

Software Protection & e-Commerce in IPR

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1.0 INTRODUCTION

The role of the law is to recognise, regulate human conduct and to enforce such regulation. The challenge to any emerging economy is to keep pace with the developments in technology and introduce relevant and appropriate legislation to facilitate the growth of Information and Communication Technology (ICT).

Copyright protection has traditionally been viewed as offering an incentive for the production of artistic, scientific, and other creative content, while permitting the public to access, use and innovate with such creative works.

The Internet and other global information technologies have opened new opportunities for the creation, distribution, and use of creative content. The Internet challenges lawmakers and society as a whole: how to preserve the balance between creators' rights and users' rights? Can the foundations of copyright law withstand the pressures of the new technologies? Can they be interpreted to apply to the modern age?

The purpose of this note is to clarify some of these issues

2.0 COPYRIGHT MEASURES TO PROTECT SOFTWARE IN SRI LANKA

An important aspect of legal reform which has been successfully implemented in Sri Lanka is the Intellectual Property measures to ensure adequate and meaningful protection for Computer Software. Over the years, Copyright as a means of protecting Software under the Intellectual Property regime became accepted firstly through judicial dicta² and then through statute law and International legal covenants³. However, recent trends have demonstrated that relying on Copyright alone would not provide adequate protection for Computer Software in view of the inherent features governing the law of copyright. Therefore, reliance on additional safeguards has become a necessity.

Intellectual Property Rights in Information Technology based products have grown rapidly in importance even in Sri Lanka. Although the Code of Intellectual Property Act of 1979 (based on the WIPO model) did not expressly contain provisions to protect Computer Software, Section 7 of the 1979 Code protected original literary, artistic and scientific works. There were several decisions in Commonwealth countries which have held that Computer Programs are protectable as literary works⁴. These decisions could have had persuasive value in Sri Lankan Courts, which are often guided by the decisions of Courts from countries in the British Commonwealth.

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² Eg:- *Apple Computer Inc vs Computer Edge Pty Ltd* [1984] FSR 481

³ Eg:- Australian Copyright Amendment Act (1984), UK Copyright (Computer Software) Amendment Act (1985) and the 1994 WTO TRIPS Agreement

⁴ *Autodesk Inc. vs Dyason* [1992] RPC 575; *Sega Enterprises vs Richards* [1983] F S R 73.

Nevertheless with Sri Lanka becoming a signatory to the TRIPS Agreement, the necessity to provide specific legislative safeguards to protect Software became more and more important. This was further advocated and supported by the growing Software industry in Sri Lanka. The obligations placed on Sri Lanka under the TRIPS Convention required Sri Lanka to update the Code of Intellectual Property to meet the minimum requirements placed by the Convention. The series of amendments suggested by the IPR Reform Commission resulted in the Code of Intellectual Property Act No. 36 of 2003 which seeks to incorporate most of the obligations imposed by the TRIPS Agreement.

Whilst comprehensive legal reforms were ongoing, an Amendment was introduced to the IP Code in June 2000. The effect of the Amendment (Act No. 40 of 2000) was the inclusion of Computer Programs as a protected work within the ambit of literary, scientific and artistic works under Section 7(2) of the Code of IP Act of 1979. In addition, the words “*Computer*” and “*Computer Program*” were defined in accordance with the Model Provisions for the protection of Computer Software prepared by WIPO. Thus, Sri Lanka complied with Article 10 (1) of the TRIPS Agreement⁵ requiring countries to provide adequate and meaningful protection to intellectual property rights in Computer Software.

Traditionally, in almost all commonwealth jurisdictions, Computer Software whether it be programs, databases, Computer files, preparatory design materiel and all associated printed documentation are all protected under the Copyright regime. This was re-asserted in Sri Lanka when the principles contained in the Amendment Act No 40 of 2000 were re-introduced through the Code of Intellectual Property Act No. 36 of 2003.

Consequent to the Amending Act No. 40 of 2000 the first Source Code IP infringement case was filed before the Commercial High Court of Colombo (*Soft Systems Pvt Ltd vs Visual Tech Ltd*). Although the Court granted enjoining order in the case, the action was dismissed for want of appearance during the Injunction Inquiry.

