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INTELLECTUAL PROPERTY (IP) TODAY; RECENT DEVELOPMENTS, CURRENT AND EMERGING ISSUES

INTELLECTUAL PROPERTY (IP), THE INTERNET AND E-COMMERCE

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INTELLECTUAL PROPERTY, THE INTERNET AND E-COMMERCE

'The questions to be asked of any law or regulation that purports to govern activity on the Internet is not whether it is applicable, but rather whether it is enforceable? Though it may be in vogue to call for regulation, the primary question that should govern whether or how a regulation should be framed is not whether it is applicable – it will almost certainly be so. The question must be whether the regulation is needed, and if so, whether it is enforceable in a coherent and satisfactory manner. If regulations are not needed or do not prove to be enforceable due to the jurisdictional or substantive issues then there is a threat that users of the Internet will hold them in contempt.'[1]

INTRODUCTION TO INTELLECTUAL PROPERTY

In the past, intellectual property law was regarded as a somewhat arcane area of the law. Until very recently, very few people were concerned with what was then considered the esoteric subject of intellectual property law. In the context of the industrial society, this was understandable as lawyers and most businesses were primarily concerned with real property.

Today, we live in an information society that is substantially different from that of our industrial past. It is no longer uncommon for the value of many companies to lie less in their physical properties than in the information and expertise associated with the business.

Protecting intellectual property is critical to the success of every business. A prudent businessperson should seek to correctly identify the intellectual property of the business and take adequate measures to protect it. Intellectual property encompasses a broad field of subject matter and primarily include copyright, patents, registered designs, confidential information, trademarks, passing-off and in some countries separate performers' rights and semi-conductor chip rights as well. Additionally, in some countries, intellectual property also implicates laws on free speech, unfair competition and anti-trust laws. It should be noted that how a person protects his intellectual property ultimately depends on what types of intellectual property he has and the countries he desires to do business in.

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[1] Lars Davies, *A Model for Internet Regulation? – Constructing a Framework for Regulating Electronic Commerce* (London: Society for Computers and Law, 1999) at p 6 (accessible at http://www. scl. org).

THE APPLICATION OF COPYRIGHT LAW TO ACTIVITIES CONDUCTED VIA THE MEDIUM OF THE INTERNET – AN INTERNATIONAL PERSPECTIVE

Despite some initial uncertainty in this area, the current view is that intellectual property laws continue to apply to the electronic medium although some curious anomalies do sometimes occur as a result of the slavish application of existing principles of intellectual property rights. The real problem is not one of whether intellectual property laws apply to activities conducted on the Internet but rather whether these rights can be adequately policed or enforced. In this section, we will also look at the legal position in other jurisdictions in addition to those that apply in Singapore. It is important to note that because the Internet is accessible from almost everywhere in the world, transactions that would have been limited to one or two jurisdictions in the real world may now potentially be subject to every jurisdiction. As such, if we limited our discussion in this section to only the laws of Singapore, the discussion would be of limited use. We will therefore adopt a broad internationalist perspective in our discussion in this section before we narrow the discussion to specific activities and their legal ramifications under Singapore law.

Substantive Copyright Law Issues

It has been noted that in the world of Internet communications and other computer-mediated technology, it is routine to note the friction between rapidly advancing technology and an increasingly ponderous legal system. This friction is probably most acutely felt in the field of copyright where traditional concepts, at first glance at least, appear arduous and inappropriate in dealing with emerging legal issues. We will now turn our attention to some of these issues.

Ownership

It is not uncommon for firms to out source tasks pertaining to the creation of their web sites. In the absence of a written agreement to the contrary, the copyright to the content of the web site will belong to the person or firm responsible for creating the web site. Should the creator utilize the content or part of the content on another firm's web site, the original firm - in the absence of an agreement to the contrary - will have no recourse against the creator.

Even where the content of the site is developed in-house, difficulties can arise. It is usual for web site creators to borrow liberally from the vast amount of material posted on the World Wide Web in creating the web sites. The copyright in most of the material would typically belong to other entities and, in the absence of permission to use the material or applicable 'fair dealing' defenses, the use of the materials would amount to copyright infringement.

Even where permission is sought for the use of copyrighted material, extreme caution must be exercised. The existing copyright owner must first be determined, as it is not sufficient to obtain the permission of whoever purports or claims to own the copyright.

License agreements should be carefully and precisely drafted to ensure that the licensee obtains all the required rights. The general rule is that any right not expressly granted to the licensee is reserved by the licensor. Care should, therefore, be taken in articulating the specific rights for the use of the copyright material. Procuring the electronic rights to a work,

for instance, may not automatically extend to use at a web site. Limitations on the nature of use or time restrictions have to be strictly adhered to. The right to sub-license, if required, must also be expressly granted. One should also be extremely wary of geographical restrictions on the use of copyrighted material.

Joint Works

It is fairly common for works such as the creation of web pages to involve the contributions of multiple parties. In the absence of a written agreement stating the rights of the various parties, it is often extremely difficult to determine the rightful copyright owners of the final product. The lesson here is to ensure that these rights are clearly stipulated in a written agreement.

Fair Dealing

The copyright laws of most countries recognize a 'fair dealing' defense in relation to the use of copyrighted materials. Uses that are considered fair dealing include reproduction for the purposes of comment or news reporting. The courts are, as a general rule, hesitant to allow the application of the defense to situations involving a commercial setting. The defense would, thus, prove to be of limited utility in most commercial activities conducted over the Internet.

Implied Licenses

The peculiar characteristics of the Internet have led some commentators to propose that users can readily have recourse to the 'implied license' argument in dealing with materials posted on the World Wide Web. This argument is predicated on the thinking that the copying and downloading of materials is an intrinsic aspect of the Internet and copyright owners are deemed to have granted an implied license to users to view and download these materials.

The problem with an implied license is that it does not arise if there is an express prohibition to that effect. Copyright owners can, therefore, negate the implied license argument by inserting an appropriately prohibition on the downloading and dissemination of materials posted on a web site.

Where an implied license does exist, it may be difficult to determine its precise nature. In particular, it may be difficult to ascertain the scope of the license. For instance, is the user permitted to simply view the materials or is he permitted to download files? Does the implied license extend to the dissemination of these materials to other parties or is the use restricted to the personal use of the user?

It should also be noted that charlatans abound in cyberspace and it is not uncommon for individuals who do not own the copyright to materials to purport to grant, whether expressly or impliedly, licenses to these materials.

The "Internet Treaties"

The World Intellectual Property Organization (WIPO) is deeply involved in the ongoing international debate to shape new standards for copyright protection in cyberspace. WIPO administers the WIPO Copyright Treaty and the WIPO Performances and Phonogram Treaty

(often known together as the "Internet Treaties"), which attempt to set down international norms aimed at preventing unauthorized access to and use of creative works on the Internet or other digital networks.

ENFORCEMENT

Intellectual property law generally aims to safeguard creators and producers of intellectual goods and services by granting them certain limited rights to control the use made of those productions. These rights are infringed when one of the acts requiring authorization of the creator or producer is done by someone else without consent from the creator or producer, as the case may be. In relation to copyright materials, for example, piracy refers to the unauthorized copying of copyright materials for commercial purposes and the unauthorized commercial dealing in copied materials.

The advent of the Internet has resulted in the rapid development of the software industry. Software developers and technology companies are among the chief architects of electronic commerce and have long realized the commercial and economic potential of offering and, where possible, delivering their physical and intellectual property based products electronically.

The Internet provides opportunities for products and services to be provided and distributed more quickly, more efficiently, and more cost-effectively world-wide. In addition, the Internet enables companies in every corner of the globe to reach consumers in the international marketplace.

Software piracy is a serious threat to the growth of e-commerce and the protection of intellectual property rights. Whilst businesses and consumers have been busy adapting to doing business electronically, pirates have been busy nipping at their heels and have developed various ways of utilizing electronic commerce to their benefit and the ultimate detriment of intellectual property owners.

Despite what the pirates would have us believe, Internet piracy is not harmless. It threatens all intellectual property based industries and discourages individuals and companies from engaging in research and other creative endeavors. Rampant Internet piracy also has the effect of dampening certain types of legitimate electronic commerce activity.

The Internet's sheer size and anonymous nature allow countless Internet users to illegally pirate computer software and distribute it on the Internet without fear of apprehension. Due to the ease with which software can be copied and distributed world-wide - virtually instantaneously - copyright owners have become reluctant to make their protected works readily available on the Internet without reasonable assurances against massive piracy. For the software industry alone, rampant copyright infringement now accounts for billions of dollars in world-wide losses each year.

The launch of dial-up bulletin boards presented intellectual property right holders with their first foretaste of Internet piracy. These were essentially individual computers that could be dialed up by modem and where software could be uploaded and downloaded by the users of that bulletin board. This insidious practice continues unabated today on the Internet where

pirates advertise their warez with impunity and virtually without any cost, on newsgroups, Internet Relay Chat (IRC) channels, and other bulletin-board type areas.

