in marketing the Game Genie.[57] The appropriate focus, said the court, was on the purposes of the activities of the alleged underlying infringers, which in *Galoob* were the kids who used the Game Genie to alter the play of Nintendo games in the privacy of their homes. Under the U.S. Supreme Court's ruling in the *Sony Betamax* case, the court decided that because consumers were making private and noncommercial uses of the allegedly contributorily infringing device, this factor favored a finding of fair use.[58]

The court rejected Nintendo's argument that the unpublished character of its works made the use unfair.[59] It agreed with Nintendo, however, that the scope of fair use was generally narrow in cases involving entertainments, such as those in this case, although this was not dispositive.[60] Furthermore, it found the alterations to Nintendo's games through use of the Game Genie to be far less substantial than the copying in *Sony*.[61] This too favored Galoob's fair use defense.[62]

Nintendo had two principal arguments about the harm to its market arising from the sale of Game Genies. One argument focused on the Game Genie's interference with Nintendo's game quality control system which Nintendo asserted it had to maintain in order to prevent a collapse of the videogame market.[63] The other asserted that the Game Genie interfered with Nintendo's opportunities for marketing altered games.

The court was not persuaded by either argument, pointing out that Nintendo had no plans to market versions of its games containing alterations of the sort that the Game Genie produced.[64] The court likened the modifications made through use of the Game Genie to children deciding to change the rules of play when using a copyrighted board game, which Nintendo conceded would not infringe any copyright.[65] "Because of the technology involved, owners of videogames are less able to experiment with or change the method of play, absent an electronic accessory such as the Game Genie,"[66] said the District Court. The court recognized that kids could only use the Genie if they had already bought Nintendo games, which meant that the Game Genie did not displace sales of the Nintendo programs.[67] "Having paid Nintendo a fair return, the consumer may experiment with the product and create new variations of play, for personal enjoyment, without creating a derivative work."[68] This analysis is consistent with the ruling in the Canadian Cameria case.[69]

### b. Clip Art and Data Interpretation Tools

Among the other electronic information tools that present no serious copyright problems are the "clip art" and "clip sound" programs that are widely available on the market today.[70] Developers of copyrighted clip art programs know that consumers expect to use them to copy images or sounds from the program's compilation and reuse them in the creation of new works. It is, in fact, the very purpose of these programs to fill consumer demand for such a product.

Under Canadian copyright law, consumers who made ordinary use of such programs for their intended purposes would surely be shielded from copyright liability under the implied consent doctrine.[71] In the United States, which has no separate implied consent doctrine, the clipping of a reasonable number of images or sounds for the consumer's own purposes would surely be regarded as fair use if the issue was ever litigated.[72] The copyright in clip art programs would protect against appropriation of the developer's collection of clip art images for reuse in a competing clip art program.[73]

One class of uses of electronic information tools in which fair dealing defenses might successfully be raised in Canadian cases, and fair use in U.S. cases, are those in which electronic information tools are used as aids in the interpretation of data contained in copyrighted works in digital form. One example of such uses was demonstrated at a conference about computer-human interaction some years ago. During one of the conference sessions, there was a demonstration of a software tool that processed digital signals representing visual materials to produce sounds that would aid in the interpretation of the visual materials.[74]

One demonstration of this tool featured a digital image of a tissue sample taken to detect the presence (or hopefully, verify the absence) of cancerous cells. With the aid of the software tool, someone wanting to interpret this image could pass the cursor over different parts of the sample, thereby causing the tool to process the visual data as sounds. Muscle tissue not only looked different from nerve tissue; it "sounded" different as well. Because it was difficult to detect cancerous cells relying solely on visual cues, it helped to have a second source of information (i.e., the sounds) with which to try to distinguish the "good cells" from the "bad ones."

Another demonstration of this tool focused on the interpretation of a digitized image of a chart. The chart depicted the distribution of men and women in the sciences in terms of their professional rank and salaries. By assigning a deep bass sound to visual symbols representing males and a high piccolo sound to the visual symbols for females and then running the cursor over different parts of a digitized image of the chart, one could "hear" (as well as see) how few women had either high ranks or high salaries in the field of science.

Perhaps no one would think to claim copyright in a digitized image of a tissue sample, but someone might very well claim a copyright in the chart. Use of this tool to interpret the chart would, I believe, not infringe the copyright in the chart even if it was incidentally necessary to make copies of the chart in the course of using the tool to interpret it. Under the Canadian fair dealing provision, the purpose would be for private study or research and would not harm the market for the chart. Under the U.S. *Galoob* decision, use of the interpretation tool would likely be a noninfringing fair use. It would involve a noncommercial research purpose, the nature of the work would be factual, which generally favors fair use, and little or no harm to the market for the work would be likely to arise from the use.[75]

The tool just described is one of a number of electronic information tools that take advantage of the plastic nature of works in the digital medium.[76] Because the electronic signals constituting a work in digital form do not know, until the computer and software processing them interprets them, whether the work which they embody is a song, a picture, a text, a program, or a motion picture, works in digital form can, in fact, be more than one kind of work.[77] Thus, the chart described above, which first appeared to be a graphical work, "became," when processed with the aid of this tool, a musical work as well.[78]

Among the other software tools now available to aid in the interpretation of data are those that allow users to "visualize" scientific data.[79] Scientific data are typically collected and represented in textual form, often as a set of numbers corresponding to various data types being collected. One of the most difficult tasks of scientific work tends to lie in conceptualizing a representation of the data to make it more comprehensible. Scientific visualization tools allow researchers to assign certain shapes and/or colors to certain classes of data. The data are then processed with the aid of the tool to produce visual representations with the assigned attributes. Often, such tools will be used by the person who collected the data and who may claim a copyright in the scientific data compilation by virtue of his or her exercise of judgment in the selection or arrangement of data in the

compilation. And of course, when this is so, no copyright concerns are likely to arise from the use of scientific visualization tools.

These tools can, however, be used by someone other than the original data gatherer. They might, for example, be used to create an alternative visualization of the data set that might challenge the interpretation given to the data by the scientist who gathered them. As with the previous example, I believe that someone who used such a software tool to make a scientific visualization of the data to aid the interpretation of a data set would be making noninfringing uses of the data compilation.[80] Principles of fair dealing or fair use could, if necessary, also be used to justify the publication of an article with the challenger's visualization of the data[81] — even if the gatherer of the data, or a publisher of the data compilation, or an article containing a different visualization — might object.[82] In Canada, however, it might be necessary to acknowledge the source of the data.[83]

### c. Reformatting, Filtering, and Morphing Tools

A number of electronic information tools available in the market today permit users to reformat electronic documents so that they can be read on a different computer or by different software than that on which they were created, to convert them from one proprietary format to another (or from a proprietary to a nonproprietary format), or to "tag" components of existing documents so that the contents of these documents can be retrieved from the user's database based on the tagged attributes (e.g., section headings, footnote references, or lists of items).[84] Assuming that users of these documents have lawful possession of these documents, even when not being the author of all such documents, the question is whether processing these documents with the aid of such a tool would infringe copyright.[85] The *Nintendo* decisions support the view that neither the developer of conversion or tagging tools nor those who use them to make use of the documents for legitimate purposes should raise serious copyright concerns.[86]

Another class of electronic information tools expected to have a commercially significant future are those that permit users to "filter" information of interest (or not of interest) to them.[87] Such a tool might, for example, be used to produce a customized version of an electronic newspaper that would delete sports coverage for those who are not interested in reading about sporting events.[88] Or users might "train" filtering software about the order in which they wished to read items of interest to them from the digital information product, or service constituting the newspaper as a whole. The question arises, however, whether use of these filtering tools should be regulated

by copyright law if the owner of the newspaper copyright does not want consumers to use them, or only wants consumers to use filtering tools supplied by it or its licensees.[89]

An individual consumer who used a filtering tool to tailor an electronic information product or service for his or her own uses would probably not infringe the newspaper copyright so long as the consumer was paying the standard fee for the copy of the electronic newspaper being filtered under the principles of Cameria and *Galoob*.[90] This would undercut the argument that there would be any demonstrable harm to the market for the copyrighted work being filtered. Harm to the market for the publisher's own filtering software would be akin to arguing that sale of the Game Genie was unfair because it had harmed Nintendo's opportunity to market a Game Genie-like product. This was a potential market that both American and Canadian courts seemed to be unwilling to reserve exclusively to Nintendo. The focus of the copyright inquiry should be on the harm to the market for the copyrighted work, not on the potential impact of the tool on the sale of competing tools.

A more troublesome set of electronic information tools available in the market today are those that permit users to "morph" images from one shape to another,[91] to change the texture of an image (making it plaid instead of plain white or making a photograph look like a painting by Van Gogh),[92] to excise the head from a person in a photograph and move it onto the head of another figure in the same or a different photograph, [93] or to process texts to change the dialect in which they are expressed.[94] Unlike the Game Genie, these tools just mentioned can be used to make substantial enough alterations to existing works to infringe copyrights.

One question raised by these electronic information tools is whether such tools should be banned from the market because of their potential for uses that will infringe copyrights and the likelihood that they will be used for such purposes. Under a broad contributory infringement doctrine, such as that asserted more than a decade ago in the U.S. *Sony* case, one might say that sale of these digital manipulation tools should be enjoined on the theory that a developer of them should know that many consumers would use them to infringe copyrights.[95] However, because these tools are capable of substantial non-infringing uses, the *Sony* decision would seem to shield developers of these tools, at least in the U.S., from claims that contributory infringement charges may be brought against them merely because some people may use the tools to infringe copyrights.

It is, of course, a separate question whether consumers who might use such tools to morph images are infringers of copyright. In the U.S., *Sony* and *Galoob* would suggest that private noncommercial uses of this sort would be presumed noninfringing under the fair use doctrine. As long as consumers confined their use of the morphed images to private noncommercial activities, the potential for harm to the market would not be sufficiently strong to overcome this presumption. Even though Canadian courts might not employ the fair dealing doctrine to reach the same conclusion, *Camerica* suggests that where there is no discernible harm to market interests of copyright owners arising from consumer use of an electronic information tool, liability for copyright infringement would not arise.[96]

One thing that is clear from this examination of electronic information tools is that the digital medium shifts somewhat the balance of power between authors and publishers, on the one hand, and consumers of copies of copyrighted works on the others. Consumers are no longer passive recipients of a physical text which they can only read or look at. Armed with digital tools, consumers are now users capable of taking an active role in interacting with texts to enhance the usability of them. As long as they pay copyright owners for the copies of their works, and do not engage in commercial marketing that harms the market for these copyrighted works in the way that copyright law traditionally seeks to prevent, users should be permitted to make reasonable uses of electronic information tools to enhance the utility or enjoyment of their uses of their copies of copyrighted works.

### d. Hypertext Linking

When texts are in digital form, it becomes possible, with the aid of hypertext system software,[97] for users of the texts to create links between one portion of a text and another, between one document and another, or among many documents or portions thereof.[98] A set of links made by a user of digital texts can exist as a separate document in a digital networked environment (which then becomes a hypertext publishing system). The link document will consist of a compilation of data identifying the starting and ending points of the material being linked to.[99]

Depending on how the hypertext system is designed, it may be possible for someone other than the link author to follow the link path set forth in the link document.[100] When the link document is processed by the hypertext system program, a user who follows the links created by someone else will see the portions of the documents designated by the link author.[101]

Hypertext linking poses very similar intellectual property rights questions as were presented in the *Galoob* case. Does the author of a link document infringe copyrights in the works to which links have been created in violation of exclusive rights that U.S. copyright law gives to authors to prepare derivative works?[102] Does the author of a link document cause an unauthorized reproduction of the text being linked to in violation of the U.S. or Canadian copyright statutes? Does a user of someone else's links infringe any copyright interest of the link author?[103] Authors of hypertext links would, of course, like to be free from claims of infringement for linking portions of other authors' documents, yet able to assert copyright control over traversals of their links by other users.

As was true with the Game Genie, the link document would contain no expression taken from the texts of the authors being linked to. Because of this, a U.S. court deciding whether a link author had infringed the derivative work rights of authors of the documents to which he had linked would likely doubt that a derivative work had been created under the rationale given by the Ninth Circuit in *Galoob*.[104] As in *Galoob*, the U.S. court might go on to judge whether, even assuming a derivative work was created, a fair use might have been made of the copyright in the underlying documents. Often the link author will have an educational or research purpose in constructing links among documents. Works being linked to would often be factual in nature, and little from the preexisting works would have been appropriated.[105] An important factor in a fair use assessment would likely be that little, if any, harm could be expected to the market for the works being linked to since the link document would only be usable if the user has access to the underlying documents, access for which the user is likely to have already paid.[106] Under the Canadian Camerica decision, a similar result might be reached on a lack of harm or implied consent theory.

This does not, however, provide an answer to the question of the copyright implications of the use of a link document. Faced with a demand of a link author who wanted compensation for use of his links, the link user might analogize her navigation of the links to the print reader's following of a bibliographic path set forth in a copyrighted article which would, of course, not be infringing for it would involve use of the knowledge in the article, not a reproduction of it.

The link user might argue that her use should be deemed fair because it was private and noncommercial; perhaps it even had a research purpose. The link document would be a factual compilation, which generally enjoys a narrow scope of copyright protection. However, the whole of the link document would have been copied in order to be used, and there would be real harm to the market for the link document. If there is any market for link documents, it will arise from the link author's ability to charge users for the value of saved time and effort from following someone else's path, rather than going to the trouble of independently constructing the user's own link path through digital texts. It may be important to give link authors some protection for their creation of these paths in order to induce investment in them. At least, fair use and fair dealing doctrines provide a framework for making balanced judgments about how copyright law might apply to new questions arising from the use of electronic information tools.

## 3. Public Policy Limitations On The Scope Of Copyright: On Interoperability And Related Issues

### a. Of Program Interfaces and Decompilation To Get Access To Interface Information

The Canadian draft report on Copyright and the Information Superhighway is silent about an issue that is critically important to the future of the information superhighway: whether copyright protection is, or should be, available for the interfaces of computer programs — that is, to the precise rules of interaction required in order for other programs to successfully interoperate with other programs.

There are two ways that some software developers have attempted to use copyright law to protect program interfaces. The more direct approach is to claim that the interface of a computer program is part of its structure, sequence, and organization (SSO), which copyright should protect in much the same manner as it protects SSO of novels and plays.[107] A more indirect way to protect program interfaces has been to claim that any intermediate copying of program code, necessary to get access to interface information during the process of decompiling or disassembling the program, should be regarded as copyright infringement.[108]

Canadian courts have not yet had to deal with either type of claim. U.S. courts have, and in three influential appellate court decisions, the courts have permitted subsequent developers to use interface information from another program to achieve interoperability with that program and to decompile another firm's program to get access to its interface information.[109] One recent article characterizes program interfaces as "the information equivalents of the gear teeth, levers, pulleys, and belts that physical machines use to interoperate."[110] Just as copyright law would not protect the interfaces by which physical machines interoperate, it should not protect the interfaces by which software machines interoperate.[111]

Some Canadian decisions have construed the scope of copyright protection for programs in a manner consistent with U.S. rulings that deny claims of copyright protection for interfaces, even though the Canadian cases did not directly address the interface issue.[112] Canadian copyright policymakers should know that European policymakers adopted a directive on the legal protection of computer programs, which provides that, insofar as interfaces establish the requirements for achieving interoperability, they should not be protected by copyright law. Any intermediate copying necessary to get access to the information needed to permit interoperability is also lawful.[113] The Canadian copyright committee might want to make recommendations about the interface issue in its final report on copyright and the information superhighway.

Because of the different character of the Canadian fair dealing and U.S. fair use doctrines, it is not clear whether a fair dealing defense would succeed in a Canadian lawsuit involving claims of infringement arising from the decompilation of a computer program object code for such purposes as gaining access to the information necessary to construct a program capable of interoperating with another program. However, even if a Canadian court might not rely on the fair dealing doctrine, the same legal result might be reached through use of the more general public policy limitation on the scope of copyright that some Canadian cases seem prepared to recognize.[114] A Canadian ruling in favor of decompilation to achieve interoperability on public policy grounds would make its copyright law on this issue consistent with the European software directive, as well as with U.S. caselaw.

To enable Canadian policymakers to understand why it might be desirable to permit decompilation of a computer program code to get access to unprotectable elements of computer programs, such as interfaces, on grounds of public policy, it may be helpful to review the analysis used by the Ninth Circuit Court of Appeals in the principal U.S. case on this subject, *Sega Enterprises, Ltd.* v. *Accolade, Inc.*[115]

Sega sued Accolade for copyright infringement because Accolade made copies of Sega programs in the course of trying to develop games that would operate in Sega's Genesis machines.[116] Accolade admitted "disassembling" Sega programs — an act that necessarily involves copying — to gain access to information about how to construct games that would be compatible with Genesis machines.[117] This was information that Sega normally made available to other game developers only under restrictive licensing agreements for which licensees had to pay.

Sega did not claim that any of Accolade's games contained expression from Sega programs.[118] Rather, Sega asserted that the intermediate copying of the program to determine how to construct a program that would work in the Genesis machine was itself infringing.[119] Sega sought to stop distribution of Accolade games compatible with Sega cartridges on the ground that, as products of an unlawful disassembly process, these games were infringing derivative works: the fruit, so to speak, of the poisonous tree of disassembly.[120] Accolade's principal defense was that this intermediate copying of Sega's code was a fair use.[121]

Sega argued that Accolade's copying should be presumed to be unfair because the purpose of its disassembly of the Sega program was commercial.[122] The appellate court, however, perceived Accolade's principal purpose in disassembling the Sega program as aiming to study the program contents to discern how to make compatible, but otherwise quite different and original programs, to run on Sega machines. The court thought that Accolade's development of new noninfringing programs contributed to achievement of the main goals of the copyright system of encouraging the "growth of creative expression" and the introduction of new independently created works into the market.[123] These purposes favored a finding of fair use.

Sega argued that the nature of the copyrighted work factor cut against fair use because its software was an unpublished work,[124] seeking to invoke the general rule that there is a narrower scope of fair use when the protected work is unpublished.[125] The Ninth Circuit decided that the mass marketing of Sega's program precluded any claim that the work was unpublished. It was on the utilitarian nature of computer programs that the court chiefly focused in considering the nature of the work factor.[126] Computer programs, the court observed, contain many functional elements that are not protectable by copyright law.[127] Some unprotectable elements of programs cannot be discerned by running the program, but others cannot.[128] Because of this, it is sometimes necessary to make intermediate copies of a

program in order to get access to unprotected elements of programs, such as information necessary to make a compatible program. When it was, the court decided that the intermediate copying should be regarded as fair use.[129] "If disassembly of copyrighted object code is per se an unfair use, the owner of the copyright gains a de facto monopoly over the functional aspects of his work—aspects that were expressly denied copyright protection by Congress."[130] To have a legal monopoly over the idea or functional principle underlying a work, said the court, "the creator of the work must satisfy the more stringent standards imposed by the patent laws."[131]

Although Accolade's intermediate copying had been of the whole of the Sega program, the court thought it had done so only as an intermediate step in the process of developing a noninfringing program. The court cited the U.S. Supreme Court's *Sony* decision for the proposition that copying of the whole of a copyrighted work did not necessarily preclude a finding of fair use.[132] Because Accolade's use of the intermediate copy was so limited, the court thought that this factor was "of very little weight."[133]

Sega asserted that harm to its market flowed from the fact that Accolade's games directly competed with Sega-produced and Sega-licensed games.[134] However, the court observed that noninfringing works often compete in the marketplace in their appeal to consumer choices. If consumers preferred Accolade's games to those produced by Sega or its licensees, that might hurt Sega's market. But as long as Accolade produced its own creative programs and didn't copy expression from Sega programs, Accolade was only engaged in the kind of competition that copyright is supposed to encourage.[135] Hence, there was no harm to Sega's market arising from Accolade's disassembly of its program with which copyright law should be concerned.

Faced with this issue of first impression, the Ninth Circuit in Sega considered whether the ultimate purposes of copyright law would be served by a ruling that decompilation or disassembly of computer program object code was infringing.[136] Although U.S. and Canadian traditions differ somewhat in their views about copyright purposes—U.S. caselaw tending to emphasize public access to knowledge as the principal purpose of copyright, while Canadian law tends to focus on promoting authorship as copyright's purpose[137]—the decompilation issue is one on which they can probably find common ground. The U.S. case regarded decompilation in order to achieve interoperability as the rule that would best promote the development of more new, creative, noninfringing programs.

To forestall the need to wait for litigation to resolve the decompilation issue, the Canadian copyright committee might want to include some statement about decompilation in its final report. In any event, Canadian policymakers should understand the closely intertwined nature of the interface and decompilation issues. A rule providing that program interfaces cannot be protected by copyright law because they are the functional requirements for achieving interoperability would be severely undermined by a rule that treated decompilation as infringement. Decompilation is often the only feasible way for software developers to get access to interface information.

Interoperability is important to Canadian software developers because they will often want their programs to be able to interoperate with highly successful programs in digital networked environments. Indeed, the successful construction of the information superhighway depends in no small part on interoperability.[138]

### b. Other Concerns About Decompilation And Use of Copyright To Protect Secrets

There are a number of other situations in which firms may feel the need to decompile the code of other firms' programs.[139] These include: the need to decompile a program to fix a "bug" in the program that is impeding its successful completion of a task; the need to decompile it in order to adapt it to a somewhat different computing environment (e.g., to permit it to work on a new machine or with some lately acquired program); and the need to decompile a program to analyze its contents when one has some reason to believe that the decompiled code infringes a copyright in the decompiler's program. Decompilation for the first two purposes would be within the spirit of the statutory privilege that Canadian law grants to lawful users of copyrighted computer programs.[140] Decompilation for the purpose of detecting infringement might qualify as fair dealing because of its research purpose and lack of market effect, or it might be favored on public policy grounds or on equitable grounds.[141]

Two purposes are served by this extended attention to the decompilation issue: first, because decompilation is a highly important issue pertinent to digital technologies and the challenges they pose for copyright law, and second, because careful consideration of the public policy issues posed by decompilation may provide a useful basis for thinking seriously about a more general problem posed by digital technologies: they tempt policymakers to use copyright law as a means of protecting mass-marketed secrets. Sometimes this may be appropriate; sometimes it may not.

The Canadian Draft Report on Copyright and the Information Highway foresees the use of copyright law as a means of ensuring that technological protection (e.g., encryption) for digital versions of copyrighted material cannot lawfully be undone.[142] This is similar to the U.S. Green Paper on Intellectual Property and the National Information Infrastructure.[143] The Canadian recommendation is less developed than the U.S. proposal on this score,[144] but neither report acknowledges the profound shift in copyright purposes and effect that would be brought about by such proposals. Enactment of the U.S. proposal would convert copyright into a trade secrecy protection law, even for widely distributed information products.[145] Given the depth of this transformation of copyright, policymakers would be wise to proceed more cautiously on this issue than they have to date.

This is not to say that there are no circumstances in which copyright liability should be imposed when someone decrypts a technologically protected digital version of a copyrighted work. But existing copyright principles, such as those enunciated in the U.S. *Sega v. Accolade* case, can be used to distinguish between legitimate and illegitimate decompilation of digital works other than computer programs.

It is, for example, highly unlikely that a prospective consumer of an encrypted motion picture, who made intermediate copies of the digital version of the movie to gain access to an unencrypted version of the motion picture, without paying the usual price, could successfully raise a fair use defense in an American court. The purpose of this intermediate copying would be to get access to an unencrypted version in order to consume it the way that one would consume it if one had paid the customary price. This is not a legitimate purpose.[146] The nature of the work would most likely be an "entertainment," for which the scope of fair use is generally narrow. The whole work would have been copied, and there would be harm to the market because the consumer would have gotten for free (or at least only for the cost of the decryption device) what the producer sells in the marketplace. Similarly, the copyright contributory infringment doctrine would permit action to be taken against a firm selling a decryption device (or some similar technological system) that has no substantial use except to infringe copyrights.

However, as appealing as a general ban may be on all technologies or services perceived as threatening by copyright owners, it may be an overbroad response to a problem that, with some careful thought, might admit of a more careful and precise solution. Although Canadian copyright law does not place as much emphasis as U.S. copyright law does on dissemination of knowledge as a purpose of the law,[147] Canadian copyright law provides some privileges for news

reporters.[148] Moreover, some commentators and cases suggest that concerns about freedom of expression might support a defense to claims of copyright infringement in the proper case in Canada.[149] There is no reason to think that Canada would be less receptive to news reporting or freedom of expression claims if the document in dispute was in digital rather than in print form.

If Canadian policymakers can conceive of the following situation as lawful as a matter of Canadian copyright law, it ought to think twice about its position on banning digital technologies that might be used to overcome some technological protection for a work in digital form.

Suppose that a news reporter comes lawfully into possession of a document that appears to be a coded message, which the reporter has reason to believe contains information about criminal activity in which a well-known public figure has been involved. Suppose further that, after a considerable degree of research into cryptographic techniques, the reporter is able to "break" the code in which the document was written and finds out that this hunch was correct. Thereafter, the reporter writes a story about the information gleaned from this document and about his decryption efforts. Suppose this story is about to be published in the newspaper for which he works. If the public figure finds out about the impending story (as when the reporter calls and asks for confirmation of some details) and sues to enjoin publication of the story on the ground that the intermediate copying of the coded message done by the reporter in order to transcribe it into an unencrypted form was copyright infringement, what should the court do? I would argue that this intermediate copying is not infringement under fair use, fair dealing, news reporting, freedom of expression or other public policy doctrines. It would make no sense for the outcome of this case to depend on whether the document had originally been made available to the reporter in digital form.

Intermediate copying to decrypt the contents of a copyrighted work should sometimes be infringing, but sometimes it should not. Fair dealing and fair use doctrines may be useful in helping courts to distinguish the circumstances in which copyright liability should or should not be imposed.

## 4. The Future Of Copyright

The Canadian Copyright and the Information Highway report does not foresee any need for *sui generis* legislation in the regulation of digital information.[150] It also regards copyright as needing relatively few changes to successfully meet the challenges of digital technologies and the information highway.[151] In this concluding section of the paper, I will discuss three categories of works to which *sui generis* legislation may be needed in the foreseeable future to regulate trade in their respective information products. This section will also discuss some reasons why copyright law may, over time, be in need of a more substantial revision than presently recommended in the Copyright Subcommittee's report. There are some reasons to believe that the dire predictions about digital technologies spelling the end of copyright law may ultimately prove true.

### a. Database Protection

As part of the North American Free Trade Agreement, Canada has committed itself to adoption of the U.S. and European creativity-based standard for determining what information products meet the "originality" requirement for copyright protection.[152] There are two classes of works in digital form that may not meet creativity-based standards for copyright protection. However, because of their present or future commercial importance, they may be in need of legal protection that copyright law cannot provide. They are: (1) electronic data compilations requiring effort but not creativity to produce, and (2) works generated by computer programs having no identifiable human creator. In addition, there may be a need for a *sui generis* form of legal protection for the useful behavior of computer programs (i.e., for the set of results that can be generated when program instructions are executed in a computer) which copyright law cannot appropriately protect.

The most immediate prospect for *sui generis* legislation in Canada and other Western industrialized nations arises from a recent proposal by the European Commission for a directive on the legal protection of databases.[153] This proposed directive aims not only to harmonize the standards for copyright protection for databases by adopting an intellectual creativity standard as to the selection and arrangement of data in a database,[154] but also to create a *sui generis* form of legal protection in the compiled data, regardless of whether it was embodied in a copyrighted database.[155] The producer of a protected database would have fifteen years of exclusive rights to reproduce the data compilation, adapt it, and communicate it to the public.[156]

The drafters of this directive recognized that many commercially significant databases do not meet creativity-based copyright standards, yet they need legal protection to induce an optimal level of investment in their production.[157] This is because in digital form, these data compilations are expensive to produce and maintain, yet they can be easily and cheaply replicated. If the maker of the database cannot stop appropriation of the database contents, markets for this class of information product will fail because there will be too little prospect of recouping investments made in the database. Although many databases can be protected by copyright law on account of the creativity that went into the selection and arrangement of the database contents, copyright law does not protect the data as such.[158] Given how easy it is to use electronic information tools to reselect and rearrange the contents of electronic databases, the data in copyrighted databases may be vulnerable to trivial acquisitions of equivalence that copyright law cannot properly remedy.[159] Here too, market failure may result if the data compilation, as distinct from the creativity in selection and arrangement of the data, has no legal protection.

Although the European database directive has yet to be adopted, there are two reasons to think it will be influential on an international scale. First, there is a reciprocity provision in the proposed directive that will mean that the protection the directive would otherwise provide to the databases of foreign nationals will be available in the European Union only if that nation provides equivalent protection set forth in the directive.[160] If Canadian nationals want to participate on an equal footing in the information markets in Europe, the Canadian government will need to adopt a similar *sui generis* law. Second, even if the reciprocity provision is ultimately withdrawn from the directive,[161] the Europeans seem intent on promoting the database directive in international forums. There was, for example, serious discussion of the possibility of international adoption of the database directive at a recent meeting of experts hosted by the World Intellectual Property Organization.[162] Thus, Canada may well find itself considering a *sui generis* law for the compiled data in databases in the not too distant future.

### b. Computer-Generated Works

There are many computer programs now in existence and under development, the purpose of which is to generate music, text, pictures, or similar works, for which it is virtually impossible—unless one is prepared to engage in a legal fiction—to identify a person who can be the "author" of this output.[163] Although a human may have initially programmed the computer to produce output of this sort, the instructions constituting the program's text will often rely on random number generators as a means to vary the output produced. As a consequence, neither the programmer of the system, nor anyone else, would be able to distinguish between output generated by the program and output of a human author seeking to imitate the program's performance. All that the human user of the program might have contributed to the work's production is pressing a button that causes the output to be generated.[164] There will consequently not be a human "author" of such a work to whom copyright can be allocated.