2.1 COPYRIGHT SOFTWARE PROTECTION UNDER THE CODE OF INTELLECTUAL PROPERTY ACT NO. 36 OF 2003

Under Section 6(1)(b) of the new IP Act, Computer Programs are protected under the Copyright regime within the scope of literary, scientific and artistic works (as in the Amendment of 2000). Similarly, the words “*Computer*” and “*Computer Program*” have been defined in accordance with the WIPO Model Provisions for the protection of Computer Software complying with Article 10(1) of TRIPS. What is required under Section 6 to protect Software is to satisfy the test of originality. Most Software programs would meet the requirement of originality, even if the program comprises little more than an arrangement of commonly used sub-routines, because even the selection and

⁵ Requires that Computer Programs (in Source Code or Object Code format) to be protected as literary and artistic works

arrangement of such sub-routines require a reasonable amount of skill and expertise (sometimes referred to as the test of “skill, labour and judgement”)⁶.

In terms of Section 9 of the IP Code 2003 the *owner* of a Copyright protected work “shall have the *exclusive right* to carry out or to authorize (a) the reproduction of the work (b) to translate the work (c) Carryout adaptations to the work etc. From a Software perspective this would mean that acts, such as the conversion of Software Source Code to Object Code format and even reverse engineering of Software would have to be exclusively carried out by the lawful owner.

A new feature in relation to Software protection under the IP Code of 2003 is the inclusion of a provision governing “fair use” in relation to Software. The concept of “fair-use” is an exception to the general rules governing Copyright protection. Section 12(7) of the IP Code provides that a reproduction in a single copy or the adaptation of the Computer program by the lawful owner of a copy of that Program (eg:- by the Licensee), shall be permitted without authorization of the owner of the Copyright if the copy or adaptation is required (a) for the purposes and the extent for which it was originally obtained, and (b) for archival or replacement of the lawfully owned copy of the Computer Program in the event the said copy is lost, destroyed or rendered unusable.

2.2 SOFTWARE COPYRIGHT PROTECTION AND OPEN SOURCE LICENSING

Open Source Software which is increasingly becoming popular even amongst individual users is being made available under a variety of licensing approaches. They all have a common feature, i.e. rely on Copyright to form the licensing contract. There are two principle open source licensing approaches – the GNU General Public License (GPL) and the Berkeley Software Distribution (BSD) License. Under the GPL, all derivative works must be licensed on the same terms as the original Software and source code subject to GPL cannot be disassociated with that license. Under BSD, developers are allowed to integrate the licensed software with developers’ own source code to create new products with few restrictions. Therefore, programs containing BSD code do not have to be re-distributed under the BSD license terms and instead could be subject to separate license terms.

The basis on which Open Source License categories impose terms and conditions on the use of the code is also founded on elements of Intellectual Property rights, namely, the copyright regime. In terms of most license conditions imposed under Open Source Models, the use of Source Code is permitted on condition that there is an appropriate attribution to the author of the original source code.

In a recent German case ⁷, a three judge German Court gave recognition to the GPL by requiring the defendant company to disclose the Source Code of its product that

⁶ *Cramp & Sons Ltd vs Frank Smythson Ltd* [1944] AC 329; *Feist Publications vs Rural Telephone Services* (1991) 111 S Ct 1282

⁷ *Netfilter Project VS Sitecom Germany GmbH* (2004)

contained components of Open Source Software. The Plaintiff's case was founded on Copyright. This illustrates that both in Open Source and commercial software models, the Copyright IP model remains the foundation for the license conditions.

3.0 THE IDEA-EXPRESSION DICHOTOMY

The safeguards provided in the IP Act of 2003, mentioned above, contain adequate safeguards against literal copying of Software. This means that sufficient protection is given to situations where exact duplicates are made through disk-to-disk copying.

In several jurisdictions, the basis for safeguarding Software from non-literal copying is increasingly becoming more and more uncertain. This is in view of the fact that copyright per-se does not give a monopoly over the ideas; what it does is to prevent a person from copying or otherwise using the tangible expression of ideas of the Copyright holder. In other words Copyright only protects the expression of ideas and not the idea itself.

Copying from a Software perspective can take a variety of forms. It need not be limited to taking a disk-to-disk duplicate. It is possible to copy a Computer program in a wider sense, for example the structure, flow and sequence of operations expressed in a Computer program may be copied and if a different programming language is used, the print out of the source code of the second program may NOT look similar to the first program.

In *Whelan Associates vs Jaslow Dental Laboratories Inc*,⁸ the impugned program was designed to assist dental labs. The same person was involved in the development of the competing programs but both were written in different computing languages. The first was written in EDL and the second (intended for the microcomputer market) written in BASIC. Therefore, there was no substantial literal similarity