It has been observed that progress in technology and the development of the World Wide Web has made software piracy much easier. Web download pages make uploading and downloading pirated software merely a matter of clicking on a few buttons. It is also possible to order counterfeit products over the Internet from anywhere in the world.

In order to effectively combat Internet piracy, it is important to ensure that the existing intellectual property regime provides a sound legal framework prohibiting Internet piracy. For instance, it is important for the existing laws of the various countries in the world to stipulate or provide that the reproduction right under the copyright law covers temporary as well as permanent reproductions. Otherwise, a copyright owner is limited in his ability to prevent the use of his copyrighted materials that involve only temporary copies made in a computer or in a telephone network.

It is also crucial to ensure that exceptions or liability limitations for service providers are carefully crafted and defined. Whilst there are views to the contrary, this author is of the opinion that service providers do not warrant a blanket exception from any copyright liability as this would have the unfortunate effect of removing all incentives for responsible activity when they become aware of pirate activity. In this respect, lawmakers may wish to consider crafting legislation that contains carefully defined rules that provide for limited liability for mere conduit, hosting, caching, and search engine activities.

In Singapore, the Copyright (Amendment) Act 1999 has sought to address this issue. A detailed examination of the amended provisions of the Copyright Act that apply is beyond the scope of this section but we will look broadly at the effect of the changes. These provisions will be further discussed in detail in the section on liabilities of network service providers.

Sections 193B-C of the Copyright Act now provide network service providers with a complete exemption from copyright infringement in respect of acts which are incidental to the provision of the technical means to enable users of a network to access material and storage, transmission, routing or connection of material at the express or implied direction of another without deliberate modification by the network service provider as to content. This is subject to Section 193C(2) which provides that Sub-section (1) would not apply if the network service provider does not disable access or remove an infringing copy from the network within a reasonable time, when served with statutory declaration. A network service provider shall be precluded from relying on his storage, transmitting and routing exemption if (a) the primary network is operated and controlled solely by the network service provider; (b) the network service provider was furnished with a statutory declaration made by the copyright owner setting out grounds of belief of copyright infringement; and (c) fails to take reasonable steps within a reasonable time to remove the infringing copy from the primary network or disable access to the material on the primary network: Section 193C(2) Copyright Act. The network service provider is protected from any civil or criminal liability for claims based on its having taken down material, whether or not copyright infringement is ultimately determined: Section 193D Copyright Act.

In order to effectively combat piracy globally, ratification, implementation and adherence to the Internet Treaties by all countries is necessary. The Internet Treaties contain

several important provisions that aid in the fight against Internet piracy. Some of these provisions stipulate rights to control the "making available" of copyrighted works on interactive networks such as the Internet and prohibit circumvention of technical protection measures. Many countries have not acceded to these two treaties as yet.

There is also much that the industry can do to combat Internet piracy. The industry should be encouraged to work co-operatively to voluntarily develop effective technologies that combat piracy but do not intrude or interfere with other legitimate functions provided online.

The software industry has also been fairly active in their attempts to discourage Internet piracy. Organizations such as the Business Software Alliance (BSA) employs several full-time Internet investigators who regularly receive tip-offs of pirate sites and who actively scan the Internet for pirate activity. If the host site can be found, the BSA sends a relevant takedown notice (or other similar notice depending on the procedure stipulated under the applicable law) to the service provider operating the site.

It is also important to ensure that the existing regulatory and operational framework provides for the prompt identification of pirate sites. It is not uncommon for pirates to use false names or Internet Protocol (IP) addresses, and this creates enormous difficulties when attempts are made to identify infringers and their physical location. In some cases, it is also impossible to identify the host server where a pirate web page resides. This problem may be redressed in part by having a consistent practice among all national registries of domain names in ensuring that good and updated records are kept of who the registrants are. These records should also be made available to legitimate inquiries aimed at establishing the identity and location of pirates. There are, however, potential privacy issues that come to the fore. In order to avoid conflict with the existing privacy laws that exist in some countries, it may be important to develop legislation that specifically articulates and narrows the situations in which the relevant information would be provided and how the information can be used by the inquirer.

The existing remedies and penalties provided in existing national laws must also be sufficiently stiff and prohibitive to deter Internet piracy. In this respect, it is important to note that the Trade-Related Intellectual Property Agreements (TRIPS) provides that remedies and penalties must be sufficient not only to compensate the right holder, but also to deter and prevent piracy. Many countries have to amend their laws to comply with their obligations pursuant to TRIPS.

In developing relevant laws to deal with Internet related activities, there has sometimes been a tendency to confuse the issue of applicability with that pertaining to enforceability. A legislator from any country can easily craft laws that apply to particular activities undertaken via the Internet. The true difficulty is in ensuring that the laws are enforceable in practice.

The Internet has given rise to a revolution in the development, distribution, and use of products and services protected by intellectual property. This is, however, a double-edged sword as these developments have enabled pirates to flourish and multiply as a result. Strong reproduction and communication rights as embodied in the Internet Treaties, technical measures, appropriate track-down and take-down procedures or other national equivalents, and co-operation among intellectual-property owners and technology and service providers can go a long way in ensuring adequate enforcement of intellectual property rights. For these

measures to be truly effective, there must be international consensus on the appropriate laws that are needed and the political will to address the issue of piracy and effectively enforce these laws.

Computer Programs and Copyright

The development of a computer program typically involves several stages. A computer programmer first identifies a problem or a task and then proceeds to develop a program that addresses the problem or accomplishes the task. Prior to writing the program, it may be necessary for the programmer to first prepare written documentation comprising of flow charts, algorithms and various other instructions or information that would assist in the development of the program. These documents are referred to as source documents.

Computer programs, in written form, can be expressed as source code or object code. The source code is the program as written by the programmer and the writing of the source code would usually take place after the source documents have been prepared. The source code can be written in any one of various languages and is typically written using one of the high level programming languages such as JAVA, COBOL, FORTRAN or REXX. These languages do have a certain degree of resemblance to existing literary languages such as English and have their own rules of grammar and syntax. Many of these languages were developed for specific applications. A lay person without knowledge of the particular programming language would usually be unable to understand the source codes (although in some instances, the use of markers as comments at particular stages of the program may give the lay person an idea of what the program seeks to do).

The source code, however, cannot be put into effect by a computer in its present form. In order for the function sought to be achieved by a program to be performed, the source code has to be translated,[2] compiled[3] or assembled[4] (as the case may be) into the object code. The object code of a computer program is a list of binary instructions represented on paper by a series of ones and zeroes.

In *John Richardson Computers Ltd v Flanders*,[5] Ferris J attempts to explain the manner in which computer programs are developed. Whilst some parts of the following extract represents an oversimplification of the process of computer programming, the discussion is nevertheless useful as a succinct description of the tasks involved in the process:

> "In order for a computer to be given the appropriate instructions it is necessary to communicate with it in some way. The only instructions which a computer can understand are those which consist of a series of 0s and 1s. Instructions set out in this way are said to be written in 'machine language' or machine code. (This may represent something of an oversimplification. I gather that at least in some cases the

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[2] A compiler is a computer program that translates the whole of a program written in high level language into machine code before the execution of the program.

[3] An interpreter is a computer program that translates each high level language statement into machine code instructions which is then executed prior to the next statement being translated.

[4] An assembler translates programs written in assembly code into machine code instructions. Assembly codes are programs written in the form of mnemonics.

[5] [1993] FSR 497 at p 503.

machine code which is fed into the computer will be translated by the machine into a more elaborate series of 0s and 1s. However this description will suffice for present purposes.) The machine code for one type of computer will usually be different from that for another type, although there may, of course, be compatibility between different manufacturers' products.

A suitably trained or skilled programmer will be able to write a program in machine code for a particular model of computer. But the process is slow and tedious and the program, although intelligible to the computer, will be virtually unintelligible to anyone except an equally skilled programmer. From the comparatively early days of computers, therefore, an alternative language for writing programs was devised. This was known as 'assembler language'. It used a variety of abbreviations more akin to ordinary language than machine code. A computer could not itself understand such a language directly but a program could be, and was, devised which enabled a computer to convert assembler language into the machine code which could be understood by the computer. The translation process is usually possible only in one direction. Assembler language can be translated into machine code, but not vice versa.

While assembler language has advantages over machine code it still requires many instructions to be written in order to achieve the simplest tasks. A variety of so called high level languages has been devised in order to simplify the task of the programmer. These high level languages have been given names. They include such languages as Basic and derivatives of it, Fortran, Cobol and Pascal. The use of these languages enables the programmer to write a program in terms which more nearly resemble ordinary English than those used in lower level languages. They also permit what is, for the computer, quite a complex operation to be directed by a relatively compact command. Like assembler language, high level languages have to be translated into machine code before they can be understood and acted upon by a computer. The programs which have been devised to achieve this are called compilers. As with assembler language, the translation process is usually possible in one direction only. It is not generally possible to recreate a program in its higher language form from its translation into machine code.