The U.K. already has a *sui generis* form of legal protection for computer-generated works. This law provides copyright-like protection to the user responsible for production of such a work for a period of 25 years.[165] It appears likely that the European Union will very likely adopt a similar *sui generis* law at some point.[166] Until the U.S. Supreme Court's decision in *Feist Publications, Inc.* v. *Rural Telephone Service, Inc.*,[167] one might have thought that computer-generated works might have qualified for copyright protection. However, the *Feist* decision was so insistent on the need for human creativity or judgment before copyright protection could attach to works that it would now appear that *sui generis* legislation will eventually be needed in the U.S. as well.[168] The same may be true for Canada, now that it has committed itself to a creativity-based originality standard for copyright protection.

At the moment, the issue of ownership rights in computer-generated works has not been of much importance because many of the electronic information tools responsible for generating such output have yet not been commercially significant. As artificial intelligence systems become more sophisticated, however, the commercial importance of computer-generated works may grow, as may the need for some legal protection for the output of these systems. Among the application domains that may eventually attain commercial significance are those for natural language processing tools that will generate translations of written texts from one language to another, and those for the automatic generation of databases of scientific data.

### c. Program Behavior

Having just published an article recommending a *sui generis* form of legal protection for behavior and other industrial design of computer programs,[169] I will briefly explain why such protection might be needed in Canada as well as in the U.S. elsewhere. Canada is among the many nations that uses copyright law to protect the texts of computer programs.[170] However, the most important aspect of programs is not their texts, but the behavior that can be produced when a program code is processed in a computer.[171] People are willing to spend considerable sums of money to acquire a program code not because they have any interest in what the program text actually says, but for the useful behavior programs provide to users.

Program behavior is far more independent of a particular text than is generally recognized.[172] That is, it is relatively simple for a skilled programmer, who has never had access to the text of an existing program, to write a new program that is functionally indistinguishable from the first program, even though nothing is copied from the first program's text. This is of commercial significance in that an independently developed program that is functionally indistinguishable from an existing program can be a perfect market substitute for it. Market failure may arise from this copying if the developer of an innovative program is unable to recoup its research and development expenses because more cheaply priced clones cut into the innovator's sales.[173]

Existing legal regimes do not provide a satisfactory means for the legal protection of computer program behavior or for other industrial design elements of programs. Trade secrecy law cannot protect the behavior of mass-marketed programs because the knowhow to make an equivalent product is borne "on the face" of the product sold in the marketplace.[174] Nor can it protect knowhow borne "near the face" of software products (such as that which is discernible through decompilation). Patent law cannot adequately protect behavior or the industrial design responsible for behavior because of its typically incremental nature.[175] And copyright cannot protect the useful behavior of programs, or other industrial designs embodied in it on account of their utilitarian character.[176] Efforts to stretch copyright law to protect innovative programs against cloning have occasionally been successful,[177] but the use of copyright law to protect functional design elements of programs will merely produce a different sort of market failure than that described above. It impedes the development of follow-on products embodying unpatented technical innovation.[178] The right solution to the market failure arising from the inability of existing legal regimes to protect the most valuable aspects of programs is to provide a market-preserving term of legal protection against cloning of software products.[179]

If an anti-cloning form of legal protection for program behavior becomes well-accepted in the international community, it is likely that Canada too might adopt a *sui generis* legal regime of this sort.

### d. The "Threat" of Digital Technologies to Copyright Law

Notwithstanding the frequent expressions of renewed faith in the vitality of copyright reflected in government reports about the information superhighway and at conferences on the impact of digital technologies on copyright law,[180] a number of ominous pronouncements have emanated recently from well-known and technically proficient persons who predict that the impact that digital technologies will have on copyright law is to cause its death.[181]

Such pronouncements have even come from some conservative American futurists in a document which they immodestly describe as a "cyberspace magna carta."[182] This quartet of futurists refers to copyright adherents as victims of "Second Wave" (i.e., outmoded, nineteenth century "Industrial Age") thinking when what is needed is the formation of "Third Wave" (i.e., forward-looking, Information Age) property concepts that will spur incredible growth in the information economy. This magna carta echoes charges made by John Perry Barlow in *Wired* magazine that those predicting no change in copyright are engaged in "glassy-eyed denial," and those who are trying to revise this law to deal with the challenges of digital technologies are engaged in "a frantic rearrangement of the deck chairs" on the slowly sinking ship of copyright law.[183]

It would be easier to ignore these doomsayers if their words did not resonate with the undertone of the many commentaries aimed at providing copyright with a bright future. These documents express concern that the growth in digital networked environments, and the increase in distribution of texts and other works in digital form through these networks, will mean that copyright law might be the "victim of digital hijacking" in the foreseeable future.[184] Even though these commentaries hope to avert this catastrophe by strengthening copyright, the uneasy truth is that they perceive digital technologies as a very real threat to copyright.

Those who predict that copyright law will have no more difficulty adapting to digital technologies than it has to a host of other new technologies may be right. If they are, incremental adjustments in the existing law are obviously sensible responses to the current situation.

If, on the other hand, digital technologies do ultimately lead to the death of copyright, this will occur as the result of forces much more powerful than the faith of the copyright believers. Since the prophets of copyright's doom have yet to articulate a new paradigm as a unifying metaphor for a legal regime that will enable information markets to thrive, the only sensible present course is for policymakers to comprehend the salient characteristics of digital technologies and digital networks, and to tailor copyright law as best they can, while at the same time keeping in mind that the laws may ultimately need a more radical transformation than we may understand.

If copyright ultimately does not survive digital networked environments, it may be because control over copying in these environments may not be attainable.[185] In digital networked environments, multiple copies can easily and cheaply be made and distributed throughout the world.[186] What makes this ease of copying and virtually costless distribution so frightening to copyright owners is that digital copies are perfect replicas of the original. Unlike the products of previous reprography technologies, digital copies are not degraded in quality. This means that any copy of a digital work is capable of serving as a virtual factory for reproduction of many perfect copies. Unless one can force manufacturers of digital reprography technologies to produce less-than-perfect copies, as was done with digital audio tape recording devices, there is a real danger that copyright owners will be unable to enforce their rights in digital works. Inability to control copying and distribution of works in digital networked environments helps to explain why some commercial publishers have been reluctant to distribute works "on the Net."

One promising body of research, aimed at addressing this problem, focuses on the development of technological means for protecting copyrighted works in digital form.[187] Some researchers are studying systems for encryption of the contents of digital works, with decryption available only after payment has been received.[188] Some are investigating the embedding of digital signatures in seemingly unimportant portions of digital pictures or movies, so that regardless of the digital manipulation that might be done to parts of these works, it would still be possible to detect that the subsequent work derived from the first work.[189] Perhaps digital works will eventually be able to report back to their rightsholders if the user is abusing access rights in these works.

Another promising area of research focuses on the potential for increased use of "header contracts" in digital networked environments.[190] Most of the commercial electronic information providers today already rely heavily on contracts and control over access to the digital information they purvey as a way to guard against market-destructive copying of their assets. In digital networked environments, a user may send out a request for access to a certain kind of information. In the future, intelligent agents, operating either for information providers or for the user, could search various repositories on the Net to determine whether information corresponding to this person's needs is available, and if so, on what terms. The intelligent agent could then forward to the user the various "headers" sent to it by information providers. If the user replied to a particular header as a means of ordering the information, the user would thereby have bound him- or herself to the terms of permitted use designated in the header. Software developers like the idea of such contracting with customers, for it would seem to overcome the enforceability problems that have beset their efforts to limit uses by means of "shrink wrap licenses" that so often come with packaged software sold in mass market outlets.

If copyright comes to an end in the digital networked environment, it may be as a consequence of the use of technological means for protecting digital works in networked environments and of header contracts. If works are protected against unauthorized copying by means of technology and contract law, there may be nothing for copyright to do, except perhaps to serve as a kind of *deus ex machina* justifying the use of technological and contractual means for protecting works in digital form.

Upon reflection, it is apparent that copyright law has worked relatively well over the past few centuries because the printing press (or an equivalent manufacturing facility for the mass production of physical artifacts) was such a good bottleneck upon which a legal regime could be built. Given that copying and distribution of copies in digital form is so easy, inexpensive, and susceptible to being done in a highly decentralized manner, a new bottleneck may be needed for digital networked environments. Perhaps it can form the base upon which to build a new copyright system (or a successor legal regime) for works created and disseminated in digital networked environments. As with traditional copyright law, such a bottleneck will need to achieve a balance among the interests of authors, publishers, and the consuming public, and perhaps will achieve it in a somewhat different way than has been common in the print world. It, too, will need limiting doctrines, such as fair use and fair dealing, to achieve this balance.

In the meantime, it is sensible to make use of copyright's limiting doctrines to give this law a chance to attain the flexibility it will need to adapt to the challenges posed by digital technologies in the foreseeable future.

# Notes

[1] Professor of Law, University of Pittsburgh Law School. This draft report has been prepared for the Intellectual Property Secretariat of the Department of Justice of Canada, for presentation at a symposium on digital technology and copyright, which was held at Meech Lake, Quebec, on March 3, 1995. The author offers thanks to Cal Becker for providing her with the opportunity to prepare and deliver this paper. She welcomes the opportunity that this conference will provide for a refinement of her understanding of Canadian copyright law.

[2] The document that convened this conference, for example, expressed concern that copyright law would be the "victim of digital hijacking" in the foreseeable future. John Perry Barlow's recent essay predicting that digital technologies will spell the end of copyright law has certainly not alleviated the fears of copyright owners about digital networked environments. See John Perry Barlow, The New Economy of Ideas, *Wired* 2.03 85 (March 1994).

[3] The principal function of copyright law is to prevent the market failure that would result from uncontrolled reproductions of such works. See, e.g., Wendy J. Gordon, An Inquiry Into the Merits of Copyright Law, 41 *Standard Law Review* 1343, 1435-1469 (1989).

[4] Copyright Subcommittee of the Advisory Council on the Information Highway, Draft Final Report on Copyright and the Information Highway (Dec. 1994) (cited hereinafter as "Information Highway Report"); Working Group on Intellectual Property Rights, Information Infrastructure Task Force, Green Paper on Intellectual Property and the National Information Infrastructure, Preliminary Draft Report (July 1994) (cited hereinafter as "Green Paper").

[5] Information Highway Report, *supra* note 4, at 51; Green Paper, supra note 4, at 120-23.

[6] It is, for example, surprising that neither report recommends adoption of a backup copying privilege for digital copies of copyrighted works, even though both Canadian and U.S. law explicitly grants backup copying rights to owners of copies of a particular class of copyrighted work in digital form, i.e., computer software. See *Canadian Copyright Act*, §27(2)(l); 17 U.S.C. §117.

[7] Green Paper, *supra* note 4, at 9.

[8] *Id.*

[9] *Id.* at 65, n. 205.

[10] *Id.* at 53.

[11] Information Highway Report, *supra* note 4, at 2.

[12] *Id.* at 51-54.

[13] *Id.* at 23, 52. The Report does not describe what circumstances it considers to be potentially fair dealing.

[14] *Id.* at 23. The Report goes on to say that "[c]larity is the domain of exemptions; vagueness is the domain of this equitable defense." *Id.*

[15] *Canadian Copyright Act*, §27(2); 17 U.S.C. §107.

[16] See generally, David Vaver, Canada, in *International Copyright Law And Practice*, VOL. I (Melville B. Nimmer & Paul E. Geller, eds. 1994).

17 One reason that user interests do not get much attention in copyright policy-making arenas is that, unlike the copyright industries, the public is generally not well-organized, well-educated, or well-financed to lobby their interests about copyright policy issues when these issues are put forward. This is proving true in response to information highway issues as well. See generally, Jessica Litman, The Exclusive Right to Read, 16 *Cardozo Arts & Entertainment Law Journal* (1994).

18 464 U.S. 417, 450-51 (1984).

19 For a thoughtful discussion of how copyright law might evolve in digital library contexts, see Jane C. Ginsburg, Copyright Without Walls, 42 *Representations* 53 (1993). See also Pamela Samuelson, Copyright and Digital Libraries, 38 *Comm. Acm* (forthcoming April 1995).

20 839 F. Supp. 1552 (M.D. Fla. 1993).

21 Frena's principal defense was that he had not "uploaded" these unauthorized copies to the bbs and therefore should not be liable for a violation of the exclusive reproduction right of copyright law. *Id.* at 1554. He also argued that once he was made aware of Playboy's infringement complaint, he removed the copies and has since monitored the bbs to prevent the uploading of digital copies of Playboy photographs by subscribers. *Id.* These defenses, along with his fair use defense, were rejected for reasons discussed further below. One reason that the court may have been unsympathetic to Frena's defenses was that Frena had removed Playboy's trademarks from a number of the digitized photographs and replaced them with his own trademarks and advertising information. *Id.* at 1559-62.

22 857 F. Supp. 679 (N.D. Cal. 1994).

23 *Id.* at 683-85. Some of the Sega games appearing on this bbs were pre-release versions of the games.

24 The results in these two cases would almost certainly have been the same, even if Frena and MAPHIA had been nonprofit providers.

25 *U.S.* v. *LaMacchia*, 1994 U.S. Dist. LEXIS 18,602 (D. Mass. 1994).

26 *Id.*

27 The court did so largely because of the U.S. Supreme Court's decision in *Dowling v. U.S.*, 473 U.S. 207 (1985). In Dowling, the Court overturned convictions of sound recording pirates for interstate transportation of stolen goods on the ground that Congress had not intended for such statutes to be used to deter copyright infringement.

28 See U.S. Not To Appeal Dismissal In LaMacchia Case, *Boston Globe*, Metro Section, p. 17 (1/28/95).

29 Green Paper, *supra* note 4, at 76-78.

30 See, e.g., Comments of Ellen M. Hirsh, America On-Line, Inc., Oral Testimony at the Public Hearing on Intellectual Property and the National Information Infrastructure, Sept. 22, 1994.

31 *Frank Music, Inc.* v. *CompuServe, Inc.*, pending in the Southern District of New York.

32 See *supra* note 29.

33 *Polygram International Publishing, Inc.* v. *Nevada/TIG, Inc.*, 855 F. Supp. 1314 (D. Mass. 1994) (COMDEX held liable for unauthorized performance of music by exhibitors in part because of monitoring by COMDEX).

34 *Cubby, Inc.* v. *CompuServe, Inc.*, 776 F. Supp. 135 (S.D.N.Y. 1991) (no liability for defamation because online service provider did not monitor customer exchanges).

35 Information Highway Report, *supra* note 4, at 52.

[36] Green Paper, *supra* note 4, at 76-78. One other puzzling copyright issue presented by online information providers is the copyright status of material posted on a BBS or the like. One of the major online service providers asks its subscribers to assent to the provider's claim of copyright in all BBS postings done on their system as a condition of their participation on the system. This claim of copyright is interesting for a couple of reasons. One is that it is far from clear that the law of copyright would regard the online service provider as having creatively selected and arranged the material posted on the BBS's to qualify for copyright protection. Second, it is far from clear that such a contract would be enforceable either on grounds that it was a contract of adhesion, or as a matter of copyright law, since users assent to the "agreement" by clicking on an "I agree" button rather than in a signed writing. Third, suppose that a group of BBS posters decide that the rest of the world would be interested in their exchanges on a particular topic, and they agree among themselves to seek a publisher for the exchange, could the owner of the online service really sue them for copyright infringement or, failing that, for breach of contract in denying the online service provider's claim of a compilation copyright in all postings on its system?

[37] Frena, 839 F. Supp. at 1556-57 (finding violations of the distribution and public display rights).

[38] See, e.g., Litman, *supra* .

[39] See, e.g., Green Paper, *supra* note 4, at 36.

[40] See Pamela Samuelson, The NII Intellectual Property Report, 37 *Comm. Acm* 23 (Dec. 1994).

[41] Information Highway Report, *supra* note 4, at 24.

[42] *Id.* at 23-24.

[43] See, e.g., Computer Science and Telecommunications Board, National Research Council, *Rights And Responsibilities Of Participants In Digital Networked Environments* (1994).

[44] This section of the paper is adapted from a previous article that discussed electronic information tools. See Pamela Samuelson, Fair Use For Computer Programs and Other Copyrightable Works In Digital Form: The Implications of *Sony*, *Galoob*, and *Sega*, 1 J. Intell. Prop. L. 49 (1993). Professor Reichman was the first intellectual property scholar to use the term "electronic information tools" and to explore the intellectual property implications of the "tool" metaphor. See J.H. Reichman, Electronic Information Tools—The Outer Edge of World Intellectual Property Law, 24 I. I. C. 446 (1993). In the software industry, programs of the sort described in this section are widely regarded as tools.

[45] For a discussion of this and other unique characteristics of works embodied in the digital medium and of the challenges this medium poses for existing intellectual property regimes, see Pamela Samuelson, Digital Media and The Changing Face of Intellectual Property Law, 16 *Rutgers Computer & Technology Journal* 323 (1990).

[46] For a discussion of a range of legal implications arising from digital manipulations, see Don E. Tomlinson, Computer Manipulation and Creation of Images and Sounds: Assessing the Impact (Annenberg Washington Program/Comm. Pol'y Stud., Northwestern Univ. Evanston, IL) 1993.

[47] For example, making a television commercial that uses a morphing program to transform one photograph so that it appears to become another when no permission has been obtained for use of the photograph by the owner of the copyrights in them would be a clearly infringing use of this kind of electronic information tool.

[48] See, e.g., Gordon, *supra*.

[49] *Nintendo of America, Inc.* v. *Camerica Corp.*, 34 C.P.R. (3d) 193 (Fed. Ct. 1991); *Lewis Galoob Toys* v. *Nintendo of America*, 780 F. Sup. 1283 (N.D. Cal. 1991), aff'd, 964 F.2d 965 (9th Cir. 1992), cert. denied, 113 S.Ct. 1582 (1993).

[50] *Galoob*, 780 F Supp at 1289, fn. 2.

[51] *Id.* at 1288-89.

[52] In the U.S. case, Nintendo's principal claim was for contributory infringement because consumers could use the Game Genie to create an infringing derivative work, that is, an audiovisual work having a different visual appearance than Nintendo had designed for the game. See 17 U.S.C. §106(2) (granting copyright owners an exclusive right to prepare derivative works). There was also a direct infringement based on Galoob's use of the Game Genie to create altered play of Nintendo programs in the course of testing the product and marketing it to show what the Genie could do. See 780 F Supp at 1298. The U.S. courts rejected both claims. Id. The direct infringement theory in *Camerica* is somewhat difficult to discern. In discussion of this claim, the trial court indicated that Nintendo had asserted that its videogames were works of art and that the Game Genie reproduced and marketed the audiovisual art in the games to Nintendo's detriment. Nintendo also alleged that the Game Genie violated the moral rights of game designers.

[53] *Galoob*, 964 F.2d at 970-72.

[54] *Camerica*, 34 C.P.R. 193.

[55] *Galoob*, 964 F.2d 971-72.

[56] See generally, Vaver, *supra*, at CAN 96-97 (concerning the Canadian fair dealing doctrine) and CAN 9-50 (concerning the direct effects of NAFTA on Canadian copyright law. See also Jay Dratler, Jr., Distilling the Witches' Brew of Fair Use in Copyright Law, 43 *University of Miami Law Review* 233 (1988) for an overview of U.S. fair use law.

[57] At the time Galoob was decided, many courts had taken very literally some dicta in the U.S. Supreme Court decision in *Sony Corp. of America v. Universal City Studios*, 464 U.S. 417 (1984) to the effect that commercial purposes should be presumed to be unfair. *Id.* at 449. Nintendo had tried to argue that Galoob's purposes were commercial enough to give rise to the *Sony* presumption of unfairness and also that unproductive uses were being made of its work. Nintendo argued that both factors weighed against fair use. 780 F Supp at 1293, n6. This was rejected by the court for the obvious reason that Sony had also had a commercial purpose in distributing the Betamax machine, yet the court focused its fair use analysis on the purposes of allegedly underlying infringers, not the provider of equipment to such consumers. 964 F2d at 970.

[58] *Galoob*, 780 F Supp at 1293, 964 F2d at 970. The Supreme Court's Sony decision had regarded private noncommerical copying of copyrighted works as presumptively fair. See *Sony*, 464 U.S. at 449. Canadian courts have expressed doubts whether such private copying would be fair dealing under Canadian copyright law. See, e.g., *Tom Hopkins Int'l, Inc.* v. *Wall & Redecop Realty Ltd.*, 5 W.W.R. 555 (B.C. 1984), aff'd 20 D.L.R.(4th) 407 (B.C.C.A. 1985).

[59] *Galoob*, 964 F.2d at 970. Insofar as Nintendo's claim was that it had not published derivative works that provided the same play as the Game Genie produced, its argument was misplaced. The question was whether the games that Nintendo had distributed in the market were published or unpublished. Because Nintendo had published millions of copies of its games to anyone willing to pay the purchase price, the work could not be considered unpublished. By arguing that the versions of its games produced by use of the Game Genie were unpublished works, Nintendo had hoped to invoke *Harper & Row's* virtu

al presumption against fair use in cases involving unpublished works. *Id* at 970-71. The court also observed that the logic of Nintendo's argument would virtually eliminate fair use defenses for subsequently created works. 964 F2d at 970-71.

[60] *Id* at 972.

[61] *Galoob*, 780 F Supp at 1293. Nintendo's argument concerning the substantiality factor cannot be discerned from the published opinions. Its argument may have been that Galoob's use of the Nintendo games should be regarded as qualitatively substantial because it affected the play of so many different Nintendo games and because the alterations affected key aspects of the play and important characters in the games.

[62] *Id.*; 964 F2d at 971.

[63] *Galoob*, 964 F.2d at 971-2. See generally David Sheff, *Game Over: How Nintendo Zapped An American Industry, Captured Your Dollars, And Enslaved Your Children* (1993) (detailing the early collapse of the videogame market and how Nintendo revived it through restrictive licensing and other quality control procedures)

[64] *Galoob*, 964 F.2d at 971-72. The fourth fair use factor is concerned not simply with present harms to present markets, but "the effect of the use upon the potential market for or value of the work." 17 U.S.C. §107(4) (1988).

[65] *Galoob*, 780 F. Supp. at 1291.

[66] *Id.*

[67] *Galoob*, id. at 1294. See also 964 F2d at 971-72.

[68] *Galoob*, 780 F. Supp. at 1291.

[69] See *supra*.

[70] Clickart is a software company that produces clip art products for a number of different types of uses (business, sports, holiday, etc.). A student might, for instance, clip an image of a tractor from a clip art program for use in a school report. An adult might clip a picture of someone blowing a trumpet to indicate that she was about to make an announcement during a slide presentation for clients of her employer.

[71] See generally, Vaver, *supra*, at CAN 106.

[72] U.S. decisions sometimes speak of fair uses as uses that reasonable copyright owners would consent to. See *Harper & Row Publishers, Inc.* v. *Nation Enterprises*, 471 U.S. 539 (1985). Some U.S. commentators have suggested use of an implied license theory for consumer digital manipulations. See, e.g., Richard H. Stern, The Game Genie Case: Copyright in Derivative Works Versus Users' Rights, 3 *Entertainment Law Review* 104, 107 (1992).

[73] See, e.g., Patricia J. Pane, "CSC Countersues SPC Over Clip Art; CSC Claims Copyright Infringements by Harvard Graphics Programs," *Infoworld* p. 8 (6/18/90).

[74] For a paper discussing this system, see Stuart Smith, R. Daniel Bergeron, & Georges G. Grinstein, "Stereophonic and Surface Sound Generation For Exploratory Data Analysis," PROCEEDINGS OF ACM CONFERENCE ON COMPUTER HUMAN INTERACTION 125 (1990).

[75] Another example of the use of electronic information tools to aid in the interpretation of data was demonstrated in the movie "Rising Sun." In this movie, the L.A. police authorized a computer analyst to make copies of a Japanese company's security videotape to try to reconstruct the contents of the original tape on which a murder was recorded. (The original tape had been doctored to edit out the murder and the identity of the murderer.) Had this been a real case, one might ask whether the LAPD would have to worry about copyright liability for this kind of investigative activity. They were, after all, making copies of an arguably original audiovisual work in order to prepare a deriva-

tive work of a derivative work which they intended to be a recreation of the original work. For none of these intermediate or the final reconstructed copy had they gotten the company's permission, and indeed, had they asked for permission, it would likely have been denied. Yet digital manipulation of a copyrighted work may sometimes be necessary in law enforcement contexts.

[76] In a previous article, I have discussed how copyright law might deal with computer-generated works. See Pamela Samuelson, Allocating Ownership Rights in Computer-Generated Works, 47 *University of Pittsburgh Law Review* 1185 (1986). It is worth pointing out that computer-generated works are an example of one class of work (namely a program) being digitally processed to produce a second class of work (a song or a picture, for example). As challenging as computer-generated works are when the work generated is a class of work that is protectable by copyright law as long as the originality requirement is met, it is more difficult when the work generated by the program is not copyrightable (e.g., the chip produced by a silicon compiler). A relatively new set of techniques, known as stereolithography, permit computer-aided design of machines, machine parts, and/or tools. It begins with computer graphics models of these items. Simulations can then be done to test their performance. Adjustments to the design can then be made to improve performance, and another simulation done of the adjusted design. Once the model achieves a satisfactory performance in the simulation, the computer can then generate the mold or machine tooling necessary to produce actual instances of the machine, machine part, or tool. This technique reduces significantly the research and development costs involved in manufacturing machine parts. See description of session entitled "Real Virtuality: StereoLithography — Rapid Prototyping in 3-D," *Proceedings Of ACM Conference On Computer Graphics* (Siggraph '93) 377-78(1993) (cited hereinafter as *Siggraph Proceedings*). See also Reichman, *supra* note 44.

[77] A friend of mine once built a laser system that would accept signals generated when a sound recording was being played as input. It would process this input to emit as output patterns of light that could be dynamically displayed on a white wall. Was the pattern of light a derivative work of the copyrighted sound recording? This question is of more than academic interest. A company called 3DO has released a multimedia product this fall which, among other things, produces visual displays of sound recordings. *Galoob* may make it safe for 3DO to market products embodying this particular feature.

[78] This characteristic of works in the digital medium may in the long run have profound implications for copyright's classification scheme.

[79] See, e.g., Brian Cabral, "Imaging Vector Fields Using Line Integral Convolution," *Siggraph Proceedings, supra*, at 263.

[80] Any copy of the data compilation made during the processing of the data by means of the visualization software would be an intermediate copy of a similar sort to that made in *Sega*, and a necessary step in doing the visualization. As to the question whether the visualization would be a derivative work of a data compilation that satisfied the originality requirement, this raises some of the same quandaries as occurred in *Galoob*. One could argue that since *Feist* tells us that facts are not protectable by copyright, the visualization is a noninfringing different expression of the data, rather than as a reproduction or derivative work of the data compilation.

[81] The previous note has presented the argument that the visualization should not be considered an unauthorized derivative work. Even if it was, principles of fair use would apply, for the use would be for noncommercial research purposes, the nature of the work would be factual for which the scope of fair use is generally broad, and little or no harm to a commercial market would exist. Still, once the data visualization is published, it goes from the realm of ordinary use to the realm of competitive fair use.

[82] Digital sampling of sound recordings is one example of potentially competitive uses of electronic information tools to repurpose digital material that may be copyright infringement. See, e.g., Sheila Rule, "Record Companies Are Challenging 'Sampling' in Rap," *New York Times*, p. B1, col. 5 (4/21/92). See also Molly Mcgraw, Sound Sampling Protection and Infringement in Today's Music Industry, 4 *High Technology Law Journal* 147 (1989).

[83] See Section 27(2)(a.1) of the *Canadian Copyright Act*.

[84] Many software tools exist for doing reformatting of this sort. Software Bridge is one such product. It is becoming increasingly common for firms to process digital forms of documents so that the logical structure of the document can be "tagged" in a way that permits searches in terms of tagged elements or their attribute values. See, e.g., Haviland Wright, "SGML Frees Information," *BYTE* (June 1992).

[85] For example, a law firm that is litigating a complex case involving lots of documents obtained from the opponents' files might need to convert electronic versions of the documents to a format their computer could read, or they might want to "tag" the documents in a way that would aid their use of the documents in preparation for trial. Most if not all of the opponents' documents would likely meet the copyright originality standard. Yet, it would be absurd to say that acts of copying, incidental to the use of the documents in litigation, would be infringing of copyrights in the documents.

[86] See *supra* and accompanying text.

[87] An issue of a widely read computing professionals' magazine, Communications of the ACM, was devoted to information filtering technologies. See articles in 35 *Comm. Acm* 26-84 (December 1992).

[88] See, e.g., Paul Saffo, "The Electronic Future Is Upon Us," *New York Times* , Sec. 3, p. 13, col.2 (6/7/92).

[89] When information filters allow consumers to tailor what they receive from a publisher, it becomes a nice question what the "work of authorship" is for copyright purposes, for there may no longer be one work that the consuming public will experience. For an excellent discussion of the impact that print technologies had on the social production of knowledge and information products arising from the fact that everyone who got a copy of a book saw the same thing, see Elizabeth Eisenstein, *The Printing Press As An Agent Of Change (198-)*.

[90] Publishers can be expected to be particularly concerned about the potential harms to their market if users are permitted to construct filters that omit all advertisements from the electronic material, for although ads in print newspapers can be ignored by readers, ads cannot be systematically omitted from the version delivered to the consumer's front porch every morning. The *San Jose Mercury News* is among the newspapers that have begun to experiment with electronic delivery of their information products.

[91] Gryphon Software's "Morph" product is an example of this. I have seen the product of another electronic information tool that can be used to alter text so that it conforms to a particular dialect of speech (DOD-speak, for example, or Southern lingo).

92 Xaos Tools' "Pandemonium" product can be used for texture alterations.

93 Adobe's Photoshop is one of many products that can be used for this purpose. This technique was recently demonstrated in the movie "Rising Sun" to demonstrate to a police officer that photographs and videotape can no longer be completely trusted as evidence because of the ease with which digital manipulations can be made of them. See also Tomlinson, *supra*.