In computer parlance the program as written in whatever language used by the programmer (whether machine code, assembler language or a high level language) is known as the source code. When this is converted by an assembler or a compiler into machine code it is known as the object code. In cases where the program is written in machine code, the source code and the object code are the same. When computer programs are exploited commercially it is usual for the end user to be supplied only with the object code, this being all that the customer needs to load into his computer. The customer does not generally have access to the source code and, because of the difficulties concerning re-translation, cannot generally reconstruct the source code from the object code. "

Copyright Protection for Computer Programs

The first issue that arises in relation to computer programs is whether they may be accorded copyright protection. This begets a set of three related questions. As we have seen

from the above discussion computer programs, in written form, can be expressed as source code or object code. The relevant questions that arise would therefore be, firstly, whether copyright could subsist in source documents. The second would be whether source codes may be accorded copyright protection. Thirdly, can copyright subsist in object codes.

Pursuant to the Copyright Act, source documents may obtain protection as an original literary work or, where applicable, as an artistic work. This is, of course, subject to satisfaction of the connecting factors discussed above. It might also be possible to persuasively argue that source documents fall within the definition of 'computer program' in Section 7(1). Section 7(1) defines a 'computer program' as meaning:

> "an expression, in any language, code or notation, of a set of instructions (whether with or without related information) intended, either directly or after either or both of the following:
>
> (a) conversion to another language, code or notation;
> (b) reproduction in a different material form,
>
> to cause a device having information processing capabilities to perform a particular function".

In any event, whether or not source documents fall within the definition of 'computer program,' they will be considered as literary or artistic works or both, depending on the circumstances of the case.

We now turn to the issue of whether copyright can subsist in source and object codes. It is useful to note that the courts have accepted that copyright can subsist in code. In *DP Anderson & Co v Lieber Code Co*,[6] Bailhache J. had the following to say:

> "... it is contended that [the code] is not a literary work, either original or otherwise, and the ground upon which that contention is based is that the words in the code are not words in the ordinary sense at all, but are merely collections of letters which are in themselves meaningless and are made up in a merely mechanical way. I cannot accede to that argument. The words – I call them so for want of a better name – are for use for telegraphic purposes and to each of them a meaning can be attached by the person sending the message and also by the addressee."

In relation to source codes, the courts have not had much difficulty in holding that copyright can subsist in source codes. This is a position that appears to be accepted in Singapore (*Aztech Systems Pte Ltd v Creative Technology Ltd*),[7] *England (Sega Enterprises Ltd v Richards*),[8] Australia (*Computer Edge Pty Ltd v Apple Computer Inc*)[9] and the United States (*Data Cash Systems Inc v JS & A Group Inc*).[10]

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[6] [1917] 2 KB 469 at p 469.
[7] [1996] 1 SLR 683 (the High Court decision) and [1997] 1 SLR 621 (the Court of Appeal decision).
[8] [1983] FSR 73.
[9] [1986] FSR 537.
[10] 480 F Supp. 1063.

The Application of the Defenses and Exceptions to Copyright Infringement to Computer Programs

In an earlier section of this chapter, we had a brief look at the various defenses and exceptions to copyright infringement that may be availed by potential defendants in copyright infringement suits. In this section, we will look at the application of these defenses and exceptions to situations involving the copying of computer programs. We will begin our analysis with the defense for private study or research.

Fair Dealing for Private Study or Research

The defense for private study or research is contained in section 35 of the Copyright Act and reads as follows:

> "35. -(1) A fair dealing with a literary, dramatic, musical or artistic work, or with an adaptation of a literary, dramatic or musical work, for the purpose of research or private study shall not constitute an infringement of the copyright in the work.
>
> (2) For the purposes of this Act, the matters to which regard shall be had, in determining whether a dealing with a literary, dramatic, musical or artistic work or with an adaptation of a literary, dramatic or musical work, being a dealing by way of copying the whole or a part of the work or adaptation, constitutes a fair dealing with the work or adaptation for the purpose of research or private study shall include –
>
> (a) the purpose and character of the dealing, including whether such dealing is of a commercial nature or is for non-profit educational purposes;
> (b) the nature of the work or adaptation;
> (c) the amount and substantiality of the part copied taken in relation to the whole work or adaptation; and
> (d) the effect of the dealing upon the potential market for, or value of, the work or adaptation.
>
> (3) Notwithstanding Subsection (2), a dealing with a literary, dramatic or musical work, or with an adaptation of such a work, being a dealing by way of the copying, for the purposes of research or private study –
>
> (a) if the work or adaptation comprises an article in a periodical publication, of the whole or a part of that work or adaptation; or
> (b) in any other case, of not more than a reasonable portion of the work or adaptation,
>
> shall be taken to be a fair dealing with that work or adaptation for the purpose of research or private study.
>
> (4) Subsection (3) shall not apply to a dealing by way of the copying of the whole or a part of an article in a periodical publication if another article in that publication, being an article dealing with a different subject-matter, is also copied.

(5) (*Deleted by Act 6/98*)"

In *Aztech Systems Pte Ltd v Creative Technology Ltd*,[11] the Singapore Court of Appeal held that the original statutory provisions in section 35 did not apply to private study for commercial purposes. This was because section 35(5) previously provided that "research" shall not include "industrial research or research carried out by bodies corporate (not being bodies corporate owned or controlled by the Government), companies, associations or bodies of persons carrying on any business. "

This decision was swiftly followed by the Copyright (Amendment) Act 1998 which resulted in the deletion of Section 35(5) in its entirety. This would effectively mean that research and reverse engineering that takes place for commercial purposes or in a commercial setting is no longer automatically excluded from the defense contained in Section 35. Nevertheless, it must be noted that whether the defense applies in any particular scenario would still depend on whether the dealing satisfies the requirement of fair dealing. Section 35(2) lists certain factors that the courts shall have regard to in deciding whether the dealing is fair and one of the factors is "the purpose and character of the dealing, including whether such dealing is of a commercial nature or is for non-profit educational purposes." The other factors listed are the nature of the work or adaptation, the amount and substantiality of the part copied taken in relation to the whole work or adaptation and the effect of the dealing upon the potential market for, or value of, the work or adaptation.

It is important to note that the use of the word "shall include" in Section 35(2) probably means that the list of factors listed in the section is not exhaustive. This was the interpretation adopted by Lim Teong Qwee J. C. in *Aztech Systems Pte Ltd v Creative Technology Ltd*,[12] at first instance, when he decided that other matters of public interest could be taken into account in deciding whether the dealing was fair. This view is also favored by Wei who suggests that the courts should similarly be entitled to take into account the American concept of "transformative" use in deciding whether the dealing is fair:

> "Transformative use looks towards a use that adds some value to the work. In broad terms, the greater the value added, the greater the transformation, the less likely that other factors such as the commercial nature of the use will result in a finding that the dealing was not fair. Will the Singapore courts take such an approach under the Copyright Act 1987? If a defendant through reverse engineering infringes the copyright in a computer program in the course of developing his own compatible interoperable and non-infringing computer program, will the courts be able to take the fact that the infringement is "intermediate" and that the final end product was "non-infringing" into account, in deciding whether that intermediate infringement is covered by fair dealing for private study or research? It is submitted that the courts should be able to take this factor into account in appropriate cases provided that it is borne in mind that it is only one factor which has to be weighed up in the context of all the other factors."[13]

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[11] [1997] 1 SLR 621.
[12] [1996] 1 SLR 683.
[13] George Wei, *The Law of Copyright in Singapore* (2nd Edition, SNP Editions), page 1254.

Rental Rights for Computer Programs

By virtue of the Copyright (Amendment) Act 1998, which applied with effect from 16 April 1998, new rental rights for computer programs have been introduced. This now appears as the amended Section 26 and the insertion of a new Section 25A of the Copyright Act:

"26. -(1) For the purpose of this Act, unless the contrary intention appears, copyright, in relation to a work, is the exclusive right –

...

(c) in the case of a computer program, to enter into a commercial rental arrangement in respect of a machine or device in which a computer program is embodied if the program is not able to be copied in the course of the ordinary use of the machine or device."

(2) Subsection (1)(*c*) shall not extend to entry into a commercial rental arrangement in respect of a machine or device in which a computer program is embodied if the program is not able to be copied in the course of the ordinary use of the machine or device.

(3) The reference in Subsection (2) to a device shall not include a device of a kind ordinarily used to store computer programs, such as a floppy disc, a device of the kind commonly known as a CD ROM, or an integrated circuit.

(4) Subsection (1)(*c*) shall not extend to entry into a commercial rental arrangement in respect of a computer program if –

(a) the copy of the computer program, not being an infringing copy, was purchased by a person (referred to in this subsection as the program owner) before 16th April 1998;

(b) the commercial rental arrangement is entered into in the ordinary course of a business conducted by the program owner; and

(c) the program owner was conducting the same business, or another business that consisted of, or included, the making of commercial rental arrangements in respect of computer programs, when the copy was purchased."