94 One tool I have seen in action is one that will convert standard American English text to a heavy Southern dialect.

95 In the aftermath of *Sony*, it became apparent that copyright owners would not be able to use copyright law to control distribution of other reprography technologies, such as digital audio tape (DAT) recording machines, because they could be used to make unauthorized copies of sound recordings. DAT machines were particularly threatening to the recording industry because, in undoctored form, they can be used to make perfect copies instead of degraded quality copies characteristic of other tape recording devices. A lengthy legislative battle ensued in which the recording industry fought for a variety of technical restrictions on the copying that DAT machines could do. The ultimate outcome of this controversy was to permit DAT machines to be sold but only if they contained a mechanism that prevents perfect copies from being made from the first digital copy made with the aid of the DAT machine. For a discussion of this history, see, e.g., Michael Plumleigh, Comment, Digital Audio Tape: New Fuel Stokes The Smoldering Home Taping Fire, 37 *UCLA Law Review* 733, 761-67 (1990).

96 *Camerica*, 34 C.P.R. 3d 193. Moral rights of authors may limit use of these tools in Canada more than would be true in the United States.

97 See Pamela Samuelson, Some New Kinds of Authorship Made Possible By Computers and Some Intellectual Property Questions It Raises, 53 *University of Pittsburgh Law Review* 685 (1992) and Pamela Samuelson and Robert J. Glushko, Intellectual Property Rights in Digital Library and Hypertext Publishing Systems, 6 *Harvard Journal of Law & Technology* 237 (1993).

98 See generally, *Proceedings Of ACM Conference On Hypertext* (1987).

99 This resembles a print article consisting of a set of suggestions that its readers should start at the first paragraph on page 50 of a particular book or article and read until the last paragraph on page 56, then go to another book or article and read from the top of page 17 to the end of chapter 2, etc. What is, of course, different about the hypertext link document is that a user of it, in contrast to the reader of the print article, can follow the links automatically, rather than having to do the extra work of getting the books and articles and reading them as designated. Also, the link document author may want compensation for anyone who traverses his or her links whereas the print bibliographer has no such expectations.

100 One of the interesting things about hypertexts is that users of them can move beyond the passive roles they have had as readers of printed texts to become authors themselves through the construction of links. See generally Theodor H. Nelson, *Literary Machines* 93.1 (1993).

101 An example may help illustrate the point. Imagine for a moment that a major legal publisher began commercially distributing a CD-ROM disk containing the copyright statute and all (or virtually all) of the nation's copyright decisions. This publisher might also offer for sale on a separate disk an electronic casebook, consisting largely of a set of links to portions of that CD-ROM, as well as some commentary on the statute and decisions, that had been prepared by a copyright professor under contract to the publisher. Now suppose that another copyright professor wanted to prepare an electronic casebook that would inter-

operate with the CD-ROM case compilation. The Nintendo decisions may help to answer the question whether the second casebook author would have to get the publisher's permission to prepare a competing casebook.

[102] More than two decades ago, U.S. copyright scholars noted the dangerous potential for very broad interpretations of the derivative work right arising from new technologies. See panel discussion between Ralph S. Brown, Jr., Benjamin Kaplan, Dan Lacy, and Caryl Haskins, "Property Rights Under the New Technology," reprinted in *Computers, Communications And The Public Interest* 189, 205, 210 (Martin Greenberger, ed. 1971). See also Ralph S. Brown, Jr., The Widening Gyre: Are Derivative Works Getting Out of Hand?, 3 *Cardozo Arts & Entertainment* Law Journal 1 (1984). *Galoob* was a case in which derivative work rights could have been dramatically expanded, but the Ninth Circuit chose not to do so.

[103] The tricky question here is: which of the exclusive rights set forth in section 106 would be violated by a user who traverses the links that a previous user had constructed. It is worth noting that the reader of a printed article who followed the research path set forth in it would not infringe any copyright interest of the article's author because use of the article would not involve reproduction of it.

[104] Recall that the Ninth Circuit favored fair use in *Galoob* in part because the Game Genie could be used only in conjunction with Nintendo games for which consumers had already paid. *Galoob*, 965 F2d at 967-69. See *supra* and accompanying text.

[105] That is, the link document would contain information about the starting and ending points from the document to be visited.

[106] See also *New York Times Co. v Roxbury Data Interface, Inc.*, 434 F Supp 217 (D NJ 1977) (preparing index to aid use of *New York Times'* annual index was fair use in part because it didn't supplant use of the Times' indices).

[107] See, e.g., William T. Lake et al., Tampering With Fundamentals: A Critique of Proposed Changes in EC Software Protection, 6 *Computer Law.* 1 (1989).

[108] See, e.g., Allen R. Grogan, Decompilation and Disassembly: Undoing Software Protection, 1 *Computer Law.* 1 (1984).

[109] *Computer Associates International, Inc.* v. *Altai, Inc.*, 972 F.2d 673 (2d Cir. 1992); *Sega Enterprises, Ltd.* v. *Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1992); *Atari Games Corp.* v. *Nintendo of America, Inc.*, 975 F.2d 832 (Fed. Cir. 1992). Altai speaks of the interfaces of existing programs as significantly constraining the design decisions of subsequent programmers. Sega speaks of interfaces as establishing the functional requirements for achieving interoperability.

[110] Pamela Samuelson et al., A Manifesto Concerning the Legal Protection of Computer Programs, 94 *Columbia Law Review* 2308, 2321 (1994).

[111] *Id.* at §2.2.3.

[112] See, e.g., *Systems informatises Solartronix* v. *College d'enseignement general et professionel de Jonquiere*, 38 C.P.R. (3) 143 (Que. S.C. 1990) and *Delrina Corp. v. Triolet Systems, Inc.*, 47 C.P.R. (3d) 1 (Ont. 1993). Delrina cites the U.S. *Computer Associates v. Altai* decision approvingly for the proposition that significant constraints on design decisions of software developers will limit the scope of copyright protection in such software.

[113] Council Directive 91/250 on the Legal Protection of Computer Programs, 1991 O.J. *(L 122) 42, Recitals, Art. 6.* For an extensive treatment of the European software directive, see Bridget Czarnota & Robert J. Hart, *Legal Protection Of Computer Programs In Europe: A Guide To The EC Directive* (1991) and *A Handbook Of European Software Law* (Michael Lehmann & Colin Tapper eds. 1993).

[114] See generally, Vaver, *supra*, at CAN 105-06 and cases cited therein.

[115] 977 F.2d 1510 (9th Cir. 1992). Portions of this section of the paper are adapted from an earlier article. See Samuelson, Fair Use, *supra*.

[116] *Sega*, 977 F.2d 1510.

[117] Programs are generally written in human-readable source code form, and then transformed by compiler or assembler programs into a machine-readable form, generally referred to as object code. Programs are most often commercially distributed in object code form. However, object code can be re-converted into a rough approximation of the program source code through disassembly or decompilation processes. See *Sega*, 977 F2d at 1514-15, n2. Decompilation and disassembly of object code necessarily involves making copies of the program code. For a concise history of the legal controversy over decompilation in the U.S., see Jessica Litman, Copyright and Information Policy, 55 *Law & Contemporary Problems* 185, 196-201 (1992).

[118] Sega did not, for example, argue that Accolade's programs infringed because of the interface information it had taken from Sega's programs. Although Sega had initially claimed infringement based only on the copying done during the disassembly process, it belatedly raised a claim for infringement arising from copying of a short sequence of code important in initialization of the program. The Ninth Circuit addressed this "belated" claim in a footnote. The court ruled that reproduction of this short sequence of code was non-infringing, offering several rationales for this ruling: that it was a fair use and/or because the code sequence was too functional or short to be protectable by copyright. *Sega*, 977 F2d at 1524, n7.

[119] The Ninth Circuit did not mention the merger doctrine.

The Computer & Business Equipment Manufacturers Association supported Sega's position in a brief *amicus curiae* submitted to the Ninth Circuit Court of Appeals, which was also signed by Prof. Arthur Miller. Prof. Miller has recently published an article critical of the Ninth Circuit's ruling in *Sega*. See Arthur R. Miller, Copyright Protection For Computer Programs, Databases, and Computer Generated Works: Is Anything New Since CONTU?, 106 *Harvard Law Review* 977 (1993).

[120] The trial court granted Sega's request for an injunction not only against further disassembly of Sega's programs but also against Accolade's distribution of games embodying information derived from the disassembly process. See *Sega*, 785 F Supp 1402. For a critique of Sega's "fruit of the poisonous tree" argument, see brief *amicus curiae* of the American Committee for Interoperable Systems submitted to the Ninth Circuit Court of Appeals in *Sega Enterprises Ltd.* v. *Accolade, Inc.* at 12-14 (citing authorities and reasons why this theory is erroneous). The prominent copyright scholar, Professor Paul Goldstein of Stanford Law School, was a signatory to this brief.

[121] Accolade raised three other defenses: that intermediate copying should be excused because the final product sold on the market was noninfringing; that decompilation was always excusable in order to get access to functional elements that were unprotectable under 17 U.S.C. §102(b); and that 17 U.S.C. §117, which allows copying of computer programs to use them in a computer or to have a backup, could be construed to permit decompilation. The Ninth Circuit rejected all three of these defenses. *Sega*, 977 F.2d at 1518-20.

[122] *Sega*, 977 F2d at 1522. See also *Atari Games Corp* v. *Nintendo of America, Inc.*, 975 F.2d 832 (Fed Cir 1992) (also ruling that decompilation in order to develop compatible videogames would be fair use of a copyrighted program). The Ninth Circuit opinion in *Sega* indicates that the *Atari Games* opinion "is consistent both with our analysis and with the result we reach." *Sega*, 977 F2d at 1513-14, n1.

[123] *Id.* at 1522-23.

[124] There are at least three respects in which one might argue that programs such as Sega's games should be treated as unpublished works. For one thing, Sega distributes only object code versions of their games, implicitly expressing thereby an intention that the source code versions should be kept as trade secrets. Because the goal of Accolade's disassembly was to get access to the contents of the unpublished source code version of the program that Sega keeps under lock and key, it was aiming to create a copy of that unpublished source code (or an equivalent to it). Secondly, any assembly-language version of Sega's programs is a copy of the program that Sega has not distributed, which arguably renders it unpublished. Thirdly, many mass-marketed computer programs, such as Sega's games, are distributed with shrinkwrap licenses that announce limitations on usage which arguably give the restricted use copy an unpublished status. See Karen Pohala, Note, The Protection of Computer Software Through Shrink-Wrap License Agreements, 42 *Wash & Lee Law Review* 1347, 1379-80 (1985) (arguing that shrinkwrap restrictions give rise to a "limited publication" of object code which renders it an unpublished work). But see Richard H. Stern, Shrink-Wrap Licenses of Mass-Marketed Software: Enforceable Contracts or Whistling In the Dark?, 11 *Rutgers Computer & Technology Law Journal* 51 (1985) and David A Rice, Licensing the Use of Computer Program Copies and the Copyright Act First Sale Doctrine, 30 *JURIM J* 157 (1990) (critical of this view).

[125] *Harper & Row*, 471 US at 553-55.

[126] *Id* at 1526, n9, citing to *Galoob*, 964 F2d at 970, discussed *supra* and accompanying text.

[127] *Id* at 1524-25. The court traced the rule that copyright protection for works with "strong functional components" is narrower than for works of fiction to the Supreme Court's decision in Baker v Selden, 101 U.S. 99 (1879). See also 2 Paul Goldstein, *Copyright: Principles, Law & Practice* §8.5 (1989) and J.H. Reichman, Goldstein on Copyright Law: A Realist's Approach To a Technological Age, 43 *Standard Law Review* 943, 970-76 (1991) (discussing Goldstein's interpretation of copyright law as applied to functional works, including computer programs, and reasons for regarding copyright protection for such works as "thin").

[128] "The unprotected aspects of most functional works are readily accessible to the human eye... Computer programs, however, are typically distributed for public use in object code form, embedded in a silicon chip or on a floppy disk. For that reason, humans cannot gain access to the unprotected ideas and functional concepts contained in object code without disassembling that code—i.e., making copies." *Id* at 1525.

[129] A group of copyright law professors submitted an *amicus* brief in the *Sega* case that strongly emphasized the utilitarian nature of software as a factor favoring fair use. See Brief *Amicus Curiae* of Eleven Copyright Law Professors in *Sega Enterprises, Ltd* v. *Accolade, Inc.*, 33 *Jurimetrics Journal* 147, 151-59 (1992) (cited hereinafter as "Law Professor *Amicus* Brief"). Signatories to the law professor brief were: Ralph S. Brown, Yale Law School; Stephen L. Carter, Yale Law School; Peter A. Jaszi, The American University; Dennis S. Karjala, Arizona State University (principal author); David L. Lange, Duke University; Peter S. Menell; University of California at Berkeley; L. Ray Patterson, University of Georgia; Leo J. Raskind, University of Minnesota; Jerome H. Reichman, Vanderbilt Law School; David A. Rice, Rutgers Newhouse Center for Law & Justice; and Pamela Samuelson, University of Pittsburgh. See also Last Frontier Conference Report on Copyright Protection of Computer Software, 30 *JURIM J* 15 (1989) (reporting that ten intellectual property scholars had reached consen-

sus that the kind of intermediate copying done in *Sega* should be regarded as fair and noninfringing use of a copyrighted program at a conference sponsored by the Arizona State University College of Law's Center for Law, Science, and Technology). Signatories to this report were: Donald S. Chisum, University of Washington; Rochelle Cooper Dreyfuss, New York University; Paul Goldstein, Stanford University; Robert A. Gorman, University of Pennsylvania; Dennis S. Karjala, Arizona State University; Edmund W. Kitch, University of Virginia; Peter S. Menell, Georgetown University; Leo J. Raskind, University of Minnesota; Jerome H. Reichman, Vanderbilt University; and Pamela Samuelson, University of Pittsburgh.

130 *Id.* at 1526, citing 17 U.S.C. §102(b).

131 *Id.* See also *Atari Games*, 975 F.2d at 842.

132 *Sega*, 977 F.2d at 1527.

133 *Id.*

134 One plausible harm argument that seems not to have been made by Sega was that Sega typically charges a fee for giving game developers access to information about how to make games compatible with the Genesis console. Accolade's activities undermined this licensing system to some degree.

135 The court pointed out that consumers typically buy many games for their Sega machines, so that it was far from clear that Sega's sales were affected by the availability of Accolade games. The court emphasized that Accolade had copied the Sega program to get access to compatibility information that was not available in any other way, and to give Sega the remedy it sought would be to defeat rather than enhance the ultimate purposes of copyright. *Id.* at 1523.

136 *Id.* at 1523-24.

137 See *supra* and accompanying text.

138 Julie Cohen, Reverse Engineering and the Rise of Electronic Vigilantism: Intellectual Property Implications of "Lock-Out" Technologies, 68 So. *California Law Review* (forthcoming 1995).

139 For a more detailed discussion of these examples, see Samuelson, Fair Use, *supra*, at 86-98.

140 Section 27 (2)(l) & (m), *Canadian Copyright Act*.

141 See generally Vaver, *supra*, at CAN 96-97, 107.

142 Information Highway Report, supra, at 27-30. This Report suggests that decryption be made a criminal offense. Id. at 30.

143 Green Paper, *supra*, at 125-30.

144 The Green Paper proposes specific statutory language; the Information Highway Report makes a more general recommendation. See Green Paper, *supra*, at 128-29; Information Highway Report, *supra*, at 30.

145 For further discussion of this issue, see, e.g., Pamela Samuelson, Will the Copyright Office Be Obsolete in the Twenty-First Century?, 16 *Cardozo Arts & Entertainment Law Journal* 657 (1994).

146 The legitimacy of Accolade's purpose in decompiling the Sega program was an important factor in the court's decision that decompilation in that case was fair use. *Sega*, 977 F. Supp. at 1522-23.

147 See, e.g., *Campbell* v. *Acuff-Rose Music, Inc.*, 114 S.Ct. 1164 (1984).

148 *Canadian Copyright Act*, §§27(2)(e), 28.

149 See, e.g., Vaver, *supra*, at §8 [3] [d].

150 Information Highway Report, *supra* note 4, at 8 (explicitly rejecting the idea of *sui generis* legislation for multimedia works).

151 *Id.* at 51-53.

152 See, e.g., Vaver, *supra*, at CAN 13-14 (discussing this issue).

[153] See Amended Proposal for a Council Directive on the Legal Protection of Databases, 1993 O.J. (C 308) (1993) (cited hereinafter as "Proposed Directive").

[154] *Id.*, Art. 2-5, 7,-9.

[155] *Id.*, Art. 6, 10-13.

[156] *Id.*, Art. 6, 12. In recognition of the need for users of databases to be assured of their right to make reasonable uses of databases, the proposed EC database directive would give users of unoriginal databases the right to take insubstantial parts of the database's contents and reuse them in other works. Id., Art. 8. This provision is notable, in part, because most European countries do not have general fair use or fair dealing provisions in their copyright laws. The fair extraction right is, thus, an innovation in the intellectual property framework.

[157] It is in the Recitals portion of the Proposed Directive that the economic purpose of the Directive is discussed at length. *Id.*, Recitals.

[158] See, e.g., *Feist Publications, Inc.* v. *Rural Telephone Service, Inc.*, 499 U.S. 340 (1991).

[159] See, e.g., Manifesto, *supra*, at 2337, n.94.

[160] Proposed Directive, *supra*, at Art. 13.

[161] The World Intellectual Property Organization actively discourages reciprocity provisions in national intellectual property legislation. See, e.g., Steven J. Metalitz, The Database Directive and the EC's "Direction" on Copyright: Some Reflections, 4 Fordham Intell. Prop. *Media & Entertainment Law Journal* 33, 37-38 (1993).

[162] Report of Seth Greenstein on WIPO Experts Meeting, December 1994.

[163] See, e.g., Pamela Samuelson, Allocating Rights in Computer-Generated Works, 47 *University of Pittsburgh Law Review* 1185 (1986).

[164] For examples, see Office Of Technology Assessment, U.S. Congress, Intellectual Property Rights In An Age Of Electronics And Information (1986).

[165] See Christopher Millard, Advanced Computer Systems and Their Output, *Proceedings Of Softic Third International Symposium On The Legal Protection Of Computer Software* 439-444 (1991).

[166] See, e.g., Gerald Dworkin, Copyright, Patent, and/or *Sui Generis*: What Regime Best Suits Computer Programs?, in *International Intellectual Property Law And Policy* (Hugh Hanson, ed., forthcoming 1995).

[167] 449 U.S. 340 (1991).

[168] Not all commentators agree with this assessment, however. See, e.g., Miller, *supra*.

[169] Manifesto, *supra*.

[170] *Canadian Copyright Act*, § 22.

[171] Manifesto, *supra*, at §1.1.1.

[172] *Id.* at §1.1.2.

[173] *Id.* at §2.1.2.

[174] *Id.* at §2.2.1.

[175] *Id.* at §2.2.2.

[176] *Id.* at §2.2.3.

[177] See, e.g., *Lotus Development Corporation* v. *Paperback Software International Inc.*, 740 F. Supp. 37 (D. Mass. 1990).

[178] *Id.* at §2.3.1.

[179] *Id.* at §§4-5.

[180] See, e.g., Information Highway Report, *supra* note 3, and Green Paper, *supra* note 3.

[181] See, e.g., Barlow, *supra* note 2.

182 Esther Dyson, George Gilder, George Keyworth, and Alvin Toffler, Cyberspace and the American Dream: *A Magna Carta for the Knowledge Age*, Release 1.2 (Aug. 22, 1994). This document is available at the Progress & Freedom Foundation server on the Internet.

183 Barlow, *supra* note 2, at 85.

184 See *supra* note 2.

185 The next few paragraphs of this report are adapted from an earlier work by the author entitled Copyright, Digital Data, and Fair Use in Digital Networked Environments. This work will be a chapter in a forthcoming book on the Electronic Superhighway published by Kluwer Press. The papers in this book were presented at a conference sponsored by the University of Montreal in May 1994.

186 See, e.g., Samuelson, Digital Media, *supra*.

187 In April 1993 the Coalition for Networked Information, the Interactive Multimedia Association, the John F. Kennedy School of Government of Harvard, and the Massachusetts Institute of Technology jointly sponsored a workshop on research initiatives of this sort. See *Proceedings, Technological Strategies for Protecting Intellectual Property in the Networked Multimedia Environment* (Jan. 1994) (cited as IMA Proceedings)

188 See, e.g., Gary N. Griswold, IMA Proceedings, *supra*, at 169-178 and Marvin A. Sirbu, Internet Billing Service Design and Prototype Implementation, IMA Proceedings, *supra*, at 67-80.

189 See, e.g., Kineo Matsui & Kiyoshi Tanaka, Video-Steganography: How to Secretly Embed a Signature in a Picture, IMA Proceedings, *supra*, at 187-296.

190 See, e.g., Henry J. Perritt, Jr., Permission Headers and Contract Law, IMA Proceedings, *supra*, at 27-48.

# Digital Technology and Copyright: Can Moral Rights Survive the Disappearance of the Hard Copy?

Ysolde Gendreau

Copyright thrives on new technologies*. It is a technology that is at the origin of copyright — the printing press — and the occurrence of new technologies has led to the expansion both of categories of works that are protected by copyright and of the uses that give rise to the exercise of copyright. Photographs, films, sound recordings, and computer programs, to name a few, have been added to the list of protected works[1] while radio, television, the photocopier, and satellites have increased the potential value of works because they enable the authors of these works to reach a greater audience. Each time a new type of work, or a new mode of disseminating works has come up, the underlying forces of copyright have had to be reconsidered. While some of these issues have still not been fully resolved, a new challenge has come to the fore and, seemingly, eclipsed all others: digital technology.

The issues that must be discussed with respect to digital technology encompass all aspects of copyright. It would be foolhardy to attempt to address them all here, but it would be interesting to set off against each other two notions that are each closely associated with one of the two schools of thinking in copyright law. The first is the concept of fixation, which has been afforded much importance by the countries that belong to the copyright tradition. The second is the notion of moral rights, a notion that has acquired much prominence in countries that share the continental approach to copyright. Of course, the aim of the exercise is not to determine some sort of superiority of either system, but rather to see if it is possible for one system to borrow from the other, and vice versa, to arrive at a solution that would be acceptable to both, in light of the adjustment that digital technology may require.

# 1 Fixation

Digital technology involves the disappearance of the tangible copy of works as the primary medium of their existence. Its increasing importance means that the notion of fixation must be revisited. However, this reappraisal is a process through which many countries have already been and, in some cases, it has led to the forsaking of that criterion as a prerequisite for copyright protection. Because there is no unanimity on the issue, the Berne Convention states that "it shall... be a matter for legislation in the countries of the Union to prescribe that works in general or any specified categories of works shall not be protected unless they have been fixed in some material form."[2] Yet in countries where the fixation of works is required for their protection, the concept has evolved to take into consideration the different means that have become available to fix the works. The impact of digital technology on the criterion of fixation may be the final step in this evolution.

## a. Evolution of the Criterion of Fixation

It is only fitting that the notion of fixation has acquired new meanings as technology has produced new methods to incorporate a work in tangible supports. Because the occurrence of new forms of works may call for new media, this evolution is inevitable. The legislations of some countries that still require the fixation of works as a prerequisite for their protection are better equipped than others to deal with this phenomenon. The state of the law in Canada appears uncertain for the moment and, for this reason, may lend itself more easily to the changes that digital technology requires.

In the beginning, of course, fixation could only be equated to the printing process: the Statute of Anne of 1709 had been designed for the copyright protection of printed materials, whether literary or musical works. With the extension of copyright protection to artistic works, the notion of fixation could take on the meaning of an embodiment of the work that is perceived by the eye. Indeed, the current British and Canadian copyright legislation does not mention the fixation of these works,[3] since it is of the essence of these works that their traditional manifestations take on a concrete physical shape.

The category of dramatic works poses a more difficult question because these works are meant to be shown to the public by means of performances. It encompasses plays, cinematographic works, choreographic works, and pantomimes. While the first two types of these works can be associated with either a literary work (the manuscript), or an artistic work (a series of photographs), the existence of the last two cannot really be traced back to a material origin in the same manner. Their particular nature explains why legislators will sometimes specifically require that they must be fixed to be protected.[4]

Two inventions upset the traditional understanding of fixation. The first one is the sound recording. As the name implies, sound recordings record sounds and can therefore be used to record musical works. However, even though a musical composition can thus take on a physical form, the work itself cannot be seen in the same manner as a musical score. Until the coming into force of the *Copyright Act* of 1976 in the United States, a sound recording did not constitute a proper fixation of a musical work because it was necessary to resort to some mechanical means to have access to the work.[5]

The second invention is the computer program. With its series of "0"s and "1"s, the computer program pushes even further the abstract character of the fixation of a work in a physical embodiment. Yet judicial interpretation and legislative drafting have proclaimed the fixed nature of a computer program when it is in object code. In some countries, a special provision is required,[6] while in others the general statement on fixation is sufficient to cover the case.[7] A broadly defined fixation requirement, like the one of the U.S. legislation, has enabled courts to conclude that storage in the RAM memory of a computer satisfies the requirement, even though it means that the work disappears when the computer is turned off.[8]

These latest developments suggest how artificial a fixation requirement can become nowadays. The state of Canadian law with respect to fixation is unclear now since the enactment of the *Copyright Amendment Act* of 1993, which modified the definition of musical works so as to remove the necessity of a graphic fixation[9]. The Canadian *Copyright Act* does not contain a provision on the fixation of works that has a general scope such as the ones that are found in the U.S. or British legislation. On the contrary, it even states that "every original literary, dramatic, musical and artistic work includes every original production in the literary, scientific or artistic domain, whatever may be the mode or form of its expression,"[10] the latter being the traditional formula that is used to denote the absence of a fixation requirement. Before either the courts or the legislator desperately seek to cling to the notion of fixation as a prerequisite for copy-

right protection, they would do well to consider the impact of digital technology on it.

### b. Impact of Digital Technology on Fixation

Multimedia flies in the face of fixation. To each category of works has corresponded more or less traditional forms of physical support and their derivatives: literary works imply the use of pen and paper; artistic works are made up of colour, canvas, clay, film, and so on; musical works are perceived thanks to scores or sound recordings; dramatic works are noted down on paper or on tape. With the multimedia phenomenon, these standard associations between the type of work and its tangible manifestation are no longer as categorical as they used to be. Almost all works can be reduced to the same "physical" format, that is, a series of "0"s and "1"s that embody literary, artistic, musical, and dramatic works interchangeably.

The judicial interpretation that says that storage of a work in the RAM memory of a computer is sufficient to satisfy the fixation requirement of the U.S. copyright legislation has paved the way for multimedia creation. It is submitted that the statement on fixation in the *Canadian Admiral* decision — a work "must be expressed to some extent at least in some material form, capable of identification and having a more or less permanent endurance,"[11] which has been the foundation of the fixation doctrine in Canada, has the potential to warrant the same interpretation. It is also submitted that, when a concept like that of fixation can be given such a meaning, it has lost its relevance as a determining factor in copyright protection. It is therefore time to abandon such a dogma, especially when multimedia creation is looming on the horizon. In many countries, there is no fixation requirement and it has not prevented the system from operating in a satisfactory manner. By discarding this requirement, one would remove an important philosophical roadblock that would facilitate our grasp of the multimedia phenomenon.

Multimedia indeed highlights the importance of doing away with a copy-oriented approach to copyright (which is precisely what the notion of fixation perpetuates). Digital technology, which forms the basis of multimedia creation, allows the blending of the different categories of works. It becomes increasingly irrelevant to classify works as literary, artistic, musical or dramatic in order to determine their existence because our understanding of these terms is closely linked to the physical medium with which they have been associated. Discussions on the classification of works according to these categories can easily appear quite idle, as the recent British decision in *Anacon Corp. Ltd.* v. *Environmental Research Technology Ltd.* has

proved.[12] It will become more and more imperative that we think in terms of the generic "oeuvres de l'esprit" rather than of distinct works belonging to tightly defined categories. This evolution would also be in keeping with the fact that copyright law is being transplanted in countries of varying cultures, where the notion of work may be different from what was originally understood by the founders of the Berne Convention.[13] It should be remembered, however, that this change of thinking may be a by-product of the multimedia revolution in copyright countries, but it is nothing new in continental countries.

Multimedia therefore forces us to conceptualise the notion of "work" to a greater degree. While this is a more demanding exercise, because we can no longer rely on the safety nets that the traditional categories have been providing, it is far from being a new one with respect to copyright law. Copyright law has always sought to distinguish property in the intellectual work from property in the physical object in which this work takes form. This distinction between the work and its materialisation is clearly made in the U.S. definition of copies: "copies are material objects... in which a work is fixed... and from which the work can be perceived, reproduced, or otherwise communicated."[14] In a similar vein, the French legislation states that "the incorporeal property defined by section L.111-1 [copyright] is independent of ownership of the material object."[15] Again, there is therefore nothing inordinate about this demand that is made on us by multimedia creation. The application of the principle may be a little less obvious at first, but that should not be an impediment.

If the process of identifying the protected works is destined to become a fairly routine activity, some of the consequences of the lack of traditional material supports are far more revolutionary because our understanding of many aspects of copyright is conditioned by the copy-oriented framework. Several notions that are now taken for granted have to be reappraised. Many come to mind, but only one will be mentioned here: the qualifying factors. In order to determine if a work is protected according to national law, one takes into consideration either the author's nationality or the place of publication of the work. The ease with which a work can be modified thanks to multimedia means that at different stages of its evolution different people can intervene who are not all necessarily of the same nationality. If several works are thus created during this process, how shall we identify which law is to govern it? The other connecting factor, the place of publication, brings out the issue of the lack of physical medium even more clearly. Publication traditionally implies the existence of a material object that can be located in a determinate place.

How can publication occur if the location of the work is a seamless web of electrical impulses? Already, the current Canadian *Copyright Act* precludes the act of communicating a work by telecommunication from constituting an act of publication.[16] It may soon become imperative to revise this position. These questions are but two of many that must be tackled because of the disappearance of the hard copy as the vehicle for determining whether or not a work is protected. They emphasise a need for an international consensus over the problem, a consensus that can only be reached if, as a preliminary measure, all parties agree to shed a copy-oriented approach to copyright. The first step in this process starts with the removal of the concept of fixation as one of the criteria on which copyright protection hinges.

As we broach this endeavour, it is important not to give in to a tendency that may be starting to grow. A major portion of current talk about the information highway is rather hostile to copyright. The very term "information highway" sets the tone. "Most multimedia products available today are based on intellectual property that either comes from a single source or lies within the public domain."[17] Intellectual property is therefore known to be an issue, but the problems are circumvented. It is easy to slip into a mode of thinking where copyright is regarded as a thorn on the side that the multimedia phenomenon is meant to eradicate. Why, after all, should one worry about copyright? Aren't the works mere informational products with a cultural content? Why should some series of "0"s and "1"s be allowed to move freely while others are not? Digitisation threatens to trivialise works that are protected by copyright because their intrinsic worth is no longer visible, thanks to an easily recognisable medium.

Some hostility towards the application of copyright law is based on the cost that it entails. Current use of the information highway is mainly free. An ever-growing number of users of this technology are thus becoming used to the idea that there is no real cost associated with its use. Copyright conflicts with these practices. Users can also be even more hostile when they perceive that payment for the works is actually payment to publishers, that is, to big corporate interests. Already, much of the language of the debate around the information highway pits users against publishers, rather than against authors. Although this attitude may be regrettable, it is not really surprising in a continent that has a fairly extensive practice of the work-for-hire rule and of assignments of rights to publishers. However, any decrease in the importance that is granted to authors undermines much of the legitimacy of copyright. Without authors as its central elements, copyright becomes a mere economic battle between two

groups of interests — publishers and users — that rests on little or no ideological basis.[18] It therefore becomes important to appreciate how copyright law has responded to the authors' interests in such a manner as to further the public interest in copyright. It has done so, of course, by providing financial rewards to authors, but it has also done so by protecting their personal interests.

## 2. Moral Rights

Moral rights live in a rather hostile environment in Canada. Granted, Canada was the first copyright country to implement Article 6bis of the Berne Convention in its copyright legislation; but that provision was fraught with difficulties for anyone who wanted to rely on it.[19] While they helped to solve most of the problems that were associated with it, the changes that were introduced with Phase I of the copyright revision process continue to reflect the same attitude towards moral rights. In particular, the existence of a waiver provision[20] — a waiver that need not be in writing — undermines the raison d'être of the moral rights system. Canada's position in this matter is far from being singular, since it is in line with those of other countries belonging to the copyright tradition. Indeed, one can look to the United States for an example of a country that is almost allergic to moral rights: its opposition to Article 6 bis of the Berne Convention in the GATT/WTO Agreement and its special status regarding the application of that provision in the NAFTA agreement are recent indications that it is increasingly open about its refusal to make room for this concept.

The ever-growing internationalisation of copyright makes it imperative that the polarisation that characterises this debate come to an end. One cannot deny that multimedia, with its potential for interactivity, poses a formidable challenge to moral rights. If it is not met, and moral rights are eliminated, the ensuing loss may be inflicted on both the losers and the winners. The supporters of a copyright regime without moral rights may actually be denying an aspect of their own history when they fight moral rights so adamantly, and in the process, they sap much of the legitimacy of copyright law. The evolution of moral rights has taken on different forms in the continental and copyright traditions, but the impact of digital technology on moral rights requires a solution that is acceptable by both sides.

### a. Evolution of Moral Rights

Even when they are introduced in copyright countries, moral rights continue to be regarded as an outgrowth of the civil law authors' rights system. The history of moral rights is thus considered to have shaped continental authors' rights while the copyright system was seen as being immune to the philosophy of moral rights until international pressure succeeded in forcing that system to come to terms with it. Yet, it is not because the copyright system has not articulated the authors' concerns as methodically as the civil law school of thinking that authors' interests are absent from the copyright tradition.

The doctrine of moral rights, as it is understood today, finds its roots in nineteenth-century continental Europe. German philosophy, German and French doctrine, and French case law produced a concept that exalts the author's personality.[21] This gradual process has led to a statutory recognition in both countries in the beginning of the second half of the twentieth century: the French Law of 11 March 1957 consecrated a double-barrelled copyright, where moral rights are given priority over the author's economic prerogatives. The 1965 copyright legislation provided the basis for the monist theory of copyright in Germany, where the author's personal rights determine the essence of the right as a whole. The moral rights doctrine is thus a latecomer in the development of copyright, witness the absence of moral rights in the original 1886 text of the Berne Convention and the insertion of Article 6bis in 1928 only.

The nineteenth-century origins of moral rights lend them to being derided as an impractical romantic phenomenon that has outgrown its use in our modern end of the millennium. When countries like Canada, the United Kingdom, the United States with its *Visual Artists Rights Act* of 1990, and soon Australia, adopt moral rights provisions, their act is often perceived as the sign of a victory of the moral rights (read: civil law) faction over the copyright tradition through the influence of an increasingly stale Berne Convention. The presence of moral rights in these statutes therefore shows all the signs of being an imported commodity. If one takes the Canadian *Copyright Act* as an example, one can easily perceive that moral rights are not integrated in the concept of copyright as they are in civil law countries. The definition of the term "copyright" in that Act refers only to the economic dimension of copyright and, throughout the legislation, the use of the terms "copyright" and "moral rights" clearly refers to two very distinct notions that operate almost independently of each other.[22] In contrast, the French Code de la propriété intellectuelle states that copyright "is made up of intellectual and moral components as well as economic elements."[23]

Instead of moving towards a polarisation of the debate over moral rights, the first question to ask is whether the author's personal interests have always been foreign to the copyright tradition. To answer this question, it is necessary to look beyond a formally defined theory of moral rights since, admittedly, such a notion has not been the object of any general conceptualisation. The origins of copyright law in England are particularly informative in this respect. The Statute of Queen Anne played a decisive role in removing control over books from the publishers to the authors. While, since 1642, publishers needed the author's consent to print a book and to use his name, authors did not play an active role in the commercialisation of their books: the sale of their manuscripts for, generally, a lump sum meant the end of their control over their productions. Until the adoption of the Statute of Queen Anne,

> authors complained, but by all accounts were more concerned with what are now called moral rights..., objecting to publication without consent, false attribution of authorship and modifications to the text which were harmful to their reputation. Wittenberg gives a number of examples of such complaints from English authors, including the following heartfelt attack by one George Wither, an English author, in 1625:
>
> > For many of our moderne booksellers are but needless excrements, or rather vermine, ...yea, since they take upon them to publish bookes contrived, altered and mangled at their own pleasures, without consent of the writers, and to change the name sometymes, both of booke and author (after they have been ymprinted).[24]

The battle between the booksellers, who wanted their monopoly to be continued with a renewal of the *Licensing Act*, was brought to an end with the Statute of Queen Anne, not by the reinstatement of their monopoly, but by its elimination, thanks to the new function that authors were made to fulfil in the dissemination of their works. "...[I]n fact it was parliament that first introduced the author into the copyright struggle."[25] While it may be that the purpose of this move "was not so much to create an author's copyright as to prevent the perpetuation of the London booksellers' monopolistic control of all the most valuable old copyrights,"[26] the effect of the legislation was to empower authors. The pivotal role in the dissemination of the works fell to the authors because of their personal interests in the process, rather than to the purely economic interests of their publishers. Indeed, the London publishers fought hard against this change of paradigm, but they definitively lost their case in the decision of the House of Lords in *Donaldson* v. *Beckett*. Parliament had thus killed

two birds with one stone: it had broken a powerful monopoly that was not serving the public interest by catering to the demands of authors, which reflected a growing belief that one should own, i.e., control, what one has created.[27] The very foundation of copyright is that it is in the public interest to promote the authors' personal interests.

Naturally, this promotion must be effected in a judicious manner, which is what the entire copyright scheme seeks to achieve. In the British tradition, the authors' personal interests were mostly promoted by economic measures. Yet here and there, there are indications that interests that are closer to their intellectual preoccupations were also attended to. The poet Byron succeeded in restraining the publication of a book that was attributed to him, but that contained poems he had not written.[28] The prince consort Prince Albert recognised the right to control the publication of unpublished works.[29] Other examples exist.[30] More telling, perhaps, are legislative provisions in the copyright statutes that unmistakably resemble the modern moral rights prerogatives. Thus the *Fine Arts Copyright Act* of 1862 prohibited until 1956 the modification of an artist's work during his lifetime, as well as the use of another person's signature and the false attribution of authorship.[31] The drafters of the *Copyright Act, 1956*, drew upon this provision to extend the prohibition to misuse an author's name to all categories of protected works.[32] Of course, the remedies that have been available to authors to vindicate their personal, i.e., "moral", rights have not been the object of extensive scholastic discourses and have not had the pervasive effect on the understanding of copyright law that the moral rights doctrine has wielded in the continental countries. Yet should there not be an end to the denial of the protection of personal interests in the copyright countries? Instead of taking refuge in labels, should one not look at the function of the law? The protection of the authors' personal interests has always been part of the copyright tradition - maybe not to the same extent as in the civil law countries - but it would be misguided to dismiss this function of copyright law as mere nineteenth-century romantic grandiloquence. One hears no call to dismiss the by-product of the flip side of the romantic nineteenth century, the industrial revolution, which is the work-for-hire rule, even though the concept was not formally part of the initial copyright statutes.

The current provisions on moral rights in the copyright statutes do not really give the impression of being the results of an indigenous maturation process, except perhaps in Canada. The external pressure that is exerted by Article 6bis of the Berne Convention has somewhat speeded up the course of action and thus contributed to the sense that the solutions are imported and plastered onto an ill-fitting can-

vas. If they had been left to their own devices in this matter, the copyright countries might have evolved towards a system that resembles the one that is shaping up today, without resenting the manifest civil law inspiration of the international standard. However, the essence of this evolution is that copyright countries can accommodate the protection of the authors' personal interests within their copyright regime, and that continental countries have been able to do so in a more articulate manner for a longer period of time. The two copyright systems are closer to each other on this issue than each would want to admit[33] and a solution must be found to reconcile them truly, a solution that also provides an answer to the challenges that digital technology poses.

### b. Impact of Digital Technology on Moral Rights

Digital technology constitutes a formidable challenge to moral rights. The distinguishing features of digital technology, the ease with which works can be altered and its potential for interactivity, can multiply to an unprecedented level the occasions for infringing an author's moral rights. The practical consequences of a recognition or of a non-recognition of moral rights in this context therefore take on special proportions.

Traditionally, moral rights comprise four prerogatives: the right of disclosure, the right of withdrawal, the paternity right, and the integrity right. The Berne Convention does not deal with the first two prerogatives. Nevertheless, it is fair to say that these prerogatives could remain relevant in the context of digital technology. The decision to disclose one's work on the multimedia highway can have immediate repercussions on the author because the public is reached the moment the work is put into the system. Conversely, the withdrawal of the work from the distribution network may affect many third parties who have relied on the fact that the work has been distributed. However, if the author is the one who has effected the publication of the work in the network, a situation that would be increasingly likely to happen, much of the mechanism of the right of withdrawal would have to be reconsidered. Like the Berne Convention, the Canadian *Copyright Act* does not include the right of disclosure or the right of withdrawal within the moral rights provisions. Any decision to do so involves policy questions that go beyond those that are directly raised by digital technology, although one may say that this technology widens the perspective from which the problem can be envisaged. For the moment, discussions on moral rights and digital technology have revolved around the prerogatives that are expressly recognised in the Berne Convention: the paternity right and the integrity right.

Already, several people have reflected on the impact of digital technology. They have emphasised different aspects of these rights in this context and sometimes devoted more attention to one right than to another. Oddly enough, the report commissioned by the French ministry of culture and "francophonie" does not dwell on the issue, since it provides only a few examples of problems related to the right of integrity. An important warning is however given: because digital technology relies heavily on the use of computer programs, one should be careful not to slip into the process of assimilating all creation that involves digital technology to the creation of computer programs.[34] The cursory dismissal of moral rights in the preliminary draft of the report of the U.S. working group on intellectual property rights, prepared for the Information Infrastructure Task Force, was to be expected, although it could have been based on more solid grounds.[35] More specific insight can nevertheless be gained from other official studies and private papers.

If one starts with the paternity right, it is interesting to note that, like the French report, neither the report of the Japanese Institute of Intellectual Property nor the draft final report of the Copyright Subcommittee of the Canadian Advisory Council on the Information Highway devote any specific attention to that right. One may safely assume that the comments on the general aspects of moral rights apply to it, but it is odd that the specific issues raised by the paternity right are not discussed. How can this silence be explained? Perhaps the experts have felt that the right to be recognised as the author of one's work is so blatantly reasonable and normal that it is a non-issue. Another force may be at work: digital technology already makes it possible to insert a code into each bit of information. There is even increasing talk of an international digital registration system that would facilitate the task of identifying the works that circulate in cyberspace. One commentator, who questions the integrity right because he views it as an excessive constraint upon other authors' creativity, champions a right to reference that would be "tailored for a digital world," precisely because the technology provides the possibilities to implement it.[36] The proposition may seem astounding: instead of being a threat to the paternity right, digital technology actually enables authors to avail themselves fully of this right. There is no inherent incompatibility between digital technology and the paternity right.

The integrity right requires more nuances. This is not to say that it is less important to authors: the Canadian Copyright Subcommittee even entertained the question of protecting the integrity right in works that would not be protected by copyright.[37] The integrity right does have a sizable role to play in the protection of the authors' personal interests but, at the same time, it has just as major an impact on other authors' freedom to create. How can those two opposing interests, which give rise to the underlying tension in copyright law, be balanced in a technological context, where each person is as likely to be a "prime" author as an incremental one? Two techniques, which are sometimes used jointly, can apply. The first one is the waiver, a technique that is known in Canada. The Canadian report avoids the issue by referring it to those who are responsible for Phase II of the copyright revision. The Japanese report, however, in its two-fold proposition, suggests that contractual waivers "be valid as long as [they] would not prejudice the author's honor or reputation."[38] This proposition is actually more generous than the current Canadian position in this matter because waivers are valid here even if they cause such prejudice.

The second technique to offset the strictness of the integrity right is the use of a moderating factor: the prejudice to the author's honour or reputation. The Canadian *Copyright Act* follows the example set by the Berne Convention and integrates this factor in its definition of the author's integrity right.[39] It adds, however, some precision to this pronouncement and creates presumptions of prejudice (as well as "non-presumptions") that the Canadian report would like to see further limited.[40] As was just recently mentioned, the Japanese report integrates this concept in its first proposal on the integrity right in that one cannot rely on a waiver of the integrity right if there has been prejudice to an author's honour or reputation. The second alternative of the Japanese report is to condition the integrity right solely on the existence of such prejudice, without any possibility of a waiver. It would restrict this right to works in digital form because of the modifications that this form can so easily allow.[41] In a reflection on moral rights that was not undertaken in the precise context of multimedia, although its reasoning can easily be extended to that situation, another learned commentator has pleaded in favour of the introduction of a concept of fair use or fair dealing in the appreciation of the integrity right. Just as a list of criteria is provided in section 107 of the U.S. *Copyright Act*, Dr. Dietz gives a list of factors that could be weighed to determine if there is infringement of the author's integrity right:

> ... nature and intensity of modifications of or other interference with the work, as well as its reversible or irreversible character; the number of people or the size of the public addressed by the use of the infringing work; whether the author created the work in an employment relationship or as a self-employed author or, whether a commissioning party had or did not have decisive influence onto the final result of the creation; also the possible consequences for the professional life of the author, and, of course, for his honour and reputation have to be taken into consideration.[42]

Even though prejudice to the author's honour and reputation is mentioned as a separate criterion, one can consider that this list provides the factors according to which this prejudice is measured. It is indeed fitting that the evaluation of the prejudice in the context of moral rights be made according to circumstances that take into consideration both the author's creative role and the impact on the users.

The implications of such a rule are that the application of moral rights in the multimedia context will be determined by proper usage and ad hoc court decisions. Instead of having rules that would be specifically designed for multimedia digital creation, the particular character of the multimedia environment would be reflected through a practice that would establish itself over time. Such an approach is preferable to specially tailored moral rights because it would prevent the fragmentation, and thus the legitimacy, of both moral rights and copyright as a whole. A further advantage is that it would leave intact Article 6bis of the Berne Convention: time should indeed demonstrate that a greater understanding of the role of the qualifying factor "prejudice to the author's honour or reputation" can make the integrity right more palatable to those who fear its excesses. In fact, if one looks at both the integrity right and the paternity right, the multimedia revolution would require no change to the Berne Convention, a conclusion that would highlight the shrewdness of the compromise between the two copyright traditions that was reached when that provision was drafted.

The foregoing analysis of moral rights in the digital environment inevitably has an impact on the current provisions in the Canadian *Copyright Act*. First, the existence of a paternity right should not be conditioned by a reasonableness factor. Such a condition is not included in the Berne Convention and may well defeat the very purpose of the paternity right. Moreover, digital technology does not warrant any particular derogation from the common understanding of this right. As for the integrity right, the obvious consequence would to remove the possibility that authors waive their rights. For

the integrity right to be successfully invoked, the author must demonstrate that the third party's action is causing prejudice to his honour or reputation. This requirement is a sufficient guarantee that the author will not misuse his right. Another modification that would be welcome would be the removal of the presumption and non-presumptions of prejudice in sections 28.2 (2) and (3), because it would help to promote equality of treatment among the protected works and reinforce the commitment to a technologically neutral statute. However, since these provisions pertain to works that are only remotely connected to digital technology, such a change may not appear to be as imperative as the abrogation of the waiver provision.

While the abolition of the fixation requirement may seem a drastic turnaround in the understanding of copyright law according to the copyright tradition, such an evolution does not question the purpose of copyright law. In a similar vein, the disappearance of tightly defined categories of protected works does not shake the foundations of copyright law. None of these changes, moreover, prevent legislators from protecting the author's moral rights. Copyright countries can indeed accommodate the protection of the author's personal interests and remain true to their original philosophy. The adjustment of copyright law to the world of electronic creation must be made carefully:

> It would make little sense to go from a model largely based on the book trade to another fashioned with only telecommunication in mind. In effect, media do not replace as much as supplement each other, and communication networks formed by older media enter into complex relationships with those formed by newer media. ...Any overall model of all communication networks would still have to take some account of the multifarious ways older networks, generated by older media, feed back into newer ones.[43]

This prudence is all the more necessary since the full commercial fate of a multimedia highway is still uncertain and since people will continue to pen poems on paper, paint pictures with pigments, and sing songs to the stars. Any change that is made because of the multimedia context must therefore be evaluated in light of the existing media. Moreover, where the legislator takes into consideration the author's personal interests, the public interest is also served: authors were used, in the Statute of Queen Anne, to break the publishers' monopoly. An even more threatening monopoly can take form today if these interests are dismissed in the copyright regulation of multimedia.

# Notes

* The author wishes to thank Mr. Paul Geller for his help in locating pertinent materials and his useful comments on the text.

1 The protection by copyright refers here to both author's rights and neighbouring rights in continental countries.

2 Berne Convention, Article 2(2).

3 *Copyright, Designs and Patent Act 1988*, s. 3(2); *Copyright Act*, R.S.C. 1985, c. C-42, s. 2.

4 *Copyright Act*, s. 2; French *Code de la propriété intellectuelle*, s. L.112-2, 4°. The situation can thus exist in jurisdictions where the official dictum is that fixation is irrelevant in the qualification of a work for protection. On this issue, see Y. Gendreau, "Le critère de fixation en droit d'auteur", (January 1994) 159 R.I.D.A. 111, pp. 155-159.

5 P. Goldstein, *Copyright - Principles, Law and Practice*, Boston, Little, Brown and Company, 1989, vol. 1, p. 84, n° 2.4.

6 In Canada, see *Apple Computer Inc. v. Mackintosh Computers Ltd.*, (1987) 10 C.P.R. (3d) 1, at pp. 20-21, 27-35; *Copyright Act*, s. 2 (definition of "computer program").

7 In the United States, *Copyright Act* of 1976, ss. 102(a) and 101 (definition of "fixed"); in the United Kingdom, *Copyright, Designs and Patents Act* 1988, s. 3(2).

8 See *Stern Elecs. Inc. v. Kaufman*, 669 F.2d 852 (1982) *at* p. 855; *MAI Systems Corporation v. Peak Computer Inc.*, 991 F.2d 511 (1993), at pp. 517-518.

9 On this point, see Gendreau, supra, note 4, at pp. 173-179.

10 *Copyright Act*, s. 2 (emphasis added).

11 *Canadian Admiral Corp. v. Rediffusion, Inc.*, (1954) 20 C.P.R. 75, at p. 86.

12 [1994] F.S.R. 659. See S. Hall, "Multimedia : Does Anacon Provide a Route to Future Protection?", (1994) 5 *Entertainment L.Rev.*191.

13 See P.E. Geller, "Legal Transplants in International Copyright : Some Problems of Method", (1994) 13 *U.C.L.A. Pacific Basin L.J.* 199, at pp. 221-224.

14 *Copyright Act* of 1976, s. 101. See also s. 102(a). A similar definition is given for sound recordings in the same section.

15 *Code de la propriété intellectuelle*, s. L.111-3, 1°.

16 *Copyright Act*, s. 4 (1) (f).

17 H.J. Meeker, "Multimedia and Copyright", (1994) 20 *Rutgers Comp. & Tech. L.J.* 375, at p. 406.

18 On the phenomenon of the erosion of humanistic values in copyright law, see A. Kerever, "Le droit d'auteur : acquis et conditions du développement de la culture juridique européenne", (1990) 103 Le Droit d'auteur 138, esp. at pp. 145-146. In a similar vein, one commentator stresses the need for copyright to have "a coherent moral centre the ordinary person can appreciate and accept". D. Vaver, "Rejuvenating Copyright", (1995) 74 *Can.Bar Rev.* (to be published).

19 See Y. Gendreau, "Moral Rights" in G.F. Henderson, ed., *Copyright and Confidential Information Law of Canada*, Toronto, Carswell, 1994, p. 161, esp. at pp. 167-168.

20 *Copyright Act*, s. 14.1(2).

21 See S. Strömholm, *Le droit moral de l'auteur en droit allemand, français et scandinave*, Stockholm, P.A. Norstedt & Söners, 1967.

22 See Y. Gendreau, "-De l'importance d'être constant-", (1994) 96 R. du N. 129.

23 S. L.111-1, 2°.

[24] G. Davis, *Copyright and the Public Interest* (IIC Studies, Volume 14), Weinheim, VCH Verlagsgesellschaft mbH, 1994, pp. 17-18.

[25] M. Rose, "The Author as Proprietor : *Donaldson v. Becket* and the Genealogy of Modern Authorship" in B. Sherman & A. Strowel, eds., *Of Authors and Origins - Essays on Copyright Law*, Oxford, Clarendon Press, 1994, p. 23, at. p. 30.

[26] *Ibid*, p. 31, referring to Professor L.R. Patterson's work, *Copyright in Historical Perspective*.

[27] "In the eighteenth century, lawmakers started to shift this control [over the national dissemination of information] from centres of power outwards to individual authors and media entrepreneurs catering to the public in nationwide markets". P.E. Geller, "Must Copyright Be For Ever Caught between Marketplace and Authorship Norms?" in Sherman & Strowel, eds, supra, note 25, p. 159, at p. 163.

[28] *Byron v. Johnston*, [1816] 2 Mer. 29, 35 E.R. 851.

[29] *Prince Albert v. Strange*, [1849] 2 De Gex & Sm. 652, 64 E.R. 293.

[30] See A. Strowel, *Droit d'auteur et copyright - Divergences et convergences*, Brussels, Bruylant, 1993, pp. 572-575.

[31] *Fine Arts Copyright Act*, 1862, 25 & 26 Vict., ch. 68, s. 7(4). See Y. Gendreau, *La protection des photographies en droit d'auteur français, américain, britannique et canadien*, Paris, L.G.D.J., 1994, pp. 174-175, n° 165.

[32] *Copyright Act, 1956*, 4 & 5 Eliz. 2, ch. 74, s. 43.

[33] P. Goldstein, "Copyright et droit d'auteur au XXIe siècle" in *Colloque mondial de l'OMPI sur l'avenir du droit d'auteur et des droits voisins*, Geneva, WIPO, 1994, p. 275; A. Lucas, "Résumé des débats du colloque" in *Colloque mondial de l'OMPI sur l'avenir du droit d'auteur et des droits voisins*, Geneva, WIPO, 1994, p. 283.

[34] P. Sirinelli, *Industries culturelles et nouvelles techniques* , Paris, La documentation française, 1994, p. 97.

[35] B.A. Lehman, *Intellectual Property and the National Information Infrastructure* (Preliminary draft of the report of the working group on intellectual property rights), July 1994, pp. 94-95. The conclusions of the working group seem to be based on an erroneous reading of a Japanese report.

[36] P.E. Geller, "The Universal Electronic Archive : Issues in International Copyright", (1994) 25 I.I.C. 54, at p. 66.

[37] C. Brunet, *Copyright and the Information Highway* (Draft Final Report of the Copyright Subcommittee), September 1994, p. 17.

[38] Institute of Intellectual Property, *Exposure'94 - A Proposal of the New Rule on Intellectual Property for Multimedia*, February 1994, p. 26.

[39] *Copyright Act*, s. 28.2(1).

[40] *Supra*, note 37, p. 16.

[41] *Supra*, note 38, p. 26. The latter particular is necessary because current Japanese law makes no reference to the need for such prejudice. The author's objection is enough to trigger the application of the moral rights provisions.

[42] A. Dietz, "Legal Principles of Moral Rights in Civil Law Countries", (1993) 11 *Copyright Reporter* n° 3, p. 1, at p. 15.

[43] Geller, "Must Copyright Be For Ever Caught", supra, note 27, pp. 190-191.

# Digital Technology and the Notion of Property

Lucie Guibault

## Introduction: Digital Technology - Past and Future

Informatics is often considered the main "technological revolution" of the 20th Century.* This technology is basically a collection of physical equipment (hardware), computer programs (software) and integrated circuits (semiconductor chips), used to transmit information in the form of electromagnetic pulses. These components together allow for the storage, transmission, automated processing and display of an ever-growing amount of data. In addition, computer technology forms the foundation of what is today commonly known as the "information highway." The gradual establishment of many computer networks over the past 35 years can therefore be ascribed to the advances made in the telecommunications and informatics sectors, particularly the increased power and speed of computers, the lower costs associated with the use of computers, and the expanded realm of application offered by the convergence of informatics and telecommunications.

Once limited to the transmission of digital texts and data, network communication now involves all types of information in digital form, including texts, data, images and sounds.[1] To this end, the operating structure of the information highway is built around an ever-expanding range of equipment, including cameras, scanners, keyboards, telephone sets, fax machines, computers, laser disc players, video and audio tapes, cables, wires, satellites, fibre optic transmission lines, microwave networks, television sets, monitors, printers and much more.[2]

Since computer technology is no longer based solely on central computer systems (mainframes), but rather on a multitude of personal computers capable of communicating with one another, computer networking has been able to adopt a decentralized model where the user of the information transmitted via the network can also become a supplier or creator of information. The information highway is

therefore not made up of one single computer network, but rather of a growing number of independent networks. One of the main advantages of the information highway, compared with other technologies such as "Pay-Per-View" television that cable companies are trying to develop, is that it allows its agents to interact not only with one another, but also with the system.

The largest information highway currently available is undoubtedly the U.S. network *Internet*, with strong competition coming from three other networks: *America On-Line, CompuServe* and *Prodigy*. These networks are increasingly dominated by private-sector companies and, in the absence of an accurate measure of the size of networks and the potential market, many of these companies are reluctant to invest in the development of products to be introduced on the network. However, since it is still virtually impossible to determine the exact number of people with access to the network, estimates are based on the approximate number of terminals linked to the network. According to these results, the *Internet* population is estimated at between 2.5 and 32 million people. These methods of calculation have been severely criticised and the community is still searching for a method of calculation that would provide a more accurate count.[3]

While computer networks were initially reserved for the scientific and military research sector, other categories of users have now joined the information highway, including the education, business and entertainment sectors.[4] Given the diversity of users, the inevitable trend is for the content of information transmitted on the networks to become increasingly commercial and for access to creations to be more and more controlled.[5] Currently in France, the most popular services on Minitel are the electronic yellow pages, the matching service for merchants and carriers, the ticket-purchasing service (train, theatre or other events), and the "romantic" service. In the United States, the most widely used services are those of news, weather, stock market information, shopping and E-mail.[6]

Obviously, the information highway is still expanding. Services are being added to the networks on a daily basis, but many of them are still "under construction." No one can truly predict the long-term direction of the development and use of this highway. Already, the habits of users and suppliers of information have changed, both in the conduct of public, scientific and commercial business, and in entertainment. It should be pointed out, for example, that the U.S. Government now uses E-mail as a way of holding public consultations.[7] Many scientific papers are today made available on the *Internet* before, or in lieu of, being published in trade journals.[8] The big U.S. banks already offer on-line services to their customers; the

major daily newspapers and a myriad of commercial services are accessible on the *Internet*. Users can also download video games, films and soundtracks to their personal computer, and even browse through the collection at the Louvre, from the comfort of their living rooms.