...

25A. -(1) In this Act, "commercial rental arrangement," in relation to a sound recording or a computer program, signifies an arrangement that has the following features:

(a) regardless of the way in which the arrangement is expressed, it is in substance an arrangement under which a copy of the sound recording or computer program is made available by a person on terms that it will or maybe returned to the person;

(b) the arrangement is made in the course of the conduct of a business; and
(c) the arrangement provides for the copy to be made available-
(i) for payment in money or money's worth; or
(ii) as part of the provision of a service for which payment in money or money's worth is to be made.

(2) Notwithstanding anything in subsection (1), an arrangement shall not be regarded as a commercial rental arrangement if, regardless of the way in which the arrangement is expressed, it is an arrangement for the lending of a copy of a sound recording or computer program under which the amount payable is intended to be no more than –

(a) the amount necessary to recover the costs, including overheads, of the arrangement; or
(b) a deposit to secure the return of the copy."

THE LIABILITY OF NETWORK SERVICE PROVIDERS

Section 10 of the Electronic Transactions Act deals with the issue pertaining to the liability of network service providers. Section 10(1) provides that network service providers are not liable in respect of "third-party material" which is in the form of electronic records in a situation where the network service provider "merely provides access". The phrase "provides access" is defined in Section 10(3) in relation to third-party material as meaning "the provision of the necessary technical means by which third-party material may be accessed and includes the automatic and temporary storage of the third party material for the purposes of providing access". "Third-party" is defined in Section 10(3) in relation to a network service provider as meaning "a person over whom the provider has no effective control".

In the context of copyright infringement committed by computer users accessing the Internet via the services provided by Internet Service Providers in Singapore, Section 10(1) could be *potentially*[14] availed in situations where action is brought against the Internet Service Provider. As observed by one commentator, the scope of Section 10 is very broad (although it must be noted that the various limitations on the operation of section do have the effect of making the exemption unavailable in some situations):

> "This exemption from liability is potentially very powerful. It is not even conditional upon lack of knowledge on the part of the service provider. Hence it will apply even if a service provider knows that a certain web-site has a lot of unlicensed, pirated software for download, and that many of the service provider's subscribers access that "warez" web-site.
>
> It is, of course, possible to have a more restrictive exemption of liability clause which requires that the service provider must not know of the third-party content in question, and if he becomes aware of it, he must block it, either within limits of what is

[14] The effectiveness of the provision is, however, now curtailed somewhat by virtue of section 10(2): see discussion below.

commercially reasonable or absolutely. However, if the goal is to recognize the infrastructural role played by service providers – not unlike that played by telephone and postal operators – and to grant service providers exemption from liability in respect of content conveyed by them as mere "conduits" of information, then such a guarded exemption of liability clause would be inadequate.

However, one very important ingredient in Section 10 is that the network service provider must be "merely providing access" in respect of the third-party content in question. If a service provider were to recommend and advertise "hyperlinks" to any third-party content, it may not be able to avail itself of the protection offered by Section 10, since it may have effectively "endorsed" or "adopted" the content as its own.[15] Furthermore, a service provider that attempts to absolve itself of liability by hosting or locating its content on an international or offshore web-site would also not succeed since it would not then be "merely providing access" in respect of such content.[16] The fact that the section deals with third-party content means that it does not absolve the network service provider from liability for *its own content* (*i.e.*, when it provides access to "programs" on the Internet not as access provider,[17] but in its capacity as a content provider in its own right).[18]

In addition to Section 10 of the Electronic Transactions Act, the Copyright (Amendment) Act 1999 has now introduced a new Part IXA that seeks to address issues pertaining to the liability of network service providers. Section 10 of the Electronic Transactions Act is expected to be of limited utility to network service providers in situations involving copyright infringement by its' users as Section 10(2)(b) specifically provides that nothing in Section 10 of the Electronic Transactions Act shall "affect the obligation of a network service provider as such under a licensing or other regulatory regime established under any written law". Section 10(2)(b) is likely to be read as encompassing the provisions contained in Part IXA of the Copyright Act.

We will now turn our attention to the relevant provisions of Part IXA of the Copyright Act. Before we examine these provisions, it may be opportune to discuss in general the various policy arguments in relation to the issue of the liability of network service provider. We will then turn our attention to case law that has been instrumental in triggering the drive,

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[15] For example, a service provider that provides, in its email newsletter, a hyperlink to a collection of files which are images of copyrighted arcade game Read-Only-Memory chips, may be assisting in the propagation of software piracy in a manner which s 10 would offer no protection against.

[16] Given the amorphous and borderless nature of the Internet, whether or not content is that of a network service provider or a third party is a question of fact which must be determined by an objective review of the dataflow involved. The answer to this question cannot be determined from a simplistic consideration of the physical location of physical machines in which data content is stored or "hosted" in cyberspace.

[17] Under the Singapore Broadcasting Authority Act (Cap. 297), "programme" is defined as, *inter alia*, "any matter the primary purpose of which is to entertain, educate or inform all or part of the public. " A Class License Scheme under the SBA Act governs Internet service and content providers in respect of the content, or "Programme" carried by such providers.

[18] Hence, a service provider which creates a collection of newsgroup postings, exercising control in the selection and editing of such postings, would not be able to claim that such an edited content is "third-party content".

in many parts of the world, to develop statutory provisions that seek to curtail the liability of network service providers.

Backdrop

Due to the difficulty of enforcing copyrights against individual users of the Internet, disgruntled copyright owners have started filing suits against network service providers. These claims are usually for copyright infringement[19] or, in some cases, based on the doctrine of vicarious liability.

Advocates who argue that network service providers should be held liable point to the fact that the latter profit from pirates' use of the Internet and are in a good position, through contractual means or the implementation of applicable technologies, to police their subscribers' use of the Internet. Network service providers have, however, retaliated by arguing that they are mere passive carriers, akin to telecommunications companies, and should accordingly be granted immunity or limitations from liability for copyright infringement committed by their users. There was also concern that the imposition of liability on network service providers may stifle the growth of the Internet.

The US Approach

In order to address the concerns expressed by network service providers, some countries have enacted appropriate legislation. In the United States, for example, the Digital Millennium Copyright Act[20] seeks to address these concerns by codifying into statutory law the principle established in the American case of *Religious Technology Center v Netcom*[21] that passive acts cannot be the basis of on-line copyright infringement.

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[19] On the basis of direct infringement or authorization of an infringing act.

[20] For a detailed analysis of the US Digital Millennium Copyright Act, see Mark E. Harrington 'On-line Copyright Infringement Liability for Internet Service Providers: Context, Cases & Recently Enacted Legislation' (1999) Boston College Intellectual Property and Technology Forum 060499: this article can be viewed at http://www.bc.edu/bc_org/avp/law/st_org/iptf/articles/content/1999060401.html.

[21] 907 F. Supp 1361 (N. D. California 1995). See also the very recent decision of the New York State Court of Appeals in *Lunney v. Prodigy Services* which ruled that Internet service providers are not publishers and are therefore not subject to libel laws. An imposter had posted various vulgar and profane messages in the name of a teenage Boy Scout. The father of the teenager asserted argued that his son had been stigmatized by being falsely portrayed as the author of the offensive messages and sued Prodigy Services. The court opined that Prodigy Services was protected against charges of defamation by the common law privilege applicable to phone companies. The court was of the view that the transmission of e-mail by Prodigy Services was analogous to the transmission of a defamatory phone call by a telephone company. In respect of messages posted on Prodigy Services bulletin board, the court found the question of liability for bulletin board postings 'more complicated' due to the 'generally greater level of cognizance that their operators have over them.' The court held that Prodigy Services was not a publisher of the electronic bulletin board messages. The court, however, refused to close the door on such liability and noted that there might be other circumstances in which an electronic bulletin board operator might be found to be a publisher: see John Caher 'Internet Provider Not Liable For Defamation' New York Law Journal (January 3, 2000) accessible at http://www.

[Footnote continued on next page]

The legislation also seeks to clarify the criteria for establishing liability and makes it more difficult to successfully sue network service providers on the basis of contributory or vicarious copyright infringement. In addition, the legislation provides that in situations where network service providers institute action against alleged copyright infringers, the law accords protection to network service providers from lawsuits when they act to assist copyright owners in limiting or preventing infringement. Lastly, the Digital Millennium contains provisions requiring the payment of costs incurred when someone knowingly makes false accusations of on-line infringement.

It is also apt to note that the US legislation does not establish an exemption to copyright infringement liability but rather is a limitation on liability. This limitation takes the form of a statutory change in the remedies available to a plaintiff. Some other countries, such as Singapore, have formulated slightly different responses to similar problems posed. An examination of the Singapore position follows.