However, the development of the information highway — both its structure and the works transmitted thereon — raises some serious legal problems, particularly with respect to intellectual property. While the fraudulent reproduction of protected works is nothing new, the digitization of works facilitates not only their reproduction and distribution,[9] but also their transformation from one technological support to another:

> On the Net, you don't need heavy equipment to infringe. Any college kid with a tuition-paid account can readily copy any digital work and send it to thousands of places online for no fee. Add to this the recently developed Net service known as the "anonymous remailer", and no one will be able to identify that kid as the wrongdoer. (...) If others do the same, why would anyone want to pay for *Wired*, or anything else we can digitize?[10]

Therein lies the problem. If neither the law nor technology gives creators the tools to exercise effective control over the use of their work, or does not give them the tools to recover their production costs and to profit from the commercialization of their work, what interest would creators see in producing new works and putting them on the information highway? For this reason, several companies have used the technology's current capabilities to ensure that access to their services is limited to subscribers, and that works are transmitted only with the express consent of the author.[11] But technological barriers, in and of themselves, are not sufficient to prevent free-riding, which still makes the definition of an effective intellectual property right, in the specific context of the information highway, one of the major concerns of the legal community at this time.

In the first part of this report, we will present a brief overview of the basic principles around the concept of public good and the structure of intellectual property rights. This overview will allow us to reflect on the nature of the right that should be granted to works riding the information highway, as well as to its underlying technology. The economic analysis of the merits and effects of intellectual property rights will allow us to better assess what type of right would be most appropriate to protect both the interests of creators and those of competition. In the second part of this report, we will examine, in turn,

the protection granted by copyright and that granted by patents to the various components of the information highway, in light of the activities of public consultations held by governments in various countries. Such a review will help highlight the problems that remain to be solved to achieve a compromise that provides the best possible intellectual property protection for the components of this new technology.

## 1. Intellectual Property: Basic Principles

### a. Ideas and the Concept of Public Good

In principle, as soon as an idea is expressed, it is free to be used, copied or transmitted. Of course, ideas can be kept secret. Of all ideas produced and expressed, only a small portion is appropriated in any way by their author. Certain categories of ideas are, however, more likely than others to be claimed exclusively by their author. These include technological innovation, which is defined as the application of a new idea, a method or a process, designed to increase the efficiency of industry,[12] as well as literary and artistic creations, which notably take the form of a prose, a poem, a melody or a photograph.

Whatever the nature or the form in which ideas are expressed, they are rare, since they have to be produced and their production requires investment in time and money — investment that could have been allocated to other ends.[13] Although this is not widespread, certain categories of ideas can also be of considerable economic value. Inventions and scientific discoveries, as well as literary, artistic and musical works, are part of these categories of ideas. Indeed, those who invest in the creation of valuable goods do so generally in the hope of making a profit, or at the very least of recovering their production costs.

However, technological innovations and literary, artistic and musical creations are ill-suited for the processes of appropriation adopted for material things. Unlike material goods, ideas can be known and used by several people without a reduction of the amount available to the general public. Furthermore, once ideas are expressed and communicated, it is very difficult to prevent third parties from using them, without the repeated transmission of the ideas diminishing their quality.[14] Goods that are characterized by non-rivalry and non-exclusivity are called "public goods:" when a good is available to one per

son, no other person can be excluded from using it, and the use of a good by one person does not prevent or diminish the consumption of this good by others.[15] Following these criteria, ideas are part of the category of public goods.

The non-exclusive nature of ideas, however, prevents creators from fully appropriating the fruits of their labour. This phenomenon naturally encourages members of society to free-ride on the production of others. Unlike material goods, intellectual goods lack sufficient physical barriers to give the creator the necessary tools to prevent the appropriation of his good by others. In addition, like ideas, inventions, poems and songs can be reproduced by others at great speed and at minimum cost. Since technology has reduced the cost of acquiring intellectual goods, users are now reluctant to pay the price that would normally be due to the creator. In return, the creator will be unable to recover his production costs and will hesitate before investing once again in the development of products that anybody can obtain almost free of charge.[16]

This reality explains why the private market could tend to underallocate resources for the production of this category of goods.[17] The high costs involved in effectively excluding third parties from participating without fair compensation in the collective consumption of a good constitute a hindrance to the smooth operation of the market and create externalities.[18] An inefficient system of property rights would therefore be the basic source of externalities. According to certain economic theories, if property rights were perfectly defined and respected, no externality would occur.[19] Creation and the possibilities of transferring intellectual property rights are, in theory, one way of responding to new forms of externalities in the market, such as the emergence of new technologies.[20]

Accordingly, the granting of mutually exclusive rights appears as the solution most likely to encourage individuals to use resources efficiently, both in response to scarcity and public-goods type of externalities.[21] In theory, property rights are deemed effective if they satisfy the exclusivity and transmissibility criteria.[22] The effectiveness of rights would be even greater if the transactions between agents were costless, that is, if the transfer, acquisition and protection of rights were done free of charge.[23] However, these transaction costs are a fact of life, particularly in the case of intangible goods. Generally speaking, transaction costs are not so much a reflection of market failure, as they are an incentive for individuals to look for ways of reducing them.

### b. Intellectual Property

While technological innovation is an essential component of economic development,[24] the creation of artistic works constitutes a major source of enrichment for society as a whole. Governments justify their intervention in terms of promoting scientific progress and artistic creation,[25] considering the potential benefits of the production of either of these intellectual expressions. They actively encourage research and development in high technology as well as the production of literary and artistic works, by awarding research and creation grants, awarding tax benefits, and establishing an appropriate legal regime for the intellectual protection of new works.[26]

Intellectual rights are an outgrowth of governments' desire to strike a balance between two legislative policies that are of equal importance but of very different scopes. These rights are aimed at promoting technological progress and artistic creativity and, at the same time, safeguarding the free flow of ideas.[27] In the quest for a balance between the interests of users and those of inventors, intellectual property rights seem to offer a solution to the non-exclusivity that characterizes public goods, by imposing time limits on the borrowing of others' ideas. Intellectual property rights are therefore designed to encourage creation by giving holders of such rights a means of collecting, to the exclusion of others, the gains resulting from the production of new goods.[28] Intellectual property rights would therefore provide an answer to the insufficiency of technological barriers in order to guarantee creators the exclusive right to their products.

Property rights are generally defined as the control that the holder can exercise over the protected material and by the possibility of deciding how it is used. But exclusivity is a matter of degree.[29] The notion of "property," the structure of the various rights and the degree of exclusivity guaranteed by each differ considerably based on the good claimed and the objective of the institution:

> The notion of property is further complicated by the variety of very different sorts of things that we claim to own. We may own a plot of land, or the trees on the land, or the fruit that we expect the trees to bear, or access to the space above the land. We may own a corporation including all its real assets, or the name and reputation of a corporation. We may own a book of poetry (that is, the material item consisting of paper and ink), or the poems included in the book and none of their particular inscriptions. Obviously, these very different sorts of things are owned in very different sorts of ways. A car owner decides who may move the car and whether to destroy it in a steel compactor. A plot of land can be

> neither moved nor destroyed, but the owner decides who may occupy it. A poem can neither be moved nor destroyed, but the owner decides where it may be inscribed. Different sorts of things demand different notions of ownership.[30]

Like any other type of property right, intellectual property rights have very unique characteristics that are adapted to the subject matter they are supposed to protect. Nevertheless, in copyright and patent law, we find the broad strokes of the property rights recognized for tangible goods, such as the right to exclude third parties, the right to determine the terms and conditions of use of the good and to receive the fruits and benefits thereof, as well as the right to transfer the good according to specific terms and conditions.[31] However, the characteristics of the various intellectual rights vary from one extreme to the other, from the rigidity of patents to the flexibility of copyright.[32] In contrast to patents, which forbid any type of duplication by third parties, copyright merely provides protection against copying: the independent or accidental duplication of a protected work is not an actionable wrong. Copyright draws a line between accidental duplication and copying, however involuntary: while the first is the result of efforts that do not involve direct or indirect use of the original work, the second constitutes a form of free-riding which must be condemned.[33]

The difference in operation between the patent and copyright systems lies in the narrow view that legislators have always taken of utilitarian subject matter and works of art.[34] Since inventions can be easily described and circumscribed on paper and a register comprising specific classes of invention suffices to track them, the patent system can operate effectively on the basis of a preliminary examination of the applicant's invention by the appropriate authority. In this light, independent duplication can be avoided and, if not, it will constitute an actionable wrong. By contrast, literary or artistic works are presumed impossible to describe satisfactorily in words, and the expression of an idea can take so many different forms that no register could make the information readily available. As a result, the few reported cases of independent duplication have so far not justified the setting up of a system to prevent them.[35]

The notions of free-riding and independent duplication today appear in a completely different light, inasmuch as new technologies are putting the entire system under undue stress: the written description of computer innovations is becoming more complicated every day; the utilitarian nature of new technologies limits the number of possible forms of expression for the ideas underpinning these technologies; and the cases of independent duplication, borrowing and decompilation of protected material are growing at the same rate as the economic stakes involved. Furthermore, the rigorousness of the standards of use, borrowing and decompilation for the creation of works that are derived from or compatible with one another vary from one industry to another, as evidenced by the more liberal standards prevailing in the computer and chip industries.[36]

The structure of the property right granted for a given material has a direct effect on the nature of creations that will be produced. A right that is very easy to obtain will generally offer relatively weak protection, but one that may extend over a longer period of time. By contrast, a right granted under strict conditions and formalities will guarantee stronger protection, but one of a shorter duration. The particular arrangement of the prerogatives of each right is based on very specific objectives: one encourages the production of artistic creations, while the other fosters innovation. Given the nature and duration of the intellectual property rights available, creators will develop products that conform closely to the level of originality or inventiveness required to obtain either form of protection. In other words, investors will adapt the type of creation to the form of protection they are offered, and that will allow them to recover their production costs and to make a profit. The idea, then, is to find out if this protection is truly effective with regard to digital technology, both for creators and for users, and, as a corollary, if it effectively encourages creation and innovation in this field.

# 2. Intellectual Property and Digital Technology: In Search of a Satisfactory Compromise

Intellectual property is generally perceived as a vital tool for the development of multimedia works and digital technology. Yet, the revolutionary nature of these works and the conceptual challenges posed by the technology have raised doubts about the ability of the existing legal regimes to provide adequate protection for these elements. Consequently, many industrialized countries have taken the opportunity to form working groups to study the legal framework around the creation and use of the information highway.[37] The discussions of these working groups have basically focused on questions related to copyright protection and have given rise to a certain number of recommendations. Several points should, however, be analyzed by the decision-makers in more detail. In the next few pages while reviewing the general principles of copyright and patent laws, we will take a critical look at the main issues that have been addressed by these advisory groups and at some others that should have been examined.

## a. Copyright

By virtue of creating a work, an author holds, under international conventions and the domestic laws of each country, an exclusive intangible property right enforceable against the public at large. Unlike a patent, copyright is recognized internationally, upon the fulfilment of a few simple formalities.[38] Copyright protects several categories of literary, artistic and scientific works listed in all legal instruments, which include oral, written, musical, cinematographic, photographic and architectural works, as well as works of applied art and compilations.[39] Copyright grants creators of any original work the exclusive right to produce, reproduce and perform the work, regardless of the means or the form in which it is expressed. Copyright therefore applies to the expression of an idea and not the idea itself. The ideas behind a work are part of the public domain and literary, artistic and musical creations are protected only when they are fixed on a material support.[40]

1. Multimedia Works

Adapting the principles of copyright to a specific material such as multimedia works involves various elements: firstly, the material to be protected has to be determined, as well as the criteria of originality and fixation[41] for such protection. Secondly, the rights and limits relating to the protection must be defined as precisely as possible. The idea at this point is to determine the extent of the pecuniary rights,[42] neighbouring and moral rights of the author,[43] as well as the exceptions granted to users.[44] Thirdly, authors must be given adequate civil and criminal recourses[45] to ensure compliance with their property rights, given the state of technology and the international dimension of communications. Lastly, since a property right is deemed effective only if it is exclusive and transmissible, terms of property transfer must be established or, if direct contractual relations between individuals cannot be established, a system for the collective management of rights must be set up.

Fitting multimedia works into one of the categories laid down in legal instruments is of vital importance in copyright, since all categories of works do not necessarily enjoy the same rights or protection of the same duration. The deliberations of advisory groups have shown that, based on the wording of definitions set forth in their respective laws, multimedia works would be generally classified under either of the two existing categories: "cinematographic" or "audiovisual" works on the one hand, and "compilations" or "collective works" on the other. Upon analysis, the Canadian advisory committee came to the conclusion that no legislative amendment should be made to the existing definitions,[46] contending that these works do not lose their literary, artistic or musical status simply because they have been converted to digital format, and that they can just as well fit into the category of compilations. However, because the digitization of works now makes the presence of a multitude of definitions pointless and difficult to apply, the American group has, for its part, espoused the theory that these categories could one day be completely eliminated.[47]

Faced with the prevailing doubts about multimedia works falling into either of the existing definitions, the Japanese group has submitted two proposals: the first would be to limit the scope of the definition of "cinematographic work" while creating a separate category for "audiovisual works;" the second would be to completely eliminate the definition of "cinematographic work" while developing a broader category of "audiovisual works" which would encompass a wider variety of works.[48] The categorization of multimedia works in France is more complex, since the definition of "collective work" pro-

posed in the *Proposal for a Council Directive on the legal protection of databases*[49] could run directly into conflict with the definition of "audiovisual work" set forth in the *Code de la propriété intellectuelle*.[50] In other words, multimedia works would likely enjoy dual protection in France, under legal regimes that are not necessarily compatible. In fact, the originality criteria as well as the principles of ownership and the exceptions to patrimonial rights are quite different under the two instruments.[51]

Obviously, the application to multimedia works of the originality criterion does not seem to raise enough problems to have aroused the interest of the working groups. Yet, the requirement of originality is a major factor in the orientation of the creative exercise. The protectable elements of a work are distinguished from those that are part of the public domain based on the criterion of originality: an author who wishes to obtain protection for his work has to make a bigger investment if the criterion is given a strict interpretation. The criterion of originality is not, however, applied uniformly around the world, nor with regard to the different categories of works. A lower standard of originality is often required for compilations or data banks than for literary, musical and cinematographic works.[52] This brings up the need for the international community to clarify the category in which multimedia works should be classified, on the one hand, and the level of originality required for the recognition of a copyright, on the other. Failing such clarification, there is a risk that the protection granted to authors will differ from country to country for similar works, or that protection would be granted for materials that could just as well have been public domain subject matter. This could have negative repercussions for future creation, since an uncertain legal system or a right that is too easy to obtain would wipe out any motivation to innovate.

Since electronic network communications know no national boundaries, a creator living in one country is now able to create a work that can be protected in a second country, and then published in a third country (or more). The theory that a creator must be in the same place as his work no longer holds, and creates a certain degree of uncertainty over the status of the work.[53] .As a result, the traditional criterion of connecting copyright protection to the author's nationality loses its relevancy in this day and age of the information highway. What happens when certain works are protected in one country and that, due to the differences in legislative drafting or legal interpretation, they are not protected in a neighbouring country? What happens when a person receives the digital copy of a work in his computer and sends it electronically to friends around the world? In which country should the infringement of the rights on a protected

digital work riding the *Internet* be said to have occurred? Did the infringement take place in the country where the original work is found? Where the reproductions are found? In the country of the accused? Or in that of the author? What law would apply? The attitude of advisory groups regarding the importance of setting up a harmonized international regime to protect multimedia works, in order to avoid precisely this type of situation, is, to say the least, puzzling.[54] Only the Lehman Report places the development and protection of multimedia works in a truly international perspective:

> As we move toward a world where dissemination of entertainment and information products through on-demand delivery services operating through interactive digital information communications networks is the norm, it may be necessary to harmonize levels of protection under disparate systems of copyright, authors' rights and neighboring rights, and consideration should be given to ways to bridge the gaps among these systems.[55]

When, due to technology, creators cannot exercise real control over the use of their work or when the number of potential users is so great that creators cannot conclude contracts of use with each of them individually, the only solution is to resort to systems of collective management of authors' rights. This system is designed to reduce the costs of transactions between agents by providing users with information regarding protected works, and to facilitate the administration of royalties to creators for the use of their works. Presently, there is no collective management system responsible for the collection and distribution of royalties for the use of multimedia works.[56] Certain advisory groups have also deplored the fact that there is no way of tracing the author of a multimedia work, his assignees, the authorized users, etc.[57] Consequently, these groups have proposed, and rightfully so, that centres be created for the voluntary registration of authors' rights. The registration would be on a voluntary basis because subjecting a right over multimedia works to a mandatory procedure would be at variance with the *Berne Convention*.

## 2. Digital Technology

Multimedia works and digital technology in general differ in their predominant characteristics and respective functions. While multimedia works can exist autonomously on analog support, the same cannot be said of software and other computer items. Regardless of what certain authors may think, the legal contours of the protection of computer programs, whether through copyright or through patents, remain unclear, and continue to bedevil the legal community.

The inherent nature of computer software programs makes it impossible for them to be aligned conceptually with the frameworks established by the traditional systems of intellectual property. Taken in isolation, a computer program can be considered a writing or a set of ideas, but when used in conjunction with the physical computer equipment, it can be considered a process or a machine.

Computer programs have been protected by copyright since the U.S. Congress amended the *Copyright Act* in 1980, so as to include this type of creation in the definition of "literary work".[58] Soon thereafter, the legislatures of all countries that produce or import computer goods had to emulate the American example.[59] Yet the difficulties involved in applying copyright in this area have not disappeared, as evidenced by this comment from an American judge:

> However, computer programs are, in essence, utilitarian articles - articles that accomplish tasks. As such, they contain many logical, structural, and visual display elements that are dictated by the function to be performed, by considerations of efficiency, or by external factors such as compatibility requirements and industry demands. In some circumstances, even the exact set of commands used by the programmer is deemed functional rather than creative for purposes of copyright (...) *Because of the hybrid nature of computer programs, there is no settled standard for identifying what is protected expression and what is unprotected idea in a case involving the alleged infringement of a copyright in computer software* (our emphasis).[60]

Hence, some still dispute the application of copyright to a clearly functional material, contending that it should rather be the subject of an industrial property right. In addition, the distinction between an idea and its expression still poses serious difficulties of interpretation with regard to computers, since it is becoming increasingly clear that the design of an efficient computer program can be embodied in only a few forms of expression.[61] Lastly, the duration of protection for a computer program is equal to that of any work protected by copyright, that is, the author's lifetime plus 50 years following his death. Protection for such a length of time is inconsistent with reality, since the average commercial life of a program designed for a personal computer lasts from one to four years and that of a program designed for a larger computer system is limited to 10 years.[62]

The changes that legislators have made to the copyright regime in order to apply it to computer software programs have come in for serious criticism.[63] The adoption of the *Directive of the European Council of May 14, 1991 on the legal protection of computer programs*[64] has, in the eyes of some, sanctioned the existence of a specific regime for software.[65] This directive introduces, among other things, the notion of use for purposes of interoperability among systems; it waters down the requirement of originality and reduces the importance of the author's moral rights, inasmuch as the person who legitimately acquires the program can make the adaptations and changes necessary to run it smoothly. For many, this is no longer traditional copyright, but rather a specific right for software, distinct from that which should apply to multimedia works:

> [translation] One thing is certain. The fact that multimedia products are on digital support should in no way trigger the application of a special regime for software. Even if it is a vital component of the product, the software part cannot be allowed to obscure the nature of the other elements. This brings up the traditional debate of certain complex computer creations such as expert systems or video games. The issue seems to have been clearly settled by both legal doctrine and case law: the special right is applicable to the program part, while the common law right of copyright applies to the rest.[66]

Considering the foregoing, it is, to say the least, disconcerting to note that the international community has agreed, under the GATT, to be bound for the future by the decision to expressly include computer programs in the definition of a copyrightable work.[67] Yet, if the legal community does not recognize the special nature of the established standards for the protection of computer innovations, the copyright system risks being further contorted when it comes to protecting expert systems, computer-generated creations or other technological developments of the future that are clearly utilitarian in nature.[68]

### b. Patents

The future development of the information highway will depend on innovations achieved in various technological sectors, particularly in the fields of computer programs, computer equipment and telecommunications. Therefore, the importance of maintaining an efficient patent system that encourages and protects innovation in these sectors cannot be underestimated. In return, the most striking impact that the information infrastructure will have on the patent system will be to provide access to a large amount of quality information, used to determine the patentability of an invention or to ascertain the validity of a patent.[69]

The goal of the patent system is therefore to encourage innovation and the public disclosure of technological advances. The patent system thus plays a dual role in the area of digital technology. On the one hand, inventors will want to protect their innovations in the digital technology sector by way of a patent and, on the other hand, this technology will serve as a tool for examining the prior art.

Generally speaking, a patent is granted for any invention that meets the criteria of novelty, nonobviousness and industrial application.[70] The patent gives the inventor the right to exclude any other person from producing, using or distributing the protected invention. The monopoly thus granted is absolute, excluding even independent creations and equivalent products. The protection lasts for 20 years beginning on the date of the filing of the application.[71]

An invention is considered novel if it is not found in the state of the art; in other words, an invention is novel if it had not been disclosed to the public, in any way, shape or form, prior to the date of filing.[72] The scope of the protection depends on the claims included in the specifications accompanying the patent application. These claims consist of the technical description of the process, machine, method or the subject matter sought to be patented. A patent is granted only on condition that the specification disclose the purpose of the invention, its constituent elements and its effects, as completely and as accurately as possible, so that an average person working in the field to which this invention pertains can execute it easily.[73] This requirement implies that the invention itself should be sufficiently fixed and stable to be able to be reproduced, and that the information contained in the description help arrive at the same result as the inventor.[74]

For a long time, software components such as algorithms, source codes and object codes, were considered pure scientific principles, abstract ideas or mental processes and, for that reason, were systematically excluded from patent protection. The institutions charged with enforcing patent laws, as well as the courts in several industrialized countries, have been adopting a far more liberal approach for a few years now with respect to the patentability of computer programs. For example, in 1994, the *United States Patent & Trademark Office* (USPTO) issued more than 4,000 patents for computer programs.[75] Over the past few years, the European Patent Office (EPO) has also been granting patents for software when the invention, as per the claims, makes a technical contribution to the state of the art.[76] Generally speaking, patent protection is granted in the United States when the algorithm contained in the claims is applied or executed within a structure or process which, when considered as a whole, performs a patentable function.[77]

However, the patentability of software programs raises certain theoretical and practical questions. The general criteria established by the USPTO and the EPO pose a thorny problem of finding the correct category for the material described in the claims.[78] The courts have had to develop complicated tests to determine which computer components are patentable and which ones are part of the public domain. A recent decision by the U.S. Federal Circuit Court marks a turning point in U.S. case law with regard to the patentability of inventions using mathematical algorithms.[79] In that case, the Court held that a claim describing how a computer program can be used in applying a mathematical algorithm is valid, even if the algorithm is used to process signals that are unrelated to a tangible physical phenomenon. That decision affects all techniques employing complex mathematical algorithms, such as digital signalling processes, digital communications, computer graphics, radars and seismic analyses.[80]

Related to the problem of categorizing patentable material is that of protecting intermediary computer functions. The scope of protection is not very clear in the case of numerous computer components, such as micro codes, micro programs and object codes. Does a patent issued for the protection of a certain computer function also cover all the computer-related possibilities of carrying out this function? Does a program stored in the random access memory (RAM) of a general purpose computer infringe, for example, this same program stored in a read only memory (ROM) chip installed in a digital calculator or in a video game?[81] This is an important detail in that users of the *Internet* must download the programs in the hard disc of their computer in order to be able to use them. Could this constitute infringement?

A second factor suggesting that patents are not necessarily the proper vehicle for the protection of computer programs is the cumbersome and lengthy process involved in obtaining a patent in this sector. Indeed, the length of time it takes for the patent to be issued could be so great as to strip computer programs of their novelty and nonobviousness. Worse, because of the speed of technological change,[82] the software could even be outdated by the time the patent is issued.[83] The standard of nonobviousness raised so many difficulties in the area of computer programs that the USPTO decided to hold public hearings on the subject in early 1994.[84] During those hearings, the U.S. Patent Commissioner said:

> Many people pointed out in San Jose that the obviousness standard, as interpreted by our examiners and by the court, seems to be inconsistent with the realities of the industry. We recognize that an effectively functioning patent system requires a standard of nonobviousness that is rigorous and reflective of industry norms. However, we also recognize that the courts are the primary source of guidance on the basic question of obviousness. As such, we intend to work with the courts to ensure that the obviousness standard is applied rigorously, not only in the context of examination, but also when patents are enforced.[85]

The difficulty of describing inventions related to computer software comes to the fore particularly in the drafting of claims, but even more so in the search for the prior art that investors and patent offices alike must undertake in order to determine the patentability of an invention or the validity of a patent. The considerable volume of computer material that constitutes the prior art poses serious problems in assessing what is new and what is not.[86] Some see the advent of the information infrastructure as something that would help examiners and inventors in their search for the prior art. It is hoped that the information highway will give users access to valuable sources of information, such as access to scientific data banks, data banks kept by patent offices around the world, publications, etc. Lastly, the information highway is expected to change the way information is prepared and disseminated.[87]

# Conclusion : Is a Compromise Possible?

Even if one recognizes the need to eliminate the confusion surrounding the protection of intellectual property rights for new technologies and the obligation to present a clear legal framework to stimulate the production and marketing of technical innovations,[88] that is only the beginning. The type of innovation to be encouraged still has to be determined, so that the protection granted could be tailored accordingly. The same reasoning also applies to literary, artistic and musical creations. It should be pointed out that the structure of a right affects the type of innovations produced. Considering the highly uncertain nature of research and development results, the amount of money that investors allocate to particular projects depends on the evaluation of their chances of success and the anticipated revenue. Intellectual property rights, much like other property rights, establish parameters which allow investors to assess the value of their potential revenue.[89] If the law does not offer sufficiently strong protection, risky investments will be abandoned in favour of projects that present a lower degree of uncertainty.[90] Technological advances could suffer as a result.

Prima facie, the level of protection offered by copyright would seem to be easily adaptable to the characteristics of multimedia works.[91] Of course, the definitions regarding the categories of traditional copyrightable works must be rethought, along with the notions of authorship, originality and fixation. From the point of view of creators, it could be interesting to see where the compromise is struck, at the international level, with respect to the scope of the right of public disclosure, that of moral rights, as well as that of neighbouring rights granted to performing artists and producers of phonograms. From the perspective of users, it will be particularly worthwhile to reassess the notions of fair use and derivative works, to ensure the public reasonable access to works and to encourage users to become creators themselves. Finally, the setting up of a voluntary registration system for protected works and the reinforcement of the recourse against infringement would constitute concrete measures aimed at adapting the legal system to the particularities of multimedia works.

The experience of the past 15 years clearly shows that neither copyright nor patents are adequately attuned to the characteristics of digital technology. The creation of a *sui generis* right would appear to many as the logical solution to the problems posed by the application of copyright or patents to computer programs. To counter this proposal, many evoke the spectre of legal uncertainty: "Moreover, reduc-

ing or otherwise changing intellectual property protection at this time would increase uncertainty and otherwise deter investment of resources in the very works needed for the development and success of the information superhighway itself."[92] However, nothing could be further from the truth. Countless articles have been written on the subject, by both legal experts and members of the scientific community. The courts in all industrialized countries have been able to develop a coherent and solid body of case law regarding the protection of intellectual property rights over computer programs. This work has not gone in vain. These cases have given rise to a number of general principles that can very well serve as a foundation for the creation of a right more congruent to the subject matter it is meant to protect.

The law rarely evolves spontaneously. The development of rules of law generally follows a process comprising two major steps.[93] The first involves a series of trials and errors leading to the emergence of standards applicable to a specific field, and the second involves the crystallization of a specific rule in a country's legal order.[94] The law applicable to software programs and new technologies in general is no exception. The process of finding an appropriate pigeonhole for the right applicable to new technologies stems from a suite of legislative and judicial attempts made to satisfy the claims of companies, and from the explanations provided by legal doctrine.[95] Finally, the new law is encapsulated in the legal order of a country when the major players reach a clear consensus as to the structure of this new law and the means to be taken to ensure its implementation. The problem of intellectual protection for computer programs has been around for a sufficiently long time for us to be able to draw the necessary conclusions and to act accordingly.

# Notes

* The ideas expressed in this text are solely those of the author and do not necessarily reflect the views of the Intellectual Property Policy Directorate of the Department of Industry.

[1] Deborah REILLY, "The National Information Infrastructure and Copyright: Intersections and Tensions," (1994) 76 *J.P.T.O.S.* 903-932, 905.

[2] Ronald H. BROWN *et al*, *The National Information Infrastructure: Agenda for Action*, p.5 (Information Infrastructure Task Force, September 15, 1993).

[3] HOFFMAN, Donna and Thomas P. NOVAK, "Wanted: Net.Census," *Wired*, 2.11, Nov. 1994, pp. 93-94, where the authors write: "The current approach to estimating the population of the Internet is like estimating the number of people in the US by counting the buildings."

[4] D. Reilly (1994), p. 905.

[5] "The End of the Internet," *Wired*, 2.11, Nov. 1994, p.38, where the authors write: "Internet users think of the CIX [Commercial Internet eXchange Association], if they think of it at all, as the main alternative backbone for commercial Internet traffic. Formed at a time when the main high-speed lines of the Internet were reserved for academic and scientific networking, the purpose of the CIX was to guarantee commercial connectivity between its members. In late 1992 there were seven CIX members; in January of 1994 there were 25; there are now more than 75. Members include such networking heavyweights as Sprintlink, ANS CO+RE, NEARnet, BARRnet, PSInet, and others."

[6] "Seven Thinkers in Search of an Information Highway," *Technology Review*, August/September 1994, pp. 42-52, on p. 46.

[7] THE NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION (NTIA) and the UNIVERSAL SERVICE WORKING GROUP OF THE INFORMATION INFRASTRUCTURE TASK FORCE, "Virtual Public Conference on "Universal Service and Open Access to the Telecommunications Network", November 14-18, 1994. Information available on the *Internet:* ntiaabbs.doc.gov (telnet, gopher or World-Wide Web). See also: "Hearing Set on Patent Protection for Biotechnological Inventions", (1994) 48 BNA's *Patent Trademark & Copyright Journal*, p. 510. Information available on the *Internet:* www.uspto.gov.

[8] Gary STIX, "The Speed of Write - Trends in Scientific Communication", *Scientific American*, December 1994, pp. 106-111, on p. 107, where he writes: "Scientists now transmit reports of their research - from first inspiration to final result - over electronic networks. Even live experiments can be witnessed online. Publishers and libraries may never be the same."

[9] Pamela SAMUELSON, "Copyright's Fair Use Doctrine and Digital Data," (1994) 37 *Communications of the ACM* 21-27, 21.

[10] Lance ROSE, "The Emperor's Clothes Still Fit Just Fine," *Wired*, 3.02, Feb. 1995, pp. 103-104 and 106, on p. 103.

[11] Allen N. DIXON and Laurie C. SELF, "Copyright Protection for the Information Highway," [1994] 11 *E.I.P.R.* 465-472, p.466.

[12] MOKYR, Joel, *The Lever of Riches - Technological Creativity and Economic Progress*, New York, Oxford University Press, 1990, p.6

[13] Ejan MACKAAY, "An Economic View of Information Law," in KORTHALS ALTES, Willem F., Egbert J. DOMMERING, P. Bernt HUGENHOLTZ, and Jan J.C. KABEL (Ed.), *Information Law Towards the 21st Century*, Deventer, Kluwer, 1992, Information Law Series, No. 2, p.55.

[14] Ejan MACKAAY, "Les droits intellectuels - entre propriété et monopole", (1989-90) 1 *Journal des Économistes et des Études Humaines* 61-100, p.76 [with publisher's corrections at (1989-90) 1 *J.É.É.H* 355-358]; and Dale A. NANCE, "Foreword: Owning Ideas", (1990) 13 *Harvard J. of L. & Pub. Pol.* 757-773, 762.

[15] Robert COOTER and Thomas ULEN, *Law and Economics*, Glenview (Ill.), Scott, Foresman and Company, 1988, p.108.

[16] Dan L. BURK, "Transborder Intellectual Property Issues on the Electronic Frontier", forthcoming in (1994) 5 *Stanford Law & Policy Review.*

[17] Kenneth J. ARROW, "Economic Welfare and the Allocation of Resources for Invention", in D.M. LAMBERTON (Ed.), *Economics of Information and Knowledge*, Baltimore, Penguin Books, 1971, pp. 141-159, on p.152: "To sum up, we expect a free enterprise economy to underinvest in invention and research (as compared with an idea) because it is risky, because the product can be appropriated only to a limited extent, and because of increasing returns in use. This underinvestment will be greater for more basic research. Further, to the extent that a firm succeeds in engrossing the economic value of its inventive activity, there will be an underutilization of that information as compared with an ideal allocation." Thesis disputed by: Harold DEMSETZ, "Information and Efficiency: Another Viewpoint," in D.M. LAMBERTON (1971), pp. 160-186.

[18] Werner Z. HIRSCH, *Law and Economics - An Introductory Analysis*, New York, Academic Press, 1979, p.11. Externalities are defined as the benefits or losses that a person incurs as a result of the activities of another and which the latter does not take into account in his decision to undertake such activities. Pollution is often cited as an example of a negative source of externality, while public goods are cited as a positive source of externality. See: Carl J. DAHLMAN, "The Problem of Externality," (1979) reproduced in Tyler COWEN (Ed.), *The Theory of Market Failure - A Critical Examination*, Fairfax (Va), George Mason University Press, 1988, pp. 209-234.

[19] Jack HIRSHLEIFER, *Price Theory and Applications*, 4th ed., Englewood Cliffs (N.J.), Prentice Hall, 1988, p.474.

[20] ADELSTEIN, Richard P. and Steven I. PERETZ, "The Competition of Technologies in Markets for Ideas: Copyright and Fair Use in Evolutionary Perspective," (1985) 5 *Intern. Rev. of L. & Econ.* 209-238, 213, where the authors write: "insofar as property rights can be understood as a means by which personal incentives can be directed toward the resolution of externality relationships through market exchange, the creation of new forms of property can be associated with the emergence of new or different sources of externality in the marketplace. These novel external effects are themselves the result of changes in economic values caused by shifting preferences or the continuing development of new technologies to which existing property rights are poorly attuned. The concept of property thus acquires an explicit functional dimension; the existence of particular forms of property is rationalized by the role each plays in maintaining or extending the ability of the market order to direct resources toward their most valuable use."

[21] Harold DEMSETZ, "Toward a Theory of Property Rights," (1967) 57 *Am. Econ. Rev.* 347-373. See: Michael LEHMANN, "The Theory of Property Rights and the Protection of Intellectual Property," (1985) 16 *IIC* 525-540; and *Apple Computer Inc. v. Microsoft Corp., 24 U.S.P.Q.* (2d) 1081 (Dist. Ct. N.D. California) 1091, where judge Walker states: "Copyright's purpose is to overcome the public goods externality resulting from the non-excludability of copier/free riders who do not pay the costs of creation." *A contrario*, see: A. PLANT (1934), p.31.

[22] Yoram BARZEL, *Economic Analysis of Property Rights*, Cambridge University Press, 1989, p.2; and Harold DEMSETZ, "The Exchange and Enforcement of Property Rights," (1964) in T. COWEN (Ed.) (1988) pp. 127-145.

[23] Ronald H. COASE, "The Problem of Social Cost", (1960) 3 *Journal of Law and Economics* 1-44, 15, where the author states: "It is always possible to modify by transactions on the market the initial legal delimitation of rights. And, of course, if such market transactions are costless, such a rearrangement of rights will always take place if it would lead to an increase in the value of production."

[24] Economist Joseph Schumpeter is one of the first to have included technological innovation in his economic model; see: Joseph A. SCHUMPETER, *Theorie der wirtschaftlichen Entwicklung*, Leipzig, Duncker & Humboldt, 1912 [English translation: *The Theory of Economic Development*, Cambridge (Mass.), Redvers Opie, 1934].

[25] See for example the American Constitution (U.S. CONST. art. I, § 8, cl. 8) which gives Congress the power: "To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

[26] Robert M. SHERWOOD, *Intellectual Property and Economic Development*, Oxford, Westview Press, 1990, p.71.

[27] Rochelle COOPER DREYFUSS, "General Overview of the Intellectual Property System", in WEIL, Vivian and John W. SNAPPER (Ed.), *Owning Scientific and Technical Information - Value and Ethical Issues*, New Brunswick (N.J.), Rutgers University Press, 1989, p.32.

[28] Alden F. ABBOTT, "Developing a Framework for Intellectual Property Protection to Advance Innovation," in F.W. RUSHING and C. GANZ BROWN (Ed.) (1990), p.317.

[29] Ejan MACKAAY, "Economic Incentives in Markets for Information and Innovation," (1990) 13 *Harvard J.L. & Pub. Pol.* 867-909.

[30] WEIL, Vivian and John W. SNAPPER (Ed.), in *Owning Scientific and Technical Information - Value and Ethical Issues*, New Brunswick (N.J.), Rutgers University Press, 1989, pp. 3 and 4.

[31] Frank H. EASTERBROOK, "Intellectual Property Is Still Property," (1990) 13 *Harvard J.L. & Pub. Pol.* 108-118, p.109; with respect to the prerogatives of the property right traditionally recognized over tangible goods, see: LEPAGE, Henri, *Pourquoi la propriété*, Paris, Hachette, 1985, coll. Pluriel., pp. 16-17.

[32] Jerome H. REICHMAN, "Legal Hybrids Between the Patent and Copyright Paradigms," in W.F. KORTHALIS ALTES *et al* (1992), p.326.

[33] William M. LANDES and Richard A. POSNER, "An Economic Analysis of Copyright Law," (1989) 18 *Journal of Legal Studies* 325-363, 347.

[34] J.H. Reichman, "Legal Hybrids" (1992), p. 327

[35] W.M. LANDES and R.A. POSNER, (1989), p. 345

[36] Pamela SAMUELSON, "Creating a New Kind of Intellectual Property: Applying the Lessons of the Chip Law to Computer Programs," (1985) 70 *Minnesota L.R.* 471-531 p.496; See in the United State: *Computer Associates International v. Altai, Inc.* 23 *U.S.P.Q.* (2d) 1241 (2d Cir. 1992) 1257; *Brown Bag Software v. Symantec Corp.*, 960 F. 2d 1465 (9th Cir. 1992); *Atari Games Corp. v. Nintendo of Am.*, 975 F. 2d 832 (Fed. Cir. 1992); and *Apple Computer, Inc. v. Microsoft Corp.*, 799 F. Supp. 1006 (N.D. Cal. 1992)

[37] See: BANGEMANN Report, *Europe and the global information society*, European Commission, Brussels, May 26, 1994 [hereafter called Bangemann Report]; Bruce A. LEHMAN, *Green Paper - Intellectual Property and the National Information Infrastructure*, Preliminary Draft of the Report of the Working Group on Intellectual Property Rights, Washington D.C., July 1994 [hereafter called Lehman Report]; ADVISORY COMMITTEE ON THE INFORMATION HIGHWAY, *Copyright and the Information Highway*, Preliminary Report of the Sub-Committee on Copyright chaired by Claude Brunet, Ottawa, Dec. 1994 [hereafter called Brunet Report]; MINISTÈRE DE LA CULTURE ET DE LA FRANCOPHONIE, *Industries culturelles et nouvelles techniques*, Report of the Commission chaired by Pierre Sirinelli, Paris, 1994 [hereafter called Sirinelli Report]; and AGENCY FOR CULTURAL AFFAIRS, JAPAN, *Study of Institutional Issues Regarding Multimedia*, A Report on Discussions by the Working Group of the Subcommittee on Multimedia Copyright Council, February 1995 [hereafter called Japanese Report].

[38] In reality, the *Berne Convention* does not require any formality for works to be recognized within member states. (*Berne Convention for the Protection of Literary and Artistic Works*, signed on September 9, 1886 and last revised in Paris, on July 24, 1971 [hereafter called *Berne Convention*]). However, the Universal Convention demands that the work bear the symbol (c), followed by the author's name and the year of first publication (*Universal Copyright Convention*, signed in Geneva, September 6, 1952 and revised in Paris on July 24, 1971, art. III (1) [hereafter called *Universal Convention*]).

[39] *Berne Convention*, art. 1; *Universal Convention*, art 1; *Loi n° 92-597 du 1er juillet 1992 relative au Code de la propriété intellectuelle*, last amended by *Loi n° 94-361 du 10 mai 1994*, art. L. 112-2 [hereafter called *Code français de la propriété intellectuelle*]; *Canadian Copyright Act*, sec. 3; *US Copyright Act*, §106; and *Japanese Copyright Act*, n° 48 of 1970, sec. 10(1).

[40] See: *Berne Convention*, art. 2(2): "It shall, however, be a matter for legislation in the countries of the Union to prescribe that works in general or any specified categories of works shall not be protected unless they have been fixed in some material form;" *US Copyright Act*, § 102(b): "In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such a work."

[41] On the criterion of fixation, see: Ysolde GENDREAU, "Digital Technology and Copyright: Does the Disappearance of the Copy Lead to the Disappearance of the Author?" in the publication of the papers of the *Symposium on Digital Technology and Copyright*, held by the Department of Justice, Meech Lake, March 3, 1995.

[42] See: David VAVER, "Rejuvenating Copyright Digitally," in the publication of the acts of the *Symposium on Digital Technology and Copyright*, held by the Department of Justice, Meech Lake, March 3, 1995; and Howard KNOPF, "Copyright and the Infoway: Catalyst for Progress or Cause of Gridlock?" *loc. cit.*

[43] On moral rights, see: Y. Gendreau, *supra.* note 41.

[44] On the exception of fair use, see: Pamela SAMUELSON, "Adapting Copyright to Meet the Challenges Posed by Digital Technologies," in the publication of the papers of the *Symposium on Digital Technology and Copyright*, held by the Department of Justice, Meech Lake, March 3, 1995.

[45] on criminal recourse in copyright law, see: Wanda Noel, "Criminal Enforcement of Copyright - Study Prepared for the Department of Justice," in the publication of the papers of the *Symposium on Digital Technology and Copyright*, held by the Department of Justice, Meech Lake, March 3, 1995

[46] Brunet Report, p. 10

[47] Lehman Report, p.27, where the authors write: "The somewhat strained analysis needed to find a category for multimedia works and the increasing 'cross-breeding' of types of works demonstrate that categorization may no longer be useful. Its necessity is also questionable, except, perhaps, in the case of sound recordings, which are not granted the full panoply of rights. Consideration may be given to eliminating categorization under the Copyright Act in the future."

[48] Japanese report, p.53

[49] *Proposal for a Council Directive on the legal protection of databases*, COM (92) 24 final - SYN 393, No. C 156/4 of June 23, 1992.

[50] *Loi n° 92-597 du 1er juillet 1992 relative au Code de la propriété intellectuelle*, last amended by *Loi n° 94-361 du 10 mai 1994*, art. L. 112-2 [hereafter called *Code de la propriété intellectuelle*].

[51] Sirinelli Report, p. 78.

[52] In the United States, this situation was corrected with the decision in *Feist Publications Inc. v. Rural Telephone Service Co. [18 U.S.P.Q.* (2d) 1275 (U.S. Sup. Ct., 1991) 1283.], regarding the copyright protection of compilations of factual data. The U.S. Supreme Court held that originality remains the fundamental criterion in copyright protection and that it cannot be extended to non-protectable materials, solely on the basis of reward for labour.

[53] Dan L. BURK (1994).

[54] See for example the Brunet Report, p.47, which states: "[translation] International developments in copyright are still at the preliminary stage, at a time when the United States, Japan and other countries are confronted with the need to update their legislation as a result of changes brought about by the information highway. In the absence of a clear international consensus on the measures to be taken, it would be premature for Canada to consider 'harmonization' of its laws as an end in itself. In fact, the solutions proposed by Canada could even serve as a model for other countries".

[55] Lehman Report, p.135.

[56] Fred GREGURAS, Michael R. EGGER, and Sandy J. WONG, "Multimedia Content and the Super Highway: Rapid Acceleration or Foot on the Brake?" available on the Internet: ftp.eff.org/pub/CAF/law/multimedia.copyright.

[57] Brunet Report, p.37; Sirinelli Report, p.72; see also: MULTIMEDIA COMMITTEE OF THE INSTITUTE OF INTELLECTUAL PROPERTY, JAPAN, *Exposure '94*, February 1994, p.19.

58 Pub. L. N° 96-517, 94 Stat. 3007 (1980) (codified in 17 U.S.C. §§ 101, 117 (1982)). This legislative amendment was made following the tabling of the final report of the *National Commission on New Technological Uses of Copyrighted Works (CONTU)*[Final Report 3-8 (1979)] whose mandate touched on the protection of computer programs only incidentally. The final report recommended that copyright be extended to software programs, despite the dissenting opinion of two commissioners and the serious doubts expressed by a third. For the legislative background, see: SAMUELSON, Pamela, "CONTU Revisited: the Case against Copyright Protection for Computer Programs in Machine-Readable Form," (1984) 1984 *Duke L.J.* 663-769.

59 In Germany: *Erstes Gesetz zur Änderung des Urheberrechtsgesetzes*, of June 24, 1985, BGB1 I. S. 1137; in Japan: *Software Protection Act*, n° 62 of June 14, 1985; in France: *Code français de la propriété intellectuelle*, art. L. 112-2, par. 13; in Canada: *Act to amend the Copyright Act and to amend other Acts in consequence thereof*, C.S. 1988, C. 15.

60 *Sega Enterprises Ltd.* v. *Accolade*, 977 F. 2d 1510 (9th Cic. 1992); see: Richard H. STERN, "Is the Centre Beginning to Hold in US Software Copyright Law?" (1993) 15 E.I.P.R. 39-41, 40.

61 *Computer Associates*, 23 *U.S.P.Q.* (2d) 1241 (2nd Cir. 1992) 1254: "While, hypothetically, there might be a myriad of ways in which a programmer may effectuate certain functions within a program, - i.e., express the idea embodied in a given subroutine - efficiency concerns may so narrow the practical range of choice as to make only one or two forms of expression workable options."

62 Ashok BHOJWANI, "The Software Paradigm and the Laws of Intellectual Property", in WIPO, *Worldwide Forum on the Impact of Emerging Technologies on the Law of Intellectual Property* (1988), p.75.

63 James B. GAMBRELL, Gary W. HAMILTON and Jeffrey C. HOOD, "*Whelan* and *Altai:* Protecting Software By Abusing "Idea" and "Expression," (1994) 11 n° 7 *The Computer Lawyer* 9-22, 19, where the authors write: "Perhaps a new form of protection is necessary which recognizes that computer software should be protected, but without torturing the idea/expression dichotomy, without denying its functional nature, and without giving it everlasting life;" see P. Bernt HUGENHOLTZ, "Convergence and Divergence in Intellectual Property Law: The Case of the Software Directive," in W.F. KORTHALS ALTES *et al* (Ed.) (1992), pp. 319-323; and Friedrich-Karl BEIER, "The Future of Intellectual Property in Europe," (1991) 22 *IIC* 157-177.

64 J.O.C.E. n° L 122/42, of May 17, 1991 [hereafter called *Directive on the protection of computer programs*].

65 Karl Egbert WENZEL, "Problematik des Schutzes von Computer-Programmen", *GRUR* 1991, 105-110, 110; "[translation] Regardless of the validity of the recommendation on the subject, it clearly shows that, based on the Proposed Directive, it is not copyright in the traditional sense, but rather a special right, that is, a neighbouring right, and hence a performing right. Any affirmation to the contrary is pure fiction. This is also confirmed by the now generally accepted opinion that protection and its limitations require original regulation to be developed in a reasonable manner."

66 Sirinelli Report, p.77

67 Andrew CHRISTIE, "Designing Appropriate Protection for Computer Programs," [1994] 11 E.I.P.R. 486-493.

68 See: WIPO, *Worldwide Symposium on the Intellectual Property Aspects of Artificial Intelligence*, Stanford University, WIPO, 1991.

69 Lehman Report, p.95.

[70] *Convention on the issue of European patents*, of October 5, 1973, reproduced in (1974) 13 I.L.M. 270-351 [hereafter called *European Patent Convention*], art. 52 "European patents are issued for new inventions involving an inventive step and capable of industrial application" [translation]; *Patents Act*, R.S.C. (1985), c. P-4, sec. 2 [hereafter called *Canadian Patents Act*], definition of invention: "Any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter;" *Patents Act*, 35 U.S.C. §101 [hereafter called *US Patents Act*]: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."

[71] *Canadian Patents Act*, sec. 44; *European Patents Convention*, art. 63; *Loi n° 68-1 du 2 janvier 1968, telle que modifiée, sur les brevets d'invention* (J.O. of January 3, 1968), art. 3 [codified in art. L. 611-1 to 615-22 of the *Code français de la propriété intellectuelle*]; *Japanese Patents Act*, N° 121 of April 13, 1959, last amended by Law N° 27 of 1987 [hereafter called *Japanese Patents Act*]. The United States will have to change the duration of protection from 17 to 20 years to conform to the GATT.

[72] Period of one year after disclosure; *Canadian Patents Act*, sec. 28.2 and *US Patents Act*, §102. Period of six months after disclosure: *Japanese Patents Act*, sec. 29; *European Patents Convention*, art. 55; *Code français de la propriété intellectuelle*, art. L.611-13.

[73] *European Patent Convention*, art. 83; *US Patents Act*, §112; *Canadian Patents Act*, sec. 34; and *Japanese Patents Act*, sec. 36(3).

[74] Rainer SCHULTE, *Patentgesetz - Kommentar auf der Grundlage der deutschen und europaischen Rechtsprechung*, 4th Ed., Munchen, Carl Heymanns Verlag, 1987, p.373.

[75] Greg AHARONIAN, "Internet Patent News Service," electronic message of January 30, 1995 accessible on the Internet: patents@world.std.com

[76] H.E. PEARSON, "Patentability of Software/Computer Related Inventions in Europe," Patent World, April 1992, p.12-19. See EPO case law: *Computer-Related Invention* / VICOM, T208/84, reproduced in (1987) *O.J. of EPO* 14; *X-ray Apparatus* / KOCH & STERZEL, T26/86, reproduced in (1988) *O. J.of the EPO* 19.

[77] David S. BENYACAR, "Mathematical Algorithm Patentability: Understanding the Confusion," (1993) 19 *Rutgers Computer & Technology L.J.* 129-194, 134.

[78] Manfred KINDERMANN, "Software-patentierung (1) - Stand der Rechtsprechung des BGH und EPA," [1992] 10 *Computer und Recht* 577-588, 585 et ss.; and Pamela SAMUELSON, "Benson Revisited: The Case Against Patent Protection for Algorithms and Other Computer Program-Related Inventions," (1990) 39 *Emory L.J.* 1025, 1139.

[79] In *re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994) (en banc).

[80] Stephen C. DURANT, "Patents in Cyberspace: Impact of Recent Federal Circuit Decisions," (1995) 12 *The Computer Lawyer* 1-13, 5.

[81] Jerome T. TAO, "Theories of Computer Program Patentability," (1991) 7 *Santa Clara Computer & High Technology L.J.* 291-319, on pages 314 and 315.

[82] Robert C. SCHEINFELD and Gary M. BUTTER, "Using Trade Secret Law to Protect Computer Software", (1991) 17 *Rutgers Computer & Technology L.J.* 381-419, 399, where the authors write: "Unfortunately, the time from filing a patent application for a computer software program to its issuance as a patent can exceed two years, which in certain instances may be the commercial lifespan of a computer program."

[83] Vance Franklin BROWN, "The Incompatibility of Copyright and Computer Software: An Economic Evaluation and a Proposal for a Marketplace Solution," (1988) 66 *North Carolina L.R.* 977-1016, p.982.

[84] USPTO, *Public Hearings on Use of the Patent System to Protect Software-Related Inventions*, Before Bruce A. Lehman, San Jose (CA), January 26 & 27, 1994 and Arlington (VA), February 10 & 11, 1994.

[85] USPTO, *Public Hearings on Use of the Patent System to Protect Software-Related Inventions*, Before Bruce A. Lehman, Arlington (VA), February 10 & 11, 1994, p.2.

[86] Simson L. GARFINKEL, "Patently Absurd," in *Wired*, 2.08, July 1994, p.140.

[87] Lehman Report, p.101.

[88] See: Marie-Angèle HERMITTE, "Les concepts mous de la propriété industrielle: passage du modèle de la propriété foncière au modèle du marché," in Bernard EDELMAN and Marie-Angèle HERMITTE, *L'Homme, la nature et le droit*, Paris, Christian Bourgois Éditeur, 1988, p.95: [translation] "the multiplication of rights granted makes their effectiveness doubtful, results in endless dissatisfaction and leads to insoluble conflicts on the scope of each party's rights."

[89] Rob TEIJL and Rudi W. HOLZHAUER, *Property Rights, Property Rules and Liability Rules: Another View, Another Cathedral*, document presented at the 7th Annual Conference of the European Association of Law and Economics (EALE), Rome, September 3-5, 1990, 44p., p.20, where the authors write, in relation to patents: "Furthermore the need for patents depends on the interrelation of costs, risks and potential payoffs."

[90] Ejan MACKAAY, "Legal Hybrids: Beyond Property and Monopoly?" (1994) 94 Columbial Rev. 2630-2643

[91] Sirinelli Report, p.103, which states: "[translation] Copyright is not as unadaptable as some say to the phenomenon of digitization. While it is true that in almost all countries in the world the right resulted from a technical 'leap' (discovery of printing) that led to the rethinking of the economy of cultural markets, it subsequently adapted to various innovations (...). The only real question is whether this right, whose roots date back to the end of the 18th century (but which has been retooled several times since then), is a right built around a similar universe and if it corresponds to the "new context" as we enter the digital era. (...) Adaptation is, for the time being, possible without radical modification."

[92] A.N. DIXON and L.C. SELF (1994), p.471.

[93] E. MACKAAY (1994), p.2641.

[94] See: Ejan MACKAAY, "L'ordre spontané comme fondement du droit - un survol des modèles de l'émergence des règles dans une société civile," (1988) 22 *Revue juridique Thémis* 347-383.

[95] M.-A. HERMITTE, "Histoires juridiques extravagantes," in B. EDELMAN and M.-A. HERMITTE (Ed.).

# Criminal Enforcement of Copyright

Wanda Noel

## Introduction

The environment in which we work and play is inundated with new technology. The technologies we use in our homes and offices to live, work and communicate with each other would have been unrecognizable even ten years ago. Can you imagine a world without fax machines or electronic mail? All of this new technology has been intimidating at times. It also is incredibly useful once one catches on to how to use it.

What does all this have to do with the criminal enforcement of copyright? With advances in technology, it is becoming easier and easier to infringe copyright. In the past decade it has become not only possible, but easy, to make your own audio cassettes, to copy motion picture films and computer software and to photocopy printed material. Many copyright infringements are possible, and even easy, on a large scale. As technology continues to develop we will be provided with even more ways to use the intellectual property of others in ways that are not authorized by their owners, and which infringe upon their legal rights as provided by the copyright law.

Downloading from bulletin boards, and the ease with which multimedia works can be created, and rearranged to suit our purposes, are activities governed by the copyright law. To do these things without authorization of the owner is illegal. For example, to reproduce a work by downloading it from a bulletin board, or to use the work of others to create a multi-media work, is infringement.

As a person who is usually intimidated by new technology, I react to these descriptions of what technology can do with a sinking feeling of having to meet yet another technological challenge. Unfortunately, as managers and policy makers, it is your duty to address the legal and social policy consequences of this rapid technological development. The issue is whether the legal remedies that are available to copyright owners are appropriate to society's view of the seriousness of the copyright infringement. To use a colloquial phrase: the punishment must suit the crime.

# The Law

The copyright law in Canada has three kinds of remedies available to copyright owners when the rights provided by the Act are infringed. The first kind of remedy is civil.[1] These include the usual array of remedies for the infringement of a right: injunctions, money as a compensation for the damage caused by the wrong as well as remedies dealing with disposition of the actual goods. Civil remedies are the most commonly used.

The Act also contains a second type of remedy, which is administrative in nature.[2] This remedy allows the copyright owner to use the customs apparatus to prevent the importation into Canada of infringing copies of a copyright work.

The third kind of remedy is the activation of the criminal law enforcement process.[3] The criminal remedy is the focus of this paper. In 1988 the provisions in the *Copyright Act* relating to criminal remedies were changed.[4] Prior to these amendments a court in a criminal copyright case was restricted to a maximum fine of $10.00 per infringing copy with a maximum fine of $200.00. These amounts had remained unchanged since 1924. The antiquity of these provisions is illustrated by the reference in the Act to the long outlawed sentencing option of "hard labour".

In 1988 the maximum fine was increased to $1,000,000 and/or a term of imprisonment not exceeding five years or both, where the Crown proceeds by indictment. For a summary conviction offence, a person can receive a fine not exceeding $25,000 and/or a maximum of six months' imprisonment or both.

These legislative amendments were made as a result of recommendations of a parliamentary committee which stated the reasons for its recommendation to increase criminal remedies:[5]

> Theft is a very serious matter. Piracy costs copyright owners millions of dollars every year. Accordingly, copyright owners need the full force of the criminal law to protect their intellectual property.

These amendments have been in place for six years. The same period of time has seen new technology make infringement of copyright easier, faster and cheaper. The purpose of this paper is to examine the results of these changes. Who is using these provisions? Who are these provisions being used against? In what circumstances are they being used? Is that use appropriate? How are civil prosecutions being distinguished from criminal ones? What are the costs to the justice system of these provisions? Could the same results be achieved in other less expensive ways? Six years later, are there factors that warrant changes in the law?

During the research phase of this project, police officers, lawyers, copyright owners, distributors, Crown counsel and public servants could not resist exploring and probing the propriety of using the criminal law to enforce what are essentially private economic rights. The same question is appropriate for this audience. All of these issues are open for debate and discussion.

However, to put the debate in context it should be pointed out that the agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) obliges member states in Article 61 to provide for criminal procedures and penalties in cases of copyright piracy on a commercial scale. Remedies must include imprisonment and/or fines sufficient to provide a deterrent consistent with the level of penalties applied for crimes of corresponding gravity.

## Statistical information

Information on criminal law enforcement has been obtained from four sources: Canadian Intellectual Property Office (CIPO), the RCMP Immigration & Federal Branch, an operating RCMP investigation unit actively engaged in copyright prosecutions and industry groups in the private sector. Information obtained from each of these sources is set out below.

## RCMP Immigration and Federal Branch

The Immigration and Federal Branch of the RCMP maintains statistics relating to their involvement in criminal copyright prosecutions across the country.[6] The calendar year 1993 has been selected as the survey period. Information is complete for this year. This time period is both recent and subsequent to the 1988 amendments to the *Copyright Act*.

In 1993 there were 740 copyright complaints received by the RCMP. These complaints resulted in 343 charges being laid under the *Copyright Act*. Three hundred and thirteen of these complaints did not result in charges . These were disposed of in other ways. For example, because there was insufficient evidence, by being referred back to the civil process or because the copyright owner did not wish to proceed. The remaining 84 complaints were listed as unfounded.[7]

The word "charge" is used here to refer to the number of charges laid against an accused in one prosecution. For example, one prosecution typically involves several charges. On a simple averaging there would have been 6.47 charges per prosecution using the requests for certified copies of registration certificates received by CIPO in 1993. Using the same simple averaging there would have been five charges in each case at "A" Division from 1990 to 1994.

## CIPO Data

Another source of statistical information is the records of the Canadian Intellectual Property Office (CIPO). It is the practice of police investigators to request certified copies of the copyright registrations to be used as evidence at trial. The *Copyright Act* provides certain presumptions of authorship and ownership if a work is registered. A certified copy of a registration certificate is used in a criminal court as evidence of the subsistence of copyright in a work and who owns the work.[8] In fact, copyright is usually registered before the start of court proceedings and certified copies of registration documents are obtained from CIPO for court purposes.[9]

This information is maintained by CIPO only as a record of certified copy requests. Its value as a research tool on criminal copyright enforcement is therefore limited. The following conclusions can be drawn from the information contained in the CIPO files.