The Singapore Approach

It is increasingly recognized that network service providers play a vital role in the on-line delivery of content for copyright owners. Therefore, it is crucial that the legal framework provides certainty about their respective liabilities and responsibilities. In December 1999, the Copyright Act was amended to introduce provisions which exempt network service providers from liability for any kind of incidental copying that may occur while carrying out their activities.[22] What follows is a very brief discussion of the relevant provisions of the Copyright (Amendment) Act 1999. Readers who are interested in a detailed examination of the amendments introduced may wish to refer to Stanley Lai, "Liability of Network Service Providers under Copyright Law: Impact of the Copyright (Amendment) Act 1999," (2000) 27 *Asia Business Law Review* 65 or George Wei, *The Law of Copyright in Singapore* (SNP Editions, 2000, 2nd Edition) at pages 1349 to 1358.

Under the Copyright Act, a distinction made between materials to which the Network Service Provider provides access, and materials hosted by the Network Service Provider at the direction of the end user. Network Service Providers not liable for any kind of incidental copying that may occur while providing access to materials (i.e., user caching).[23] However, in relation to hosted materials, this statutory protection may be lifted if the copyright owner makes and serves on the Network Service Provider a Statutory Declaration stating that he believes in good faith that the materials hosted by the Network Service Provider are infringing, and notwithstanding this Statutory Declaration, the Network Service Provider fails to either remove the material which is said to be infringing, or disable access to the material.[24]

[Footnote continued from previous page]

nylj. com/stories/99/12/120399a2. htm. The decision is accessible at http://www. nycourts. com/scripts/csearch. exe/singledecision?&FILE=cpny3369. 002&CRT=5.

[22] c. f. section 10 of Electronic Transactions Act - NSP's statutory immunity against civil and criminal liability in respect of third party material.

[23] Section 193B.

[24] Section 193C.

Faced with such a Statutory Declaration, the Network Service Provider may either

(a) remove hosted material as demanded by copyright owner and be entitled to statutory immunity against copyright infringement; or
(b) ignore the demand and Statutory Declaration and lose the statutory immunity.

A loss of statutory immunity does not necessarily mean that the Network Service Provider will be liable for copyright infringement. Liability will still have to be determined in accordance with other general provisions of the Copyright Act (e.g., for authorizing infringement under Section 31 of the Act). To prevent frivolous demands from being made, the Act provides for penalties in the event false Statutory Declarations are made. Where any removal or disabling of access to a copy is done in compliance with Statutory Declaration, the Network Service Provider is automatically exempted from any civil and criminal liability in respect of such removal or disabling of access.

The provisions of the Copyright Act in relation to the liability of ISPs may be compared with the "safe harbor" guidelines in the US Online Copyright Infringement Limitation Act. Under the US legislation, an ISP is not liable for transmitting copyright infringing information if:

(a) Transmission of infringing material not initiated by ISP;
(b) Transmission carried out through an automatic technical process without hands-on selection of material by the ISP;
(c) ISP does not personally select the recipients of material except as an automatic response to the request of another person;
(d) No copy of the infringing material is made by the ISP in a manner accessible by customers other than the intended recipient;
(e) ISP does not modify the infringing material; and
(f) ISP expeditiously removes or disables access to web site or infringing portions of web site when ISP becomes aware of infringing materials.

The term "network service provider" is not defined in the Singapore Copyright Act. Section 193A, however, states that "material" means any work or subject matter other than works in which copyright subsists by virtue of the Copyright Act. Section 193A goes on to state that "electronic copy" in relation to any material, means a copy of the material in an electronic form, and includes the original version of the material in that form.

Wei rightly points out that since the term "access" is not defined, this may result in tricky questions over the true scope of the defense. It remains to be seen whether the courts would adopt a narrow or a broad interpretation of the term. In contrast, the term "service provider" is clearly defined in Section 512(K)(1) of the US Digital Millennium Copyright Act 1998 Act as:

(1) an entity offering the transmission, routing or providing of connections for digital on-line communications between and among points specified by a user, or material of the user's choosing, without modification as to the content of the material as sent or received; and

(2) provider of on-line services or network access, or the operator of facilities therefor.

Case law in the United States also suggest that operators of computer bulletin boards which are used to upload or download unauthorized copies of video games[25] or photographs[26] may be liable for copyright infringement. The underlying principle in these cases is that an ISP that facilitates or encourages the use of its system to exchange infringing copies may be liable for contributory copyright infringement, in the same manner as a provider of photocopying services would be liable for authorizing copyright infringement of literary works[27]. Generally, an ability to control or prevent the infringing act is an important factor in determining if there has been "authorization", since a person cannot be said to have authorized an act over which he had no effective control[28]. In the case of an ISP, it must be shown that the ISP has knowledge of the infringing activity, and has contributed materially to such activity by taking no action to prevent the continuation of such activity. The mere maintenance of a network that is used for the exchange of infringing material is unlikely to render an ISP liable for authorizing infringement, although that together with a failure to establish any rules governing the use of its network coupled with a refusal to remove infringing material upon being notified of the existence of such material on its system may place the ISP in a precarious position insofar as liability for authorizing infringement is concerned.

LINKING AND FRAMING

Hyperlinks, which some regard as the essence of the World Wide Web, have given rise to some interesting legal quagmires. In order to fully appreciate these issues, it would be useful to understand the technology that underlies hyperlinking (also known as hypertext linking).

Computers that are connected to the World Wide Web store their information in a format known as Hypertext Markup Language, which is more popularly known as HTML. This language is primarily a language of layout and design. HTML allows a user to format information and store it on his web site. A person who accesses the site will see the information in the format adopted by the user. HTML, thus, allows the owner of a server computer to control what is seen by the person accessing the web site. HTML also offers hypertext.

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[25] *Sega Enterprises Ltd. v MAPHIA*, 857 F. Supp. 679 (N. D. CA. 1994).

[26] *Playboy Enterprises, Inc. v Frena*, 839 F. Supp. 1552 (M. D. Fla. 1993).

[27] *Moorhouse v University of New South Wales* [1976] R. P. C. 151. Under section 31 of the Copyright Act, copyright is infringed by a person (other than the copyright owner) who does or authorizes the doing in Singapore, of any act comprised in the copyright. Liability for authorizing copyright infringement in the case of a library which provides photocopying facilities at its premises is expressly dealt with in section 34. Under this provision, the body administering the library shall not be taken to have authorized the making of the infringing copy "by reason only that the copy was made" on its photocopier machine if there is affixed to or near the machine, in a place readily visible to users of the machine, a notice in the prescribed form.

[28] G Wei, *The Law of Copyright in Singapore* (1989), at p. 132.

Hypertext is a method of designing a document containing links[29] to other documents. Links on web sites are usually shown by the word denoting the link being underlined and colored blue. Pictures are sometimes used to serve as links. Often the user's cursor arrow transforms into a 'hand' when scrolling over a hypertext link making the link easily recognizable. When a user clicks on a hypertext link, the web browser calls up a new web site. Users can easily access different pages and different sites, without the need to use complicated Internet addresses or arcane keyboard commands. All one needs to do is to click on a mouse. The term 'surfing the web' signifies the ease with which a user can link from one site to another using hyperlinks.

The beauty of this facility is that a link may be created to a document held on any other computer anywhere else on the World Wide Web. The term 'World Wide Web' is an apt description of this system of having a vast number of links, criss-crossing across digital pages in different countries around the globe.

Links between content on the Internet is all too common. Nevertheless they sometimes create problems for their creators. A major concern of a web site owner whose web site is being linked ('secondary site') to another site ('primary site') is that the front page of the secondary site, which may contain advertisements that generate revenue or other benefits, can be easily bypassed. This situation arose in the Scottish case of *Shetland Times v. Dr Jonathan Wills & The Shetland News Ltd.*

The facts of the decision are as follows. The Shetland Times instituted an action based on copyright infringement against an Internet news service for linking to articles within the Shetland Times online newspaper. It was argued in defense that the news service was technically not copying or modifying any proprietary material of the Shetland Times. By creating a link to another website, the defense argued, a primary site is simply directing users to the secondary web site. Thus, because the news service does not copy or modify the information, it should not be subject to copyright infringement.

Commentators in favor of unfettered linking point to the fact that by linking to another web site, the primary web site is helping the secondary one by directing users to the site and thereby enhancing the market for the copyrighted material. They also argue that a primary site has an implied license to link to a secondary site, since all web site owners should anticipate that others may use hyperlinks as a means to access copyrighted material on the Internet. Therefore, web site operators who make their material and services available on the Internet without including any limitations or restrictions as to use of the material, impliedly grant others the right to use hyperlinks to access that material. The court issued an interim interdict, temporarily directing that such links be terminated, subject to further litigation. The case was, however, subsequently settled out of court.