### (i) Volume

With the assistance of CIPO staff 53 requests for certified copies made by various police organizations in 1993 were identified. The various police groups requested many certified copies of registration certificates from CIPO in 1993. CIPO supplied 588 certificates. There is a difference between the number requested and the number supplied because not all the works for which certificates were requested were in fact registered.

Each of the 53 requests appears to relate to a separate prosecution. Some prosecutions involved only a few works while others involved many. The requests for certified copies of registration certificates for a specified work ranged from a low of one certificate to a high of 128.

### (ii) Profile of Enforcement

All but three requests originated from the RCMP. This indicates that most of the activity in criminal copyright prosecutions is originated by the RCMP. Some RCMP detachments are very active in criminal copyright prosecutions while others are not active at all. Although there are in excess of 700 RCMP enforcement units that could be active in copyright complaints, requests for certified copies came predominantly from Montreal and Ottawa. These two areas accounted for 21 of 53 requests. The remaining requests came from a total of 23 other units.

Various explanations were suggested by CIPO officials as to why there are more criminal copyright cases in some areas than in others. One view is that the alleged criminal activity is an urban phenomenon resulting in more cases in the larger metropolitan areas. In cross referencing this opinion with the origin of the requests for certified copies at CIPO, this opinion could not be confirmed. While 13 of the 53 requests originated in Montreal, which is a large urban centre, only four originated in Vancouver, which is also a large metropolitan area.

Other opinions attributed the difference to the copyright owners and their representatives. In some areas, copyright owners are active in making complaints to the police but in others they are not. This may not be a plausible explanation with respect to industry groups in the film, sound recording and computer software industries. These industries are organized not only on the national level but on an international scale as well. In addition, information obtained from the actual files of an RCMP unit indicate that complaints to the RCMP about copyright come from a wide variety of sources, with no discernable pattern.

A third explanation, suggested by CIPO officials, of the variance in criminal copyright enforcement relates to the experience and interest of the police in a certain area. Once a police officer has undertaken one copyright prosecution, the second one is easier because the law, the procedure and the evidence required is more familiar. Although admittedly unscientific, I am of the view that this may be a partial explanation for the differences in criminal copyright enforcement between areas.

**(iii) Unregistered Works**

Examination of the CIPO files revealed that many works, for which registration certificates were requested, were not registered. A response to police by CIPO staff that the work was not registered sometimes was followed by a request to register the work. One could speculate that a registration request in these circumstances would be for the purpose of taking advantage of the presumptions that arise from registration under the *Copyright Act*. The request for registration and certified copies of the registration certificate in these circumstances would likely be part of the prosecution's evidence preparation.

**(iv) Complainant Profile**

It was possible to identify who was accessing the criminal justice system to enforce their copyright by tracing the registration certificate requested by the investigating officer to the work itself. The categories of works for which certified copies of registration certificates were requested were: video games, computer software, audio-visual works (films), artistic works (Robert Bateman reproductions and cartoon strips), musical works (sound recordings) and artistic works contained in logos (NHL, Levi and Molson).

Information in the registration certificate identified the types of works which were involved in police investigations. From this information some general observations are possible. There were 53 separate requests for certified copies of registration certificates in 1993. This indicates that 53 investigations proceeded to the point of getting evidence of ownership to establish that the copies in question were infringing. The breakdown of the number and the types of works is as follows:

- 13 computer programs
- 12 films
- 9 cartoon characters
- 8 logos

- 7 video games
- 3 musical works
- 1 artistic work

The registration certificates indicate the works that are the subject matter of criminal cases: 25 percent of the requests involved computer software, 23 percent involved films, 16 percent involved cartoon characters, 15 percent involved logos, 13 percent involved video games, 6 percent involved musical works and 2 percent involved artistic works.

The actual works for which the registration certificates were requested reveal some information about their owners. For example, for the computer program registrations, most of the works had well known owners, such as Microsoft and IBM. The computer programs had easily recognized names such as MS-DOS and Wordperfect. However, two of the requests related to computer software were registered to individuals.

This is 10 percent of the computer cases or 4 percent of all the cases identified. This indicates that individuals, as well as the large computer software developers, are using the criminal justice system to enforce their copyright.

In the logo cases a similar observation could be made. The logos were owned by well known sports clubs (NHL, NBA, NFL), clothing designers (Levi, Roots), and beer companies (Molson). These logos themselves are well known. Typical cases involved use of the logos on wearing apparel sold at flea markets. The same conclusion also can be drawn with respect to many of the cartoon characters and the video games. The one request categorized as "artistic" involved reproductions of Robert Bateman's art.

## "A" Division Data

The third place where statistical information was obtained was an actual RCMP Federal Investigation Unit, which will be referred to as "A" Division. Geographically this represents the National Capital Region. It was not possible because of time and resource constraints to carry out an in-depth analysis of every RCMP Federal Enforcement Unit. The purpose of the research at "A" division was to create a profile of the activities of one RCMP Federal Enforcement Unit in the area of criminal copyright enforcement. "A" Division was used as an example. It does not represent a scientific sample.

### (i) Volume

The filing system at "A" Division allocates every complaint it receives to a category. Copyright is one of those categories. Sixty-seven files were allocated to the copyright category in the four-year period between 1990 and the end of 1993. Five files were unavailable. From the remaining 62 files, 38 copyright investigations were identified as having been carried out by "A" Division during the period reviewed.

Most of these cases were opened because someone made a complaint to police. In RCMP terminology, this is referred to as "reactive policing". Thirty three of the 38 investigations fall into this category. The remaining five were examples of "proactive policing" or "projects" as they are sometimes referred to. This involves a police investigation of an activity throughout the area for which a unit is responsible.

One investigation that led to pro-active policing involved the unauthorized installation of computer software on the hard drive of computers, usually in order to sell the computer in a retail store. This project began with complaints received by "A" Division from people purchasing computers. After purchasing a computer some technical problem would arise. The purchaser would be told by an advisor to "check the manual". The purchaser would not have a manual because they had not purchased the software. The computer vendor, to make the sale, would have loaded an unauthorized copy of the software, at no charge, as an inducement to the purchaser to buy the hardware.

In 1991 "A" Division launched an investigation of several computer stores in its jurisdiction. Few of the stores were engaged in this practice. If a purchaser wanted a software program then they were sold the program as a separate item, it was properly invoiced and the manufacturer's materials accompanied the diskettes. Other stores, however, did sell undercover police officers, posing as customers, computers with unauthorized software loaded by the store prior to delivery or pick up of the computer. The "project" in this case resulted in 16 charges being laid against four stores. On guilty pleas, 10 convictions were obtained.

Other examples of "A" Division's activities of a similar nature involved the manufacture of unauthorized circuit boards for arcade games and the photocopying of workbooks and instruction manuals in private business and language schools.

### (ii) Profile of Complainants

Examination of the "A" Division files revealed the origins of the complaints to police which eventually led to the opening of a file and an investigation. There are three general categories of complainants:

*The General Public*

- an individual who wanted to remain anonymous;
- owners of businesses who suspected their competitors of infringing activities that gave them a competitive advantage, e.g., renting home-made copies of films or infringing copies of sound recordings; and computer retailers who sold computers with copies of pre-loaded software at no cost to make a sale;
- a tip received through "Crime Stoppers", which is a phone number advertised to the public as a place to call to report suspected criminal activities;
- individuals complaining to police about the purchase of a computer pre-loaded with software but without accompanying manuals and diskettes;
- members of the general public, e.g., a student complaining about the cost of photocopied course material; a municipal election candidate complaining about the activities of an opponent; and an individual alleging the stealing of an idea.

*Copyright Owners and Their Representatives*

- trade associations representing owners of copyright works, such as circuit boards for arcade games, music and computer software;
- copyright owners themselves (Robert Bateman and Garth Brooks).

*Pro-Active Policing*

- information obtained in executing a search warrant in another matter;
- individual police officers acting on their own suspicion of criminal copyright infringements.

There is no pattern indicated from the complainants to "A" Division. The complaints originated from many different sources. There is no dominance of one category of complainant.

One observation that can be made is that often the corporations or trade associations administering copyright were involved in the investigations. Their involvement, however, was not always as a result of making or receiving a complaint. Their involvement was also as a result of the RCMP investigator contacting them as owners of copyright for assistance in the investigation. Examples of the assistance requested by police are establishing the subsistence and ownership of copyright, and confirming that the copies involved in the investigation are infringing copies. This often cannot be determined without the assistance of the copyright owner.

In fact, RCMP investigation procedures recommend that, in the case of a copyright complaint, the copyright owner be contacted.[10] The RCMP investigator is advised to contact the owner/creator early in the investigation to secure the person's or company's cooperation and their desire to proceed with a criminal charge. The obvious conclusion to be drawn from this procedure is that, if the owner does not perceive the act complained of as being a criminal matter, then neither should the RCMP. RCMP policy is predicated on the fact that the cooperation of the copyright owner is essential in proving several essential elements of the offence. Without that cooperation it is difficult to prove the existence of the copyright, ownership and that the copies alleged to be infringing are in fact infringing.

### (iii) Profile of the Alleged Infringers

The "A" Division files reveal a varied assortment of alleged infringers:

- an individual previously convicted of renting infringing copies of films;
- retail stores that were sometimes corporate entities and sometimes were operated by individual owners who were accused of making, renting or selling infringing copies of copyright material;
- individuals making and selling infringing copies of video games, works of art (Robert Bateman);
- a copy shop making photocopies of copyright material on request;
- a private school photocopying course materials and selling them to students;

- mail solicitation for buyers of copyright material (CDs and computer software) at prices well below market;
- flea market and street vendors making and selling infringing copies of sound recordings and wearing apparel with logos that infringe copyright;
- a Canadian manufacturer of infringing sound recordings that are distributed in France.

No profile of a typical suspected infringer can be drawn from this list. One observation is that most of the cases involve sales to the public. The venue of the sale varies. Flea markets, mail order, retail stores, photocopy shops, language and business schools are all alleged to have sold infringing copies of works protected by copyright.

A few cases involve making infringing copies for distribution rather than sale. The most prominent example of this type of defendant was found in CIPO files. A corporation was accused of distributing infringing copies of computer software to its employees.[11] The accused in this case pleaded guilty and received a fine of $50,000.

A second observation is that the suspects in the "A" Division cases are Canadian.The dimensions of the problem however are not confined to national borders. One example is infringing copies of Asian films originating in Hong Kong. Another is recent news broadcasts stating that China has built another two CD factories, which will further increase the supply of counterfeit CDs to North America.

**(iv) Disposition of Cases**

There were 36 copyright investigations conducted by "A" Division in the four year period between 1990 and 1993. These cases were disposed of as follows:

- 2 "not guilty";
- 4 "disposition unknown" ("A" Division providing assistance to another RCMP unit);
- 1 verdict not yet rendered;
- 4 "charges withdrawn";
- 22 "no charges laid" (insufficient evidence, unfounded, could not find suspect, no victim, letter sent to all business schools informing them that photocopying copyright material is infringement);
- 1 "pleaded guilty";
- 2 "found guilty".

The fines were:

- On the guilty plea, on two counts, a fine of $1,000, one year probation and 100 hours of community service;
- "Found guilty" on two counts and fined $300 per count for atotal fine of $600; and
- "Found guilty" on three counts, fined $750 per count, for a total fine of $2,250 and 75 hours of community service.

**(v) Profile of Enforcement**

"A" Division is an active unit in criminal copyright enforcement. CIPO records indicated that (15 percent) or eight out of 53 requests for certified copies of registration certificates originated in "A" Division. The reasons identified as a result of the research at CIPO, with respect to the profile of enforcement, were also explored with "A" Division investigators.

The first reason suggested for some areas being more active than others was that criminal copyright infringement was more prevalent in large urban centres. Although the National Capital Region is an urban area, it is not the largest in the country. Yet its volume of criminal copyright cases places it ahead of Toronto and Vancouver.

The second reason for the differences in criminal enforcement activities was that copyright owners are more active in seeking criminal enforcement in some areas. This reason may have some validity. The investigating RCMP members interviewed were familiar with industry individuals who are active in copyright enforcement. In fact, technical assistance in evaluating critical evidence in an investigation is often required. For example, determining whether a circuit board, computer program or sound recording is a legitimate or an infringing copy is a matter requiring considerable technical knowledge and expertise. Industry representatives and RCMP investigators have a working relationship in "A" Division, which may partly explain the higher incidence of prosecutions in this Division.

The third explanation relates to the interest and experience of police officers. It may be easier to get the police to act on a copyright complaint when they have some experience and/or interest in copyright enforcement. Interviews at "A" Division support this explanation. A core of four out of 15 members in the unit were active in the copyright area. Discussions with lawyers acting for copyright owners also provided some support for this explanation.

Familiarity with criminal copyright offenses, the evidence required and how to obtain that evidence demonstrated a steep learning curve on the part of investigating RCMP members. This knowledge and experience resulted in action on more complaints and more charges being laid. The same may also be true in the other active RCMP detachment (Montreal), which accounted for 25 percent or 13 out of 53 files at CIPO.

## Industry Data

Statistical information was also obtained from the private sector. The Film Video Security Office is a private organization formed by the Canadian Motion Pictures Distributors Association to combat film piracy in Canada. Chart I below is a record of the FVSO's activities since it was formed in 1983.

Chart I

| Year | Product Seized | Number of Seizures | Number of Prosecutions | Fine in $ | Average Fine |
|---|---|---|---|---|---|
| 1983 | 10,518 | 42 | 2 | 3,240 | 1,620 |
| 1984 | 12,780 | 54 | 57 | 71,090 | 1,247 |
| 1985 | 20,098 | 89 | 23 | 19,801 | 860 |
| 1986 | 23,463 | 79 | 6 | 53,018 | 8,836 |
| 1987 | 23,318 | 118 | 38 | 106,809 | 2,810 |
| 1988 | 14,029 | 89 | 53 | 165,180 | 3,116 |
| 1989 | 10,072 | 50 | 38 | 94,137 | 2,477 |
| 1990 | 13,811 | 34 | 40 | 104,075 | 2,601 |
| 1991 | 3,329 | 31 | 25 | 101,000 | 4,040 |
| 1992 | 8,667 | 25 | 22 | 51,250 | 2,329 |
| 1993 | 6,523 | 31 | 15 | 43,100 | 2,873 |
| 1994 | 8,254 | 46 | 23 | 93,375 | 4,059 |
| **Total** | **154,862** | **688** | **342** | **$906,075** | **$2,649** |

The Canadian Record Industry Association also provided statistical information relating to its activities in seizing and prosecuting criminal cases in the sound recording industry. The chart II below summarizes the information provided.

Chart II

| Year | Product Seized | Number of Seizures | Number of Prosecutions | Number of Fines | Average Fine in $ |
|---|---|---|---|---|---|
| pre-1984 | 127,196 | 10 | 10 | 27,925 | 2,792 |
| 1984 | 30,000 | 1 | 0 | 0 | 0 |
| 1985 | 26,000 | 2 | 2 | 76,000 | 38,000 |
| 1986 | 13,009 | 2 | 2 | 22,500 | 11,250 |
| 1987 | 0 | 0 | 0 | 0 | 0 |
| 1988 | 24 | 3 | 0 | 0 | 0 |
| 1989 | 23,208 | 4 | 4 | 8,400 | 2,100 |
| 1990 | 4,642 | 8 | 3 | 5,100 | 1,700 |
| 1991 | 414 | 5 | 9 | 9,200 | 1,022 |
| 1992 | 603 | 4 | 4 | 2,400 | 600 |
| 1993 | 61,823 | 7 | 2 | 1,500 | 750 |
| 1994 | 3,488 | 6 | 3 | 69,000 | 23,000 |
| **Total** | **290,407** | **52** | **39** | **153,625** | **3,939** |

# Distinguishing Civil from Criminal cases

## Introduction

Identifying the criteria used by police, copyright owners and Crown counsel to distinguish between a case of civil copyright infringement and a situation where it is appropriate to initiate a criminal prosecution proved to be a difficult task. One method of describing the distinction between criminal and civil infringement is to ask the following questions. In the privacy of your own thoughts, I would like you to answer them.

How many of you have been in possession of an infringing copy of a work protected by copyright? Have you at one time or another been given, or used, or requested from someone, an infringing copy of a work protected by copyright? Let me give you some very common examples: a homemade audio tape of your favourite music to listen to in the car, a movie someone taped for you or some member of your family, a piece of software loaded onto the hard drive of your computer, or that new computer game that your teenage son or daughter borrowed from a school friend, which is now permanently installed in your personal computer.

Every one of these examples involves a copyright infringement. However, these examples are not *criminal* copyright infringements. They are civil infringements. This means that the worst thing that can happen is someone can sue you. The police will not show up at your door with a search and seizure order in any of these examples.

For a copyright infringement to be a criminal matter there must be some commercial dealing. In the cited examples, the audio tape would be available for the general public to purchase, or the movie available to rent, at the local video store. The infringer must profit or benefit in some way from the infringing copies. The criminal infringer must deal in infringing copies to make money or, in some cases, to save money by making copies for employees, or to rent out instead of buying a copy from the owner.

The issue to be addressed here is how criminal cases are distinguished from civil ones. As a practical matter, there are two participants involved in deciding whether a particular case is criminal or civil: the copyright owner and the police.

## The Copyright Owner

The copyright owners and their representatives, who were identified as users of the criminal justice system to enforce their copyright, were contacted as part of the research for this report. The main issue on which their views were solicited relates to how they distinguished civil from criminal cases.

The copyright owners who use the criminal justice system have one thing in common: all of them have their intellectual property embodied in tangible objects that are sold to the public. These objects include audio and video cassettes, CDs, computer software, video games, art prints and various kinds of wearing apparel containing logos protected by copyright. It is pointed out that the piratical activity involved is large scale, in terms of the number of infringers, in terms of the number of infringing works and in terms of the amount of monetary damage.

All of these copyright owners state that criminal sanctions are the only way to deal with pirates and with large-scale piratical activity. Copyright pirates have no intention of complying with the law and most are in a position to easily evade it. Copyright owners believe that effective criminal remedies are a deterrent. Without them, pirates would hide behind the expense and length of the civil process.

In this context, an interview with a complainant in a criminal case at trial during the research phase of this report puts a human face on the issue.[12] The case involves a distributor of Asian films. The distributor imports films from Asia and supplies them to video stores in various cities. In 1993 the distributor spent $120,000 in legal fees using the civil process in two Anton Pillar proceedings against video stores that were allegedly renting infringing copies of films, for which the distributor had the distribution rights. The revenues of the distributor in the same year were $400.000. The problem still exists. In fact, the distributor alleges that for each legitimate store renting Asian films there are at least two, and possibly three, operating with infringing copies of films for which he has the rights. The distributor has ceased to operate his business because he cannot compete with the pirates.

The copyright owners of valuable logos are experiencing similar problems. There is widespread piracy of sports logos. Examples include T-shirts and baseball caps with NFL, NHL and NBA logos. Flea markets and retail stores can make and sell these objects at a fraction of the cost of a legitimate operator.

**CRITERION SUGGESTED BY OWNERS: The criminal provisions of the *Copyright Act* are appropriate where the infringing activities are widespread and the civil process will not stop the infringing activity. In short, nothing else will work.**

Another criterion mentioned to distinguish civil from criminal infringement is the monetary damage done to the copyright owner. A threshold was suggested. For example, where the damage was above a certain amount (e.g. $5,000) then criminal proceedings could be available. This solution was criticised because it does not deal with the reality that piracy frequently involves a large number of infringers, who together create great monetary damage but who individually do not inflict large damages. Examples provided were the two video stores renting and selling infringing copies for every store selling licensed copies and the numerous flea market vendors selling clothing with infringing logos.

**CRITERION SUGGESTED BY OWNERS: The criminal provisions of the *Copyright Act* are appropriate where the damages are in excess of a fixed amount.**

One of the major users of the criminal copyright provisions is the film industry. The unauthorized duplication of films and video cassettes became a major source of copyright infringement with the introduction of video cassette recorders. The infringing copies were sold and rented in competition with legal copies made by the copyright owner. The Film & Video Security Office (FVSO) was established in 1983 to combat this growing problem. The FVSO is well funded and is staffed with experienced investigators.

The FVSO reports that it refers cases to police only where the investigators determine that the infringer has violated section 42 of the Act wilfully and with the necessary intent. This is required to obtain a conviction, in light of the full *mens rea* requirement of the Act. Inadvertent violations are resolved without resort to either criminal or civil proceedings. These are treated as situations that require the individual be educated as to the fact that the individual's actions constitute copyright infringement. The FVSO estimates that only one in ten complaints it investigates is referred to the police for criminal investigation.

**CRITERION SUGGESTED BY OWNERS: The criminal provisions of the *Copyright Act* are appropriate where there is evidence proving beyond a reasonable doubt that the accused intentionally committed the prohibited act with knowledge that the act was an infringement of copyright.**

Both the film and recording industries pointed out that it is impractical to exhaust its civil remedies before resorting to the criminal provisions of the Act. The net cost (after deducting the amount of any damages recovered) for each copyright owner to proceed civilly against many infringers, each of whom is relatively minor, cannot be justified. In this context the RCMP enforcement policy, suggesting that copyright owners exhaust their civil remedies prior to resorting to the criminal provisions, was rejected by copyright owners in the film and sound recording industries as impractical.[13] In this context, it should be pointed out that the cost of criminal investigations and prosecutions is equally high, if not higher than civil investigations.

**CRITERION SUGGESTED BY OWNERS: The criminal provisions of the *Copyright Act* are appropriate when the costs of civil proceedings against many infringers, when each infringement is relatively minor, cannot be justified.**

In this context it is pointed out by the FVSO that less than 1 percent of defendants charged with film piracy under the Act request a trial. Virtually all cases proceed on the basis of negotiated guilty pleas. It is pointed out that this reduces the amount of court time required and the cost to the Crown for the prosecution.

With respect to measures taken to warn infringers before involving police, the film industry has in place a number of educational components designed to ensure that would-be infringers are fully aware of what constitutes copyright infringement. That is:

- all films and video cassettes should contain warnings that unauthorized duplication constitutes copyright infringement;
- cease and desist letters are sent out when the FVSO reasonably concludes that an individual does not have the necessary *mens rea* under section 42 or 43 of the Act; and
- pamphlets, brochures and videos are prepared and distributed to industry participants and members of the public to better inform them of copyright infringement.

**CRITERION SUGGESTED BY OWNERS: Criminal proceedings are inappropriate where education and warnings to infringers will stop the infringing activity.**

The music industry has also been identified as a user of the criminal copyright provisions. However, not all music copyright owners fall into this category. The owners of performing rights do not use criminal enforcement. They explain this as follows:

> Most music users who require a performing right licence are businesses that are "going concerns" and those users who are not aware of their responsibilities under the Copyright Act usually comply with SOCAN's request for payment of the fees under the approved tariffs. Those that do not comply, in the absence of insolvency, ultimately end up paying the fees owing, damages and profits under a court judgement. Criminal remedies are more appropriate, although not necessarily exclusively, for infringers who do not have legitimate businesses and who normally are engaged in the mass production or sale of unauthorized (counterfeit) reproductions.[14]

**CRITERION SUGGESTED BY OWNERS: The criminal provisions of the *Copyright Act* are appropriate where the infringer does not have legitimate businesses and is engaged in unauthorized reproduction or sale of infringing copies.**

## Police

### (i) How Police Forces Are Chosen

The second participant in a decision on whether a particular case is civil or criminal is the police. The police force that is usually contacted is the RCMP. This is because the RCMP is viewed as having the primary responsibility for the enforcement of the criminal law provisions in the *Copyright Act*. Industry groups, however, point out that in certain cities the RCMP are either unable, due to more pressing matters, or at times unwilling to undertake a copyright infringement investigation.

In such cases industry groups then refer the matter to either provincial or local police forces. Copyright owners stated that, in most cities, provincial and local police forces are readily available to receive copyright complaints. However, the fact that only three requests to CIPO originated outside the RCMP suggests little prosecution activity from police forces other than the RCMP.

### (ii) RCMP Investigation Procedures

The RCMP is divided into enforcement units. At the national level these units have a coordinating centre called the Immigration and Federal Branch. This branch is responsible for the criminal enforcement policy for 196 federal statutes. The *Copyright Act* is one of them.

To co-ordinate federal enforcement, policies have been developed to assist investigators in their work. The parts of this document that apply to copyright have been made public.[15] Parts of this policy recommend how RCMP investigators should separate civil from criminal cases. The following recommendations are relevant.

- For minor copyright violations it is recommended that investigators consider contacting the owner/creator at the outset of the investigation to resolve the matter through civil recourse.

- It is recommended that complaints of copyright violations be investigated where the owner has unsuccessfully exhausted all civil remedies.

- It is recommended that the investigator contact the owner/creator early in the investigation to secure the person's/company's cooperation and desire to proceed criminally.

Research included interviews with a number of RCMP members at "A" Division who are actively involved in investigating copyright complaints. One of the areas of investigation is whether the complaint is a civil or criminal matter. This was confirmed by a file-by-file examination. Four of the 36 files examined were "closed" with notations that the complaint was a civil matter. Criteria used by the investigators included: whether a civil suit existed for the same complaint; whether a breach of contract was involved; and the motive of the complainant. If the person making the complaint wants financial compensation then the case is usually considered to be a civil matter.

Interestingly, the RCMP members themselves have widely divergent views on their participation in criminal copyright enforcement. One view was that the RCMP had no place in enforcement of private economic rights when there were other serious crimes requiring their attention. The view at the other end of the spectrum was that copyright infringement was just as serious as any other form of theft or fraud. These polarized views reflect the same division of opinion in the general population.

Another relevant point emerging from the interviews of RCMP investigators relates to the general RCMP commitment to providing service to the public. This was illustrated by the perceived duty to investigate and prosecute when the law was broken, regardless of other available solutions. The recent Laurier Office Mart[16] case illustrates this. The defendant in that case was not advised prior to being charged that he was infringing copyright, or that the situation could be rectified by the simple act of purchasing a licence from the collective acting for the copyright owners. The defendant had become a licensed user at the time of trial.

In this case, the criminal activity had ceased. The infringer was licensed before the trial. The RCMP member responsible for this case defended his actions as reasonable on the grounds of the deterrent effect of the case. He argued that the publicity involved in the case has had a strong deterrent effect on infringing photocopying practices in the university environment. Thus the value of the case lies in the fact that it is a deterrent.

# Canadian Intellectual Property Office (CIPO)

## Background

Since about 1980 CIPO has been allocated fine payments and has paid the disbursements and legal bills of Crown agents associated with the prosecutions under the *Copyright Act*. Section 723 (2) (a) (iii) of the *Criminal Code* provides that where a proceeding is instituted by the Government of Canada, in which that government bears the costs of prosecution, the proceeds of the fine or penalty belong to Her Majesty in the right of Canada and "shall be paid by the person who receives them to the Receiver General". With respect to the *Copyright Act* any fines would be paid to the convicting court who then remits the money to the Receiver General.

The financial management practices of the federal government require that the various departments responsible for legislation under which fines are levied record, and in some cases receive, the fine payments. Whether a fine payment is simply recorded or actually received depends upon whether the particular government unit operates on a revolving fund or on an appropriation. CIPO operates on a revolving fund. As a result, CIPO receives fine payments under the *Copyright Act* directly into its budget. Other Industry Canada units, such as marketing practices and legal metrology, operate on the basis of appropriations. In these circumstances fine payments are received into the Consolidated Revenue Fund. The funds are then apportioned to the actual units as revenue and expense items in their budgets.

This distinction is important from the point of view of a possible conflict of interest. If a government unit receives fine money directly there is a possibility that the unit, if it had the ability to promote criminal prosecutions, would do so to increase its revenues. Not all government units have the legal authority to actively promote prosecutions. For example, CIPO has no investigatory powers. Its role is limited to providing certified copies of registration certificates and registering works when requested to do so. Legal metrology and marketing practices officials at Industry Canada, however, are empowered under their respective legislation to investigate and prosecute criminal cases.

The legal authority to receive fine payments at Industry Canada is contained in the department's Financial Management Manual. Chapter 7, subject 12, on Revenue and Accounts Receivable (Collections Policy-Fines), establishes the policy, responsibilities and procedures regarding the setting up of fines as accounts receivable. Copyright fines fall within this as the *Copyright Act* is legislation for which Industry Canada is responsible.

Chart III sets out the statistical information available in CIPO records:

Chart III

| Fiscal Year- | 1988 - 1989 | 1989 - 1990 | 1990 - 1991 | 1991- 1992 | 1992 - 1993 | 1993 - 1994 |
|---|---|---|---|---|---|---|
| Fines Received | 47,000 | 91,000 | 72,000 | 136,000 | 119,437 | 253,440 |
| Agent's Fees Paid | | | 66,250 | 129,500 | 88,200 | 52,000 |
| Fine* Accounts | | | | 72 | 77 | 86 |
| Fines not Received** | | 33,248 | 73,520 | 289,660 | 348,145 | 280,977 |

*This refers to the number of persons or companies who have paid fines. The number does not equate to "cases" since more than one individual or company might be fined in a "case".

**These amounts are cumulative.

## Jurisdiction

Certain points with respect to the jurisdiction of CIPO in matters of criminal prosecution under the *Copyright Act* should be stated. First, CIPO has no jurisdiction to investigate or prosecute under the *Copyright Act*. CIPO activity, in practice and in compliance with the Act, is restricted to providing certified copies of registration certificates to police, upon request, and to receiving any fines that are levied. CIPO plays no role in investigations or prosecutions. The RCMP and the provincial and metropolitan police forces bear the costs of investigations.

## Enforcement

In November 1993, CIPO sought some guidance from the RCMP in matters of collection of copyright fines. The reply from the Immigration and Federal Branch is instructive in several ways. First, it is politely pointed out that the RCMP is not a "collection agency" with respect to fines imposed by a Court for convictions under the *Copyright Act*.