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[29] HTML allows two types of links. The first, an HREF ("Hypertext REFerence") link, instructs a browser to stop viewing content transmitted from one location, and begin viewing that of another. The link can bring the viewer to a different point on the same page or to a different page in the same site. An HREF link can also be used to link to a site that is not on the local web site at all. The second type of link in HTML is an IMG ("IMaGe") link. An IMG link instructs a visiting browser to supplement the text on the page with an image contained in a separate image file. Like the HREF link, an IMG link can also reference a file from a completely different web site.

In another similar case, *Ticketmaster Corporation v. Microsoft Corporation*, Ticketmaster claimed that the 'Seattle Sidewalk' guide on Microsoft's web site illegally uses the Ticketmaster name and trademark by providing links that have circumvented the home page of Ticketmaster's web site which displays advertisements, products and services of entities with which Ticketmaster has advertising contracts. This case was also subsequently settled out of court.

Framing, on the other hand, is a technique whereby multiple windows or frames are created on the user's computer screen. Each frame functions independently and information downloaded into one frame fills up that frame only, as opposed to the entire screen. The result is that a user may have a multiplicity of windows on his screen, each window displaying the contents of a different web site. The use of framing in conjunction with hyperlinks allows the primary site - with its logo and third party advertising conspicuously displayed - to remain as the frame or border to the material on the secondary site.

Frames can mislead the viewer of a site as to the creator of its content. Moreover, because of their capacity to present data from several different sources as part of one unified display, frames can easily result in the juxtaposition of unrelated, and sometimes antithetical, pieces of content.

In *Washington Post Company v Total News Inc.*, framing technology was utilized by Total News to present a site that displayed its own logos, advertising and URL on screen, whilst the contents of secondary sites were contained in smaller windows on the screen. The secondary sites, which also sell advertising of their own, were not fully displayed, thus their advertising was distorted. In addition, the fact that the URL did not change when framing was used could have caused confusion amongst casual browsers as to the source of the material. The plaintiffs argued that framing constituted an infringement of their copyright and trademarks. Total News recently settled the case, and accordingly no judgement was given. It is noteworthy that under the settlement agreement, Total News will cease the practice of framing the plaintiffs' web sites, but is not prohibited from linking to the plaintiffs' web sites provided that the hyperlinks consist only of the names of the linked sites in plain text.

In a case reported to be the first of its kind in Singapore when it was first announced by the media in December 1999, Internet Service Provider Pacific Internet initiated proceedings against a Singapore homegrown start-up Asian search engine Catcha.com for breach of copyright. In the writ, Pacific Internet alleged that catch.com had reproduced in its own websites two Pacific Internet websites, web pages and their content, without consent. In particular, Catcha.com is alleged to have taken the content from Movies Online, a database of movie schedules in Singapore, and from restaurant guide Tatler Top 125 Restaurants. The following extract contains a discussion of the position taken by the two parties at the time the writ was filed:

> "Said PI chief executive Nicholas Lee: "We feel that it is patently unfair that Catcha.com has benefited commercially from the effort and expense that we have devoted to the creation of our Web properties." In the writ, the ISP claims Catcha.com had infringed on its copyright, had failed to correctly attribute the authorship of the content, was passing off PI's content as its own, and had trespassed. PI is asking the court for an injunction to restrain Catcha.com from continuing to link to PI's content, and for damages. According to Pacific Internet's lawyer Yvonne Lee, in September, Catcha.com.sg had linked to subsidiary pages in Movies Online, rather

> than to the main page. She said Catcha.com had also used a search function on one of its pages which linked directly to the database used by PI's restaurant guide. The web surfer using that search or clicking on the link was then sent to pages owned by Pacific Internet. In September, PI had sent a letter to Catcha.com asking it to stop. The portal removed the links. However, PI has decided to pursue the matter further. Said the lawyer: "We believe that this case is important, one way or another, as it will serve to establish essential markers that separate permissible and proper acts from non-permissible and improper acts on the Internet." When contacted, Catcha.com chief executive Patrick Grove said: "We admit no wrong doing and we will be vigorously defending the matter." If it goes to court, the case is likely to set a precedent as it will clarify issues of copyright and passing off as it relates to the Internet."[30]

In July 2001, it was announced that the case initiated by Pacific Internet against Catcha.com was settled out of court. The proceedings ended, after one and a half years of legal wrangling, when both parties filed notices of discontinuance with the Singapore High Court. A Singapore.CNET.com report provides additional details of the settlement:

> "The two parties are said to have settled their case amicably with a decision to set up a "mutually beneficial" strategic alliance, a source close to the two companies told Singapore.CNET.com last evening. Specifically, PacNet's travel portal Safe2Travel will be hosted on a co-branded site within Catcha's portal, while the Catcha's search engine will be made available on PacNet's local site, the source revealed. However, it could not be ascertained if Catcha paid any damages in cash. Last month, a PacNet spokesperson told Singapore.CNET.com that the ISP expected to receive damages "in both monetary and in kind". However, she could not provide any financial value to the compensation."[31]

Although case law has not provided definite answers, prudence would dictate that some basic rules be complied with to avoid legal liability. Circumventing a web site's home page may have a serious impact on that web site's ability to generate advertising revenue. In addition, web site owners should carefully design their site so that the pages follow strategically from one to another. Navigational control of a web site may be critical to a company's ability to maximize sales and profits from its web site. Thus hyperlinks might only legally be able (although this is now questionable in the light of the case of *LDS Church v Utah Lighthouse Ministry*) to direct viewers to the home page of a certain web site rather than deep into its pages (sometimes also known as deep hyperlinking). With regards to "framing," stricter rules seem to apply, for example, that the secondary site's home page and advertising on it cannot be distorted; that the URL of the secondary site must appear on the user's browser after the link is completed; and that the primary web site must not use its own advertising to border the frame of the secondary web site.

Web site owners who wish to exert stricter control over the linking and framing of their web site content should incorporate on-line terms and conditions, which exclude any implied license and which limit and restrict the use of the web site content and provide, for example,

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[30] Jimmy Yap, "Pacific Internet sues Catcha. com", Saturday, December 11, 1999.

[31] Nawaz Marican, "PacNet, Catcha settle out of court", Singapore. CNET. com, Wednesday, July 11 2001.

that no linking or framing[32] of that content may take place without the express consent of the web site operator.[33]

CHARACTERIZATION OF RIGHTS – A DISCUSSION OF THE RIGHT OF REPRODUCTION AND THE RIGHT OF MAKING AVAILABLE

Introduction

The strategy of guided development[34] (manifested in the form of recommendations, guiding principles and model provisions developed as a result of discussions by groups of experts and national legislators and governments) characterized much of international copyright discussions and negotiations during the eighties. This eventually gave way to a realization that such an approach was not conducive to harmonious development in the field and provided legislators with the excuse and opportunity to develop different solutions to deal with the evolving problems posed by newer technologies. This realization was a catalyst in the eventual attempt by WIPO to develop binding international norms via the passage of a new Copyright Treaty.

One of the more important issues that was discussed during the period when the provisions of the Copyright Treaty was being fleshed out was the identification of the right that should govern the exploitation of works over computer networks.

Distribution Right

The US proposed that the distribution right should cover the exploitation of works over computer networks. The majority of the delegations rejected this proposal.

It was widely felt that the distribution right was limited to physical copies of works and had no or limited application to electronic copies of works. In addition, many countries did not recognize a distribution right and were reluctant to change their laws to recognize the right. It was also widely accepted that the distribution right, in situations where it applied, was subject to the doctrine of first sale. This doctrine was developed in the context of physical copies of works and it would have been necessary to introduce provisions to clarify its application in the context of electronic copies of works. The ensuing adjustment that has to be effected to this well-established concept did not go down well with many delegations.

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[32] For an in-depth discussion of potential copyright issues pertaining to linking and framing with reference to the Singapore position, the reader may wish to refer to Low Fatt Kin and Loi Chit Fai, "Links, Frames and Meta-tags: More Challenges from the Wild Wild Web" (2000) 12 *Singapore Academy of Law Journal* 51.

[33] Linking and framing could also potentially give rise to an action based on copyright infringement (derivative works), passing off, defamation, and/or trademark infringement.

[34] S. Ricketson, *The Berne Convention for the Protection of Literary and Artistic Works:* 1886-1986, Centre for Commercial Law Studies, Queen Mary and Westfield College, London, [1986], at page 919.

Public Display and Rental Rights

There was a suggestion that the display right could be applied to the exploitation of works over computer networks. This suggestion did not garner much support as the right was not recognized in many countries.

There was also a suggestion by the European Commission that the rental right could be applied to the exploitation of electronic works. This gained little support due to the prevalent view held by many delegations that the rental right should be limited to physical copies of works.

Reproduction Right

The treatment of the reproduction right and its application to electronic copies of works is well summed up in the following extract:

> "As with every new technology, the reproduction right was sought to govern the application of copyright in respect of electronic delivery. It is noteworthy from the outset, however, that the advocates of the reproduction right acknowledged that if it were to be applied to computer networks it would have to be combined with another right such as public performance or communication to the public. The advocates of the reproduction right argued that uploading, together with the inevitable permanent and temporary storage of works on servers along the way, as well as downloading and screen display should amount to a reproduction in copyright terms.
>
> At the international level, this reproduction argument could be traced to 1987, when WIPO convened a Committee of Governmental Experts on the Printed Word in which the so-called "reproduction theory" was formulated. According to this theory, every screen display of writings or graphics requires copying in the RAM, and therefore should amount to reproduction. It is submitted that this theory, which was formulated mainly for the protection of computer programs (which perhaps should not have been protected y copyright in the first place), stretches the reproduction right beyond copying in tangible form. Accordingly, during the Seventh Session of the Committee of Experts on A Possible Protocol to the Berne Convention when the European Union proposed the introduction of a new Article in the WIPO Copyright Treaty to extend the reproduction right to permanent and temporary storage of works in electronic media which included the uploading and downloading of works to and from the memory of computer, it was subjected to a formidable opposition.
>
> Firstly, this proposal, as the Norwegian delegation put it, would make browsing the internet, which requires downloading works to see what is there, reproduction requiring authors' consent, notwithstanding that such downloading is merely to the RAM of the computer. Such an approach might well hinder the development of the information industry.
>
> Secondly, apart from some countries with a strong information industry, few national laws recognized copying in the RAM as a prohibited act. Thirdly, the reproduction argument would lead to a superficial distinction between broadcasting and webcasting.

Accordingly it was suggested that purely technical "reproductions", should automatically be included within the real economic right of the use, i. e. public performance or communication to the public.

The EU proposal, with minor amendments, was again submitted to the WIPO Governmental Conference of December 1996 as Article 7, and read:

> "(1) the exclusive right accorded to authors of literary and artistic works in Article 9(1) of the Berne Convention of authorizing the reproduction of their works shall include direct and indirect reproduction of their works, whether permanent or temporary, in any manner or form.
>
> (2) Subject to the provision of Article 9(2) of the Berne Convention, it shall be a matter for legislation in Contracting Parties to limit the right of reproduction in cases where a temporary reproduction has the sole purpose of making the work perceptible or where the reproduction is of a transient or incidental nature, provided that such reproduction takes place in the course of use of the work that is authorized by the author or permitted by law".

The proposed Article was met by the same opposition that had been demonstrated at earlier sessions. Additionally, even some EU member states expressed doubts regarding the proposal. The Swedish delegation argued that it should be made clear in the text that acts which were part of a communication to the public could not be subject to the reproduction right. Others, including Norway, Denmark and the Netherlands, asserted that incidental acts should not depend on exceptions: Article 7(2) should be dropped and Article 7(1) amended to make it clear that certain temporary copies fall outside the scope of the reproduction right. Another group of delegations objected to the second paragraph as being too wide, and argued that the circumstances under which signatories could limit the scope of the right should be specified in the Convention. In their opinion, since the internet is of an international nature, it is not wise to allow each country to introduce its own limitations to the reproduction right, because, as the South African delegation put it, this might lead to different exceptions in national laws which could create potential conflicts among national laws in cross-border transactions.

Surprisingly, the proposed Article 7 would have had the effect of making authorized electronic delivery subject to a single right, the public performance or communication to the public, whereas those which were unauthorized would constitute infringement of the reproduction right in addition to any other right applicable in accordance with national law. Accordingly, one wonders what exactly the reproduction right was intended to protect.

In the event, the question whether the new treaty should include a provision on the treatment of electronic reproductions turned out to be one of the most controversial issues of the 1996 Diplomatic Conference. No consensus was reached on this issue, which threatened to defeat the entire Copyright Treaty. Accordingly, the proposal was dropped. Nevertheless, at the eleventh hour of the conference it was suggested that the Agreed Statements attached to the WIPO Copyright Treaty should also deal with the reproduction issue. Accordingly, a provision was inserted in the Agreed Statements that reads: "the reproduction right, as set out in Article 9 of the Berne

> Convention, and the exceptions permitted thereunder, fully apply in the digital environment, in particular to the use of works in digital form. It is understood that the storage of a protected work in digital form in an electronic medium constitutes a reproduction within the meaning of Article 9 of the Berne Convention".
>
> In general, the binding effect of Agreed Statements is open to question. Additionally, even the persuasive effect of that concerned with the reproduction right is controversial, since unlike all the other Agreed Statements of the Conference, which were adopted by consensus, this was agreed only by majority vote. Moreover, as Vinje correctly pointed out the Statement did not even tackle the temporary copying question, which was the most controversial issue that surrounded the reproduction argument".[35]

The Communication to the Public Right

The limitations of the rights discussed above to the exploitation of works over computer networks resulted in the exploration of other rights and specifically the communication to the public right with a view to ascertaining its potential application to electronic copies of works:

> "During the preparatory work for the WIPO Copyright Treaty it was emphasized that national laws grant authors different nominate exclusive rights, and accordingly it was suggested that it was not the legal characterization which was important but rather that the acts involved be covered by appropriate exclusive rights. As a result, an umbrella solution was suggested, whereby a neutral right would be recognized in the Treaty. Its precise implementation, however, that is the choice of appropriate right or rights would be left to national legislation.
>
> The umbrella solution in international copyright terms would produce international chaos. Electronic delivery or exploitation of authors' works over computer networks recognizes no national boundaries, and allowing national laws to protect such exploitation by different rights which are normally subject to different limitations from one jurisdiction to another would lead to a great deal of uncertainty. Furthermore, since the classification of the right would also play a crucial role in determining the applicable law, the umbrella solution would naturally make solving the private international law aspects even more complex. Whilst the umbrella solution might have appeared to be an appropriate political compromise, in legal terms it could only [be] perceived as a setback.
>
> In fact, the communication to the public right was proposed as the most suitable for providing an umbrella solution. There were a few problems. Although the Berne Convention recognizes such right, it does not provide for an exclusive right of communication to the public in respect of all categories of works such as graphics and photographs. Furthermore, under the Convention literary works enjoy a very limited communication to the public right, which leaves computer programs without any such

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[35] See Makeen Fouad Makeen, *Copyright in a Global Information Society: The Scope of Copyright Protection Under International, US, UK and French Law* (Kluwer Law International) at pages 287-289.

protection. Accordingly, it was agreed that any such new right would cover all categories of works without any discrimination.

Another problem that surrounded the adoption of that right was the fact that national laws would definitely differ in defining "communication" and "public". Accordingly, it was suggested ... that the communication to the public should be defined in the convention as "the making available of works to the public," regardless of whether any person has actually received the work or engaged in downloading the same off the internet; the prohibited act begins with the making available of the work for access by the public. Furthermore ... it was agreed that the communication to the public right should encompass in addition to the "geographical aspect" a new "chronological aspect" which would allow the new right to cover interactive or on-demand acts of communication.

Thus the adopted Article 8 reads:

> "Without prejudice to the provisions of Articles 11(1)(ii), 11*bis*(1)(i) and (ii), 14(1)(ii) and 14*bis*(1) of the Berne Convention, authors of literary and artistic works shall enjoy the exclusive right of authorizing any communication to the public of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public may access these works from a place and at a time individually chosen by them".

Although the communication to the public right was initially proposed as an umbrella solution, and despite the fact that some scholars still argue that during the WIPO Conference of 1996 it was confirmed that Contracting States are free to implement the obligation of Article 8 through another right or combination of different rights, it is submitted that after its adoption in the Treaty it is no longer an umbrella solution but rather a specific right. As demonstrated in this book, the communication to the public is in actual fact the underlying principle for the application of copyright in respect of dissemination of works in non-material form. Had it been a mere umbrella solution, there would have been no point in defining the term "public" unequivocally in the body of the Treaty to include people chronologically dispersed. Moreover, the latest legislative activities around the world seem to have accepted it as a specific right. For example, Australia in its recent discussion paper *Copyright Reform and the Digital Agenda*, has adopted the communication to the public right to encompass broadcasting, cabling, and the making available of works over computer networks. Similarly, the European Commission Proposed Directive on the Harmonization of Certain Aspects of Copyright and Related Rights in the Information Society explicitly recognizes a specific right of communication to the public.

In sum, the communication to the public is not a general guide to be implemented in a variety of ways. It is explicitly recognized in the Berne Convention and in a number of jurisdictions, such as the Netherlands, Spain, Germany, Denmark, Greece, and by implication in others such as Sweden, and accordingly it is clearly a specific right, with a new, more precise, formulation.

It is widely accepted that digital technology may result in blurring the boundaries between the rights of reproduction, distribution, and that of communication to the

public. It is this author's view, however, that digital technology has clearly demonstrated the importance of the communication to the public right, which ... could replace the rights of public performance, broadcasting, cabling, and public display. Furthermore, it is submitted that it is only a matter of time before the communication to the public right could trespass on territories that were originally reserved for other rights. It is conceivable that within a short period of time the communication to the public right ... will make other rights seem redundant. For example the *raison d'etre* of the rental and public lending rights is merely to prohibit the making available of works to the public in physical form. Since ... the definition of communication to the public is the making available of works to the public, it could easily encompass these two rights, particularly because, unlike the rental and public lending rights, it is flexible enough to encompass the dissemination of works in material as well as non-material forms. "[36]

CYBERSPACE – A SEPARATE LEGAL ARENA?