This practice was confirmed in interviews with RCMP members at the federal policy level as, well as in an actual Federal Enforcement Unit. It should be pointed that confusion exists with respect to who is responsible. The Departmental Financial Management Manual at Industry Canada states in section 1.04 that "Usually, the RCMP and other police forces follow up on fines resulting from charges they have laid under the [ *Copyright Act*]". That is not the case.

Second, the same reply points out that, if a fine is not paid by the specified date, the judge can issue a "Warrant of Committal". The question that logically arises here is who, in the case of an unpaid fine under the *Copyright Act*, would request such a warrant? The RCMP, the Court which levied the fine, the prosecuting Crown counsel or CIPO are the only obvious choices.

The RCMP points out that it is not a collection agency. CIPO records reveal that the courts do not pursue unpaid fines in any systematic way. When CIPO staff calls the various courts to determine whether an overdue fine has been paid, court officials merely say "yes" or "no". Overdue fines, at least in the experience of CIPO collection activities, are not perceived by the courts as a situation requiring any enforcement action on their part. Industry Canada's Financial Management Manual supports this. Section 1.03 states that "most courts do *not* actively pursue the collection of overdue fines".

CIPO itself, in my opinion, has no legal authority to commence a civil action to collect an unpaid fine for a criminal conviction under the *Copyright Act* because it has no cause of action. The RCMP expressed a similar view on this issue.

This leaves the prosecuting Crown counsel as the last choice. Whether follow-up enforcement, subsequent to a conviction, should be included as a responsibility of Crown counsel is a matter of policy which is clearly outside the scope of this Report. Another possibility is an agreement between CIPO and the RCMP on a policy that reflects section 1.04 of the Financial Management Manual which states: "usually, the RCMP and other police forces follow-up on fines resulting from charges they have laid...". This is a matter of criminal law policy, which is also outside the scope of this Report.

## Legal Considerations

What is clear from the foregoing is that some of the fines levied as a result of criminal convictions under the *Copyright Act* are not collected. CIPO records reveal that, as of the 1993-1994 fiscal year, $280,977 was uncollected. Closer examination has revealed that some of these fines go back several years. A computer printout dated February 1994 indicates uncollected fines dating back to 1985.

A related matter is the case where there is a period of incarceration in lieu of paying a fine. RCMP disposition reports contained in CIPO files reveal that in some cases the judge only fines the convicted person with no "in default" option. In other cases, there is an option of incarceration if the fine is not paid. In such a case, the question arises whether the period of incarceration is being avoided in a manner similar to the payment of fines. If not, then the follow-up procedure for incarceration may be useful with respect to jurisdiction over the enforcement of fine payments as well.

## How It Works

The following describes the involvement of CIPO in criminal cases under the *Copyright Act*. CIPO has two levels of activity . The first is the receipt of a request from the police [17] for a certified copy of a registration certificate for use at trial. All these requests are filed by CIPO by requesting police force.

Most of the activity originates with the RCMP. There are 719 detachments listed in the most recent RCMP directory. In 1993 only 25 of these requested certified copies of registrations from CIPO. Only three regional police forces in the entire country made similar requests.

The second activity begins subsequent to the prosecution. The RCMP investigating officer is required to send CIPO a Disposition Report. These vary in content. A typical report will contain the following information: name of the person or company charged; the address; the offence; the number of charges; date and place of the offence; court location and date of decision; the result (fine amount, prison term, acquittal etc.,); disposition of exhibits; time to pay fine; name of investigating officer; the name of the unit and its address. Some reports give a detailed statement of the allegations and the disposition at trial. The variations in content, in all probability, depend upon the officer involved.

For CIPO's administrative purposes, the receipt of either a disposition report or a fine payment will cause a file to be opened. These are only two events that will trigger the opening of a file. Sometimes there is a considerable time lapse between the court's decision and the receipt of the disposition report. If CIPO has received the fine prior to receiving the disposition report, or vice versa, the two are matched. However, matching is not always easy or possible because of the use of different file numbers or the use of corporate, instead of individual, names.

In the usual case the disposition report is the first document in the file. Upon receipt an Invoice Preparation Form is prepared, which is sent to the department's Finance Section. This effectively creates an accounts receivable on the books. A note is made as to when the fine is due. The account then goes into the department's accounts payable, which is the subject of a monthly report. In short, the fine is put on the books as owing.

The practice at CIPO is to allow six months beyond the due date before taking any further action. The network of money transfers involved can take considerable time. The convicted accused pays the court which levied the fine, the court transfers the money to the provincial Attorney General who then transfers it to Supply and Services Canada who, in turn, transfers it to CIPO.

The monthly financial reports at Industry Canada alerts CIPO to fines which are past due. When a fine is past due CIPO calls the court noted in the report. If the fine is not paid then the file is marked to be brought forward to call again in a few months time. Typically, this process is repeated two or three times. If the fine remains unpaid, the account remains outstanding. As stated earlier, some fines have been outstanding since 1985.

CIPO staff perceive court administrators as being very busy people with enforcement and collection of fines not being a high priority for them. They also have commented that the information they receive from both the courts and the RCMP is incomplete. To substantiate this view two examples were produced of long overdue fines involving files which had been closed by police and court administrators. The fines on these files were never collected by CIPO. It is possible that the fines were paid and the money lost in the network of transfers. It is also possible that the fines were never paid. There is no way to verify compliance with the court decision.

In a similar vein a call by CIPO to a court may reveal that the fine in issue was paid. In this case CIPO then tries to track the payment. CIPO staff have difficulty tracking fine payments because the various government finance divisions close their record at the end of a fiscal year. It is time-consuming for them to reopen old records and this adds to the time delay and difficulties experienced by those responsible for collecting these fines. Finally, some fines are paid into the Consolidated Revenue Fund and cannot be traced back to the individual or corporation that made the payment. Once again, verification of compliance with the court decision is not possible.

## Practical Considerations

CIPO staff have real obstacles in their way in collecting the fines levied under the *Copyright Act*. These include a probable lack of jurisdiction to collect the fines as a civil debt, a lack of necessary information, poor communication between the RCMP and the courts and time delays between the decision and the collection process. One CIPO staff member put the matter succinctly when she stated that the process was like a loop that was not closed. The loop includes the police, the courts, various government service departments and CIPO. Among these elements, there should be a closed loop, within which it should be determinable whether a decision of the court has been complied with. As it is, the loop is not closed. It is not possible to determine, with certainty, whether court orders are being complied with.

## Other Federal Laws

The terms of reference under which this research is conducted do not extend to other federal laws. However, in the course of my research, comparisons to other federal laws containing criminal enforcement provisions were inevitable. For example, the *Trade-Marks Act* does not contain any criminal provisions. However, the *Criminal Code* does contain fraud, passing-off and trademark provisions which, use the criminal law process for enforcement.

The *Patent Act* contains criminal enforcement measures in sections 74 to 76. Although the criminal provisions of the *Patent Act* are not often used, statistical research in an RCMP investigation unit revealed an ongoing investigation under section 76, dealing with false representations and entries in a patent application.

The *Industrial Design Act* contained a criminal enforcement provision in section 16, which was repealed in 1993. None of the *Copyright Act*, the *Patent Act* or the *Industrial Design Act* contain any provisions relating to the enforcement of those criminal provisions contained in the statutes.

This report relates to the criminal enforcement of copyright. Examination of other federal laws containing criminal enforcement provisions is therefore outside its scope. However, information obtained with respect to uncollected fines under the *Copyright Act* indicates problems with the enforcement of the criminal provisions in that Act. From a public policy and criminal law enforcement perspective, questions arise as to whether this is an isolated phenomenon or whether it is common to the many other federal laws that are enforced by means of criminal sanctions.

For example, it would be useful to determine how many federal laws contain some recourse to the criminal law to enforce compliance. It would also be useful to determine if those responsible for the administration of those laws are experiencing the same difficulties as CIPO in carrying out their responsibilities. A comparative analysis of how the criminal power is used in different statutes could indicate which methods are working and which are not. For example, some laws, such as the *Copyright Act*, do not contain any power to investigate or prosecute for a violation. Other laws, such as the *Weights and Measures Act*, provide the department responsible for the Act with powers to enforce compliance with the law.

The importance of the distinction between laws with enforcement powers and those without has to do with a very basic and fundamental legal principle: respect for the law and, in this case, the criminal law. My research has revealed that fines under the *Copyright Act* sometimes remain unpaid. There is no foolproof connection between the offence, its prosecution and the enforcement of any fines resulting from the prosecution. If the convicted accused does not pay the fine, there are no apparent procedures in place to verify that compliance. In fact, when CIPO officials attempt to determine whether a fine has been paid they are sometimes unable to do so. Sometimes fines are paid and there is no way to determine who paid the fine or even to identify the offence for which the fine was paid.

From a policy perspective, it is appropriate to ask the question whether this state of affairs is peculiar to the *Copyright Act* or is a more widespread phenomena. Preliminary indications are that there are a great many federal laws that are enforced by means of the criminal law. If fines levied under those laws are subject to the same enforcement mechanisms and compliance verification procedures as those imposed under the *Copyright Act* then there is a problem that should be addressed.

# Investigation and Prosecution Difficulties

The final issue to be addressed in this report is whether there are any difficulties in conducting an investigation or prosecution peculiar to copyright that warrant changes to the law of evidence, criminal procedure or to the standards of liability for criminal copyright enforcement? Investigations will be addressed separately from prosecutions.

## Investigations

Many points emerged from discussions with RCMP personnel with respect to problems in criminal copyright enforcement warranting changes in procedures. Several RCMP members were interviewed. The issue was explored at three different levels of the criminal enforcement system. The first level was national policy development. The second was a manager of an investigation unit assigning members' investigation priorities. The third was several members of a unit involved in actual investigations. From these interviews and discussions, problem areas were identified and the nucleus of an approach to solve them was developed.

### (i) Training

RCMP investigators require a training program to effectively use their time and resources in the area of criminal copyright enforcement. An investigator in a Federal Enforcement Unit is responsible for investigating complaints made under 196 federal statutes. They receive no training on any of them. Copyright is one of the 196 laws. The law is complex even for someone familiar with it. Each RCMP investigator must be self-taught on the law, its breach, previous convictions, evidence and investigation techniques. There is no manual, no course and no technical support. It was agreed by all that there should be.

### (ii) Personnel Overlap and Transfers

Staffing assignments in the RCMP Federal Enforcement Units should overlap. Transfers of people are made without regard to expertise developed in a particular area. For example, a member may be in a unit for four years. During that time, valuable knowledge and experience is gained in investigating copyright complaints. That knowledge and experience is a valuable commodity, which could be passed on to a replacement if there was an overlap of a year or more in assignments.

### (iii) Teams of Special Investigators

At the present time RCMP investigators deal with all 196 federal laws as and when complaints are received. Many of these laws, including copyright, require a great deal of background knowledge, which must be acquired through substantial research. More efficient use of resources could be achieved by encouraging members to specialize. It is suggested that this approach would result in better police response to the problem of copyright infringement. Members with a better knowledge base will be more effective in identifying serious cases of piracy. The same is true for Crown counsel. They too would provide better enforcement if they were allowed to develop some expertise in the field of criminal copyright enforcement.

### (iv) National Strategy To Combat Copyright Infringement

RCMP members and Crown counsel need to become more familiar with the areas where piracy is a serious problem and to develop strategies to deal with problem areas on a national basis. For example, if counterfeit CDs and unauthorized reproduction of computer software are two problem areas, it would be better to proceed with a few stronger cases in each of the problem areas than to proceed with several weaker cases without any method or plan. This approach would better serve the public, as well as make better use of the limited resources of the court system and the police.

This national strategy, which should be developed with the victims of the infringing activity, should have the following objectives:

- to identify the industry groups experiencing a serious infringement problem;
- to define the most effective way to deal with this problem, taking into account the costs of prosecution, the deterrent value of a conviction and the probability of obtaining a conviction;
- to create a structure within the RCMP that will develop expertise to deal with criminal copyright enforcement in a manner reflecting national priorities;
- to create a mechanism to involve the Crown in this national strategy.

### (v) Self-Help Is Essential

Self-help on the part of copyright owners is essential if criminal copyright infringement is ever to be effectively controlled. The criminal justice system has many competing client groups. Crimes of violence will always take priority over crimes against property.

One senior Crown counsel pointed to the enforcement activities in the North American motion picture industry as a "text book example of how to enforce copyright". In 1983 the industry formed the Film & Video Security Office (FVSO). At that time it was estimated that pirated video cassettes represented 35 percent of the retail market. In 1995 it is estimated that this has been reduced to five to eight percent. Two reasons are given: educational work of the FVSO and the working relationship of the FVSO with the enforcement authorities.

The educational work of the FVSO, referred to by the Crown and the RCMP, involves programs for video dealers, industry participants, the police, Crown prosecutors and the public and includes:

- distribution of a film anti-piracy manual to assist police and Crown prosecutors in dealing with film anti-piracy cases;
- preparation and distribution of pamphlets, brochures and videos for industry participants and members of the public to better understand copyright infringement;
- an anti-piracy 800 telephone hotline to bring instances of video piracy to the FVSO's attention;
- attendance of FVSO personnel at video conferences, seminars and shows;
- seminars for police forces across Canada on video piracy to supplement the anti-piracy manual; and
- attempts to ensure widespread publicity for seizures and prosecutions to further enhance the deterrent value.

The second self-help mechanism is to provide expert assistance to the police. One Crown prosecutor stated, that by the time the FVSO involves the police in a case, they have already assembled the evidence needed to obtain a conviction. Evidence of the requisite knowledge on the part of the suspect, of the status of the copies as infringing and of the chain of ownership of the copyright is complete. The Crown is even provided with a manual on how to proceed with the case. The FVSO itself provided the following examples of how they assist the police and the Crown by:

- providing written statements and/or affidavits of the evidence and grounds necessary for obtaining search warrants;
- attending, with the police, on the execution of the search warrants;
- assisting the police with collating, analyzing and testing suspected infringing copies of seized films;
- obtaining copies of copyright registrations for seized titles;
- obtaining witness "will say" statements from potential witnesses and from copyright owners;
- assisting the police with preparing and collating the brief to the Crown;
- assisting the police in drafting appropriate charges; and
- meeting with the Crown assigned to the prosecution to assist in preparing for trial and/or negotiating an appropriate plea or sentence.

If other industry groups who are victims of copyright infringements adopted similar investments in the enforcement of their copyright, similar success stories could be told. In this regard, the FVSO points out that less than one percent of defendants charged with film piracy under the *Copyright Act* request a trial. Virtually all cases proceed on the basis of negotiated guilty pleas. This significantly reduces the resources required from Crown prosecutors and the courts to dispose of these cases. The resource requirements of the police are also reduced because the FVSO does most of the work required. This is necessary in any event because only the copyright owner is in a position to obtain much of this evidence.

**(vi) Evidence**

RCMP members involved in investigations and prosecutions expressed frustration regarding the obtaining of evidence relating to ownership of copyright and the chain of title. The point is best illustrated by example.

The Asian film case being tried in Ottawa at the time of writing involves many films that were originally produced in Asia. Each title has a different owner. A Canadian distributor, the complainant, had entered into a distribution agreement with an Asian distributor to acquire the exclusive distribution rights for Canada. The Canadian distributor discovered that the films for which he paid to acquire the distribution rights are being distributed by video stores throughout the country. The copies being distributed are alleged to be infringing copies. The RCMP investigated and charges were laid.

At trial the Crown must prove that copyright subsists in these films and who owns it. Hundreds of films are involved. For each one it is necessary to prove that the copy in question is an infringing copy. To prove that the copy is infringing it must be established that the copy was made without the authorization of the copyright owner. That requires that the copyright owner provide evidence of ownership of the copyright in the film. The copyright owner is in Asia and has licensed the films to an Asian distributor who in turn has licensed the Canadian distributor. To prove this "chain of title" would require many witnesses, most of whom are in Asia. This evidence is both expensive and complex to assemble.

Another difficult matter of evidence at both the investigation stage, and at trial, is proof that a copy is an "infringing" copy. RCMP investigators often cannot tell whether a film, a software program or a CD is a legal or an infringing copy. Experts are required. In the usual case the allegedly infringing copies are seized and an expert analysis is made to determine whether the copy is infringing or not. Copying technology is so good that this can be a difficult element of the case. Experts are challenged by the defense as to their qualifications to be expert witnesses. RCMP investigators cited this as a problem area peculiar to copyright cases.

### (vii) Federal Crowns

Federal Crown prosecutors also require training and support for copyright prosecutions. Sometimes the file is assigned to the Crown shortly before trial. The Crown prosecutor is faced with proceeding with a case with little time to prepare and no knowledge of a complex area of law. This same prosecutor must face a defense counsel who is well prepared and who has spent many hours on the case and the applicable law.

## Prosecutions

### (i) *Criminal Code v. The Copyright Act*

A related issue is the reasons why the industry groups prefer to use the criminal provisions in the *Copyright Act* instead of the fraud provisions of the *Criminal Code*. It was reported that the fraud provisions of the *Criminal Code* were used extensively prior to the 1988 amendments to the *Copyright Act*. The fraud provisions continue to be used but with decreasing frequency.

A fraud prosecution requires that the Crown establish all the elements of the offence in section 42 of the Act and also establish dishonest intent and deprivation of the victim. The fraud provisions are viewed as imposing additional elements of proof on the Crown which are not required under section 42.

It is also pointed out that the precedents under section 42 and its predecessor, section 25, are more extensive than those available under the fraud provisions, at least as they relate to copyright infringement. Prosecutions today under section 42 are facilitated by the large number of precedents upon which the Crown, the court and defendants can rely.

The fraud provisions of the *Criminal Code* are criminal prohibitions applicable to fraud in general. The copyright infringement offenses in section 42 are single purpose. As a result, judges before whom section 42 prosecutions are heard are in a better position to assess the relative gravity of the offenses.

If a copyright infringement is prosecuted under the fraud provisions of the *Criminal Code* the gravity of a single case may be viewed as less since much more fraudulent scenarios are dealt with by the courts. Industry groups suggest that one of the reasons that prosecutions are now being conducted under the *Copyright Act* is because the penalties for copyright infringement have increased significantly since the 1988 amendments.

**(ii) Proof of "Knowingly"**

Crown counsel cited the difficulty of proving "knowledge" as a problem with criminal copyright enforcement. It appears to be generally agreed that copyright offenses are full *mens rea* offenses. The problem is what is required to prove the required "knowledge". Proof that the accused acted "knowingly" is an essential element of each offence. It is generally considered that the easiest method of establishing this state of mind would be to submit proof that the accused had received notice in the form of a prior written warning. This is not possible where a warning could cause the disappearance of evidence and the suspected infringer. In these cases it is necessary to prove "knowledge" by other means, such as the conduct of the accused, or circumstantial evidence.

**(iii) Copyright Presumptions Under the Charter**

The *Copyright Act* provides for presumptions of ownership and subsistence of copyright if a work is registered under the Act. For example, section 53 (2) provides that a certificate of registration of copyright in a work is evidence that copyright subsists in the work and that the person registered is the owner of the copyright. Section 34 (3) presumes the work is one in which copyright subsists and that the author of the work is the owner of the copyright unless the defence proves otherwise. These are essential elements which must be proved by the Crown to obtain a conviction under section 42 or 43. The validity of these presumptions is being challenged as a violation of the presumption of innocence under the *Charter of Rights and Freedoms.*[18]

The argument can be summarized as follows. Section 11 (d) of the Charter guarantees any person charged with an offence with the right to be presumed innocent. Any statutory clause that shifts the burden of proof to the accused, to disprove an essential element of the offence, violates this guarantee. Subsistence and ownership of copyright are essential elements of a criminal copyright case. Therefore the presumptions with respect to subsistence and ownership of copyright violate the presumption of innocence. To establish guilt, the Crown can use the presumptions and does not have to prove all the essential elements of the offence beyond a reasonable doubt.

The counter argument is that these so-called reverse onus clauses are not a violation of the Charter when they are reasonable in the circumstances. It is argued that the presumptions under the *Copyright Act* are fair and reasonable because if the accused is able to raise a reasonable doubt as to the subsistence and/or ownership of copyright then the Crown must prove those elements beyond a reasonable doubt. The words used are "is evidence of" and "unless the defence proves otherwise". The presumptions can be rebutted or a reasonable doubt raised. Because the presumptions are rebuttable they are fair. It is argued that the presumptions are not only fair but also necessary in copyright cases because of the onerous burden involved in proving title.

**(iv) Applicability of Exceptions In a Criminal Case**

Another issue identified by Crown counsel in the prosecution of copyright cases relates to whether the exceptions provided for in the Act apply in criminal cases. An exception is a provision which legalizes an activity which would otherwise be a copyright infringement. This issue arose in a recent case.[19] Crown counsel expressed the view that the exceptions contained in the Act, such as fair dealing, should apply only in civil actions for copyright infringement. Clarification of this issue, either on an appeal or in phase two of copyright revision, was suggested.

# Conclusions

Two conclusions emerge from this report:

1. There is a need to create a national strategy for the criminal enforcement of copyright. This strategy should be developed in consultation with all the parties affected: copyright owners, the police, federal Crown counsel, the Department of Justice and those federal departments responsible for copyright policy. The objective of this strategy should be to use the resources of the criminal justice system in a targeted way that responds to clearly identified priorities and objectives. Those whose rights are infringed should participate in the enforcement process in terms of public education and in terms of providing assistance to the police.

2. There should be an examination of the process that requires that fine payments under federal laws be directed to the departments responsible for the legislation under which a fine is levied. The present system may be deficient in that fines are not being paid by convicted accused in a circumvention of the criminal justice system.

# Notes

[1] *Copyright Act*, R.S.C. 1985, c. C-42, sections 34-41.

[2] *Copyright Act, supra*,sections 44 and 45.

[3] *Copyright Act, supra*, sections 42 and 43.

[4] Bill C-60, *An Act to Amend the Copyright Act*, S. C. 1988. c. 15.

[5] *A Charter of Rights For Creators*, Report of the Sub-Committee on the Revision of Copyright, Standing Committee of Communications and Culture, October 1985, at 97-98.

[6] Federal responsibility for copyright has its jurisdictional base in federal jurisdiction over copyright. Accordingly, the RCMP is the police group most often contacted when a copyright infringement is the subject of a compliant. However, municipal, provincial and regional police forces are also involved in the field. Statistical information for these police forces is not available in a centralized location. It is therefore not possible to report on their activities in the field.

[7] See Appendix A.

[8] *Copyright Act*, R.S.C., c. C-42, sections 34 and 39.

[9] For an interesting discussion of the value of a copyright registration and the presumptions resulting therefrom see David W. Scott and Timothy Collins, *Criminal Copyright Offenses: The Defence Perspective*, at 15-18.

[10] See *RCMP, Criminal Copyright Enforcement*, by Corporal V. L. Rose, paper prepared for the Copyright In Transition Conference, October 13-14, 1994, Minto Place Suite Hotel, Ottawa, Ontario.

[11] *The Queen* v. *Rexcan Circuits Inc.* Ont. Prov. Ct. June 3, 1993 (unreported).

[12] *The Queen* v. *Pink Panda Inc.*, Ontario Provincial Court, January, 1995, to be continued May, 1995.

[13] Footnote 10, *supra*.

[14] Letter from SOCAN, Legal Counsel, Paul Spurgeon, December 23, 1994.

[15] *Supra*, note 9.

[16] *The Queen* v. *Laurier Office Mart Inc.* Ontario Provincial Court, November 15, 1994, unreported.

[17] Police forces involved in criminal prosecutions under the *Copyright Act* are primarily the RCMP. However, there is some activity within the various municipal and provincial police forces.

[18] *Canadian Charter of Rights and Freedoms, Constitution Act, 1982*, as enacted by Canada Act 1982 (U.K.), 1982, c. 11. This will be argued in *The Queen* v. *Pink Panda Inc.*, Ontario Provincial Court, in May of 1995.

[19] *Her Majesty the Queen* v. *Laurier Office Mart*, Ontario Court of Justice, Provincial Division, November 15, 1994.

# Biographies of Presenters

## David Vaver

Professor Vaver has been a professor of law at Osgoode Hall Law School at York University, Toronto, since 1985. He taught previously at the University of Auckland, New Zealand, and the University of British Columbia. He has law degrees from the University of Auckland and the University of Chicago, where he was a Fulbright scholar in 1970-1.

Professor Vaver has taught and presented conference papers on the law of copyright over the past twenty years. He edits the Intellectual Property Journal, published by Carswells, Toronto, and is the author of the annually updated section on Canada in Nimmer & Geller's *International Copyright Law & Practice* (Matthew Bender, N.Y., 1988). His writings on copyright and other intellectual property law appear in academic journals and other publications in Canada and internationally. He is presently working on an encyclopedia of Canadian copyright law.

Professor Vaver is a member of the joint Copyright Legislation subcommittee of the Canadian Bar Association and the Patent & Trademark Institute of Canada. He has also advised the Department of Canadian Heritage on the proposed Phase II copyright reforms over the last few years.

## Howard P. Knopf, M.S. (Juilliard), LL.M.

Howard P. Knopf was called to the bar of Ontario in 1980. He is presently the Executive Director of the Canadian Intellectual Property Institute/l'Institut canadien de la propriété intellectuelle (CIPI/ICPI), which he co-founded along with the late Gordon F. Henderson, C.C., Q.C., LL.D. From 1983 to 1993, Mr. Knopf served in the Federal Government as a senior policy advisor on intellectual property law, with various domestic and international responsibilities. He was the senior departmental lawyer at Consumer and Corporate Affairs Canada, primarily responsible for "Phase I" of copyright revision (Bill C-60), which was enacted in 1988. He also spent a year (1988-

1989) in the Bureau of Competition Policy. Prior to 1983, he practiced law in Toronto. He is the managing editor and a contributor to the three Carswell reference texts on Canadian intellectual property law, and the author of numerous other published works in this field. He has organized courses of instruction in intellectual property for the Canadian judiciary and the federal Department of Justice. Before his legal studies, he was a solo clarinetist and chamber musician, a musicologist and a co-founder of the York Winds, Canada's first full-time woodwind quintet.

## Pamela Samuelson

Pamela Samuelson is a Professor of Law at the University of Pittsburgh Law School. The principal focus of her teaching and scholarship has been on the evolution of intellectual property law in the face of new technologies.

She is a past Chair of the Intellectual Property Section of the Association of American Law Schools as well as the immediate past Chair of the Computers & Law Section of the same organization. She is currently serving as a member of the Association of American Universities Task Force on Intellectual Property Rights in an Electronic Age. She is also a member of the Board of Directors for the Center for Computer-Assisted Legal Instruction and of the Telecommunications Policy Research Conference. She also serves on the Academic Advisory Boards of the Project for Scholarly Communication and Publishing at Harvard University's Kennedy School and of American Committee for Interoperable Systems.

She is a Contributing Editor of the Communications of the ACM (Association for Computing Machinery) for which she writes a regular "Legally Speaking" column. She is the author of more than fifty published articles and is a frequent speaker at both technical and legal conferences on the challenges of new technologies for copyright and related laws.

## Ysolde Gendreau

Ysolde Gendreau obtained her B.C.L., LL.B., and LL.M. degrees from McGill University and is Docteur en droit of the Université de Paris II. She is professor of intellectual property law and of competition law at the Université de Montréal and sessional lecturer in intellectual property law at McGill University. She is a member of the Bar of Quebec since 1985.

Her field of research is copyright law and she has many publications to her credit : *The Retransmission Right : Copyright and the Rediffusion of Works by Cable* (Oxford, ESC Publishing, 1990); *La protection des photographies en droit d'auteur français, américain, britannique et canadien* (Paris, L.G.D.J., 1994). In collaboration with her colleague Ejan MacKaay, she is responsible for the annual edition of *Canadian Legislation on Intellectual Property/Législation canadienne en propriété intellectuelle* published by Carswell. Her articles can be found in Canadian as well as foreign law journals and she has contributed to several collective works on intellectual property.
She is a member of several intellectual property associations : the Association littéraire et artistique internationale (ALAI), the Association for the Advancement of Teaching and Research in Intellectual Property (ATRIP), and the Patent and Trademark Institute of Canada (PTIC/ICBM). She chairs the Centennial Index Update Committee of the PTIC, a committee responsible for updating a compilation of Canadian doctrinal materials on intellectual property.

## Lucie Guibault

Lucie Guibault is a member of the Intellectual Property Policy Directorate of Industry Canada. She recently completed her master's degree in law at the University of Montreal, under the direction of Professor Ejan Mackaay. Her thesis was entitled "Intellectual Property and New Technologies: Searching for the Key to Innovation" and focused on computer technology and biotechnology. During the course of her studies for the Master's degree, Ms Guibault spent a year at the Max Planck Institute for Patent, Copyright and Competition Law in Munich, conducting research in comparative and international law. Ms Guibault has also worked as a research assistant at the *Centre de recherche en droit public* of the University of Montreal, where she participated, with Pierre Trudel and France Abran, in writing a book on broadcasting law.

# Wanda Noel

Wanda Noel was called to the Ontario Bar in 1978. Since then her practice has focused on federal policies and legislation relating to intellectual property, communications, competition, telecommunications and cultural policy.

Ms. Noel has advised Parliamentary Committees, participated in public hearings, analyzed proposed legislation, published numerous articles in Canada and abroad and written several Reports in her field. As an expert consultant to industry and Government she has participated in consultations and negotiations between opposing parties affected by legislation relating to intellectual property and telecommunications. She has spoken at professional conventions, conducted seminars for major universities, public and private libraries, archival institutions and private organizations.

Ms. Noel is a member of the Canadian Bar Association and the Patent and Trademark Institute of Canada. She is active in these organizations' committees working on copyright revision, security interests and the information highway. She is the CBA's copyright expert to the Advisory Council on the Information Highway. In that capacity Ms. Noel is chairing the Subcommittee responding to the Council's recommendations on copyright.