Looking at issues pertaining to the Internet from a macro perspective, one could ask if it may be timely for there to be a concerted global effort to deal with some excruciatingly difficult questions which may require a complete reorientation of hitherto held opinions of how law should operate. In particular, a pertinent question is whether the unique characteristics of the Internet should create a separate legal jurisdiction. An ancillary question that may be asked is whether a separate jurisdiction would be beneficial to the development of the Internet.

At this juncture, one could rightly query whether the global nature of the Internet naturally forms a separate legal arena. This leads us to another question. If there is an inherent and separate jurisdiction that can be "reserved" for Internet based activities, should special laws be enacted to govern the Internet? In this vein, an important issue is whether a convention of cyberspace should be drafted similar to the separate international conventions governing the law of the sea and admiralty law.

The answers to these questions lie, in part, on whether we accept the Internet as a community and self-regulating body and on our understanding of and perception towards the scientific traditions and philosophies that govern such technology.

PROPERTY RIGHTS

Another important issue is whether electronic commerce will trigger the creation of new forms of property. An important sub-issue is whether these forms of property can be adequately protected by existing legal systems or will businesses have to resort to self-help to adequately protect their rights.[37] Some commentators argue that property in cyberspace is no different from that which exist in the real world and that existing doctrines are well equipped

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[36] See Makeen Fouad Makeen, *Copyright in a Global Information Society: The Scope of Copyright Protection Under International, US, UK and French Law* (Kluwer Law International) at pages 289-292.

[37] See generally Lawrence Lessig, *Code and Other Laws of Cyberspace* (1999).

to deal with any legal dispute that arises. The practical reality, however, appears to be that new forms of property are emerging with their own unique legal frameworks. The field of domain names and the accompanying registration systems provides a good illustration. The controversy over the domain name system[38] has resulted in unique laws being developed, such as the Anticybersquatting Consumer Protection Act in the United States, a governing body being set up, namely the Internet Corporation for Assigned Names and Numbers ('ICANN'), and the creation of distinct dispute resolution mechanisms such as ICANN's Uniform Domain Name Dispute Resolution Policy.[39]

The Internet also poses a viable threat to the protection hitherto afforded by intellectual property rights. In the past, where production and distribution channels were visible and capable of being regulated, intellectual property rights could be enforced through legal remedies. With the instant transmission and global distribution enabled by the Internet, legal protections for intellectual property owners appear to be inadequate.[40]

Electronic commerce also requires us to ask some fairly hard-hitting questions in relation to intellectual property rights that may have been taken for granted all along. One such question would be the position the law should take in relation to applications for patents for online business methods.[41] The recent furore in the United States over the issuance of patents for some online business methods[42] is probably indicative of the expected debate that will ensue when other patent registries in other parts of the world are similarly inundated with claims of this nature.

POLITICAL AND LEGAL INSTITUTIONS

Technological change transforms not only substantive rights and obligations but also the political and legal institutions involved in the creation, development and enforcement of these rights. It is envisaged that in the coming years, we will see greater institutional changes in legislatures, courts, regulatory bodies, and law enforcement agencies. It is noteworthy that some countries in Asia have taken strident steps in ensuring that the judicial system and problems such as delayed court dates due to backlog of cases does not act as a damper on parties' willingness to engage in electronic commerce. Singapore, for instance, recently launched e@dr, a new electronic alternative dispute resolution system where the subordinate

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[38] See generally Jessica Litman, "The DNS Wars: Trademarks and the Internet Domain Name System", 4 *The Journal of Small and Emerging Business Law* 149.

[39] See generally Olivia Maria Baratta and Dana L Hanaman, "A Global Update on the Domain Name System and the Law: Alternative Dispute Resolution for Increasing Internet Competition – Oh, the Times They Are a-Changin'!", 8 *Tulane Journal of International and Comparative Law* 325.

[40] See generally Alan Heinrich, Karl Manheim and David J Steele, "At the Crossroads of Law and Technology", 33 *Loyola of Los Angeles Law Review* 1035.

[41] See generally William D Wiese, "Death of a Myth: The Patenting of Internet Business Models After State Street Bank", 4 *Marquette Intellectual Property Law Review* 17.

[42] See Michael North, "The US Expansion of Patentable Subject Matter: Creating a Competitive Advantage for Foreign Multinational Companies?", (2000) 18 *Boston University International Law Journal* 111; and Christopher S Cantzler, "State Street: Leading the Way to Consistency for Patentability of Computer Software", (2000) 71 *Colorado Law Review* 423.

courts will provide mediation and settlement conferences for e-commerce transactions via the Internet.[43]

The very real problems posed by technological development to the work done by legislatures cannot be underestimated. The social repercussions of many recent technological developments would inevitably trigger quick and broad legislative responses. The relentless pace of technological change, however, sometimes has the effect of undermining legislative formulations. Legislatures around the world must therefore ensure that their appreciation of the ramifications of technology remain relevant and that they endeavor to predict future trends in technology or enact technology-neutral legislation.[44]

In the future, legislatures may also have to seriously rethink their roles and contemplate the possibility of delegating large chunks of their rule-making authority to specialized administrative agencies that typically have the added benefits of being more nimble and flexible in devising solutions to the problems that may arise.

Increasingly, many governments must also give due weight to the clarion calls from certain quarters of society for a hands-off regulatory approach to electronic commerce. It must be appreciated that sometimes this appears to be the best course of action to adopt especially when viewed against the backdrop of scenarios where regulatory agencies have blindly enacted legislation only to find that these efforts serve to frustrate technological advancement.[45] Regulatory agencies must also increasingly seek to engage industry and other stakeholder groups in formulating their policies and, in appropriate cases, promote industry self-regulation as a first-step response to the issues that crop up before implementing legislation. There are, however, limits to industry self-regulation and, in appropriate instances, governments must have the courage to make hard decisions and formulate suitable responses.

Courts also face similar difficulties in meeting up to the challenges of the information era. As one commentator so aptly notes, "[t]raditional rule-based, categorical reasoning, one of the hallmarks of the judicial decision-making process, is ill-suited to address areas of dynamic change"[46] and that "[j]urisprudence in an era of dynamic change may well proceed on an increasingly case-by-case basis." The courts will increasingly face tricky issues in relation to the reach of their authority. With the proliferation of electronic commerce, courts

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[43] According to Chief Justice Yong Pung How, e@dr is "[a] first of its kind in the region and the world for a judiciary" and that "[i]n addition, our partners, namely the Singapore Mediation Centre and the Singapore International Arbitration Centre will offer services in mediation and arbitration respectively, for such disputes": see Julia Ng, 'Singapore Judiciary Launches E-Commerce Dispute Resolution Hub', 16 September 2000 accessible at http://www. channelnewsasia. com/articles/2000/09/16/singaporenews16926. htm. The e@dr service may be accessed at http: //www. e-adr. gov. sg.

[44] In some cases, the latter course of action may, however, defeat the purpose of enacting legislation in the first place.

[45] Some commentators have argued that the United States' Digital Millennium Copyright Act is one such example: see Pamela Samuelson, "Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need to Be Revised", (1999) 14 *Berkeley Technology Law Journal* 519.

[46] Alan Heinrich, Karl Manheim and David J Steele, "At the Crossroads of Law and Technology", 33 *Loyola of Los Angeles Law Review* 1035 at 1045.

will increasingly be asked to deal with disputes involving international dimensions or, in some cases, involving no clear geographical dimensions at all. At the same time, the effectiveness of orders given by a judge may be circumscribed by enterprising defaulters or their supporters through postings via servers hosted or the use of internet service providers located in other countries.[47] The transnational and inherently anonymous nature of the Internet present serious challenges to law enforcement agencies as well.[48]

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[47] In the DVD DeCSS case, for example, the court issued a preliminary injunction prohibiting the posting of the DeCSS code anywhere on the Internet, even as it recognized the likelihood that its order would be disobeyed. In fact, the DeCSS code has recently been embedded within a Domain Names System (DNS) record and continues to spread across the Internet, despite the court's injunction. See also William Sloan Coats, Vickie L Feeman, John G Given and Heather D Rafter, "Legal and Business Issues in the Digital Distribution of Music: Streaming into the Future: Music and Video Online", (2000) 20 *Loyola of Los Angeles Entertainment Law Journal* 285.

[48] A good overview of the problems that exist is provided in Frank J Cilluffo, Paul Byron Pattak and George Charles Salmoiraghi, "Bad Guys and Good Stuff: When and Where Will the Cyber Threats Converge?", (1999/2000) 12 *DePaul Business Law Journal* 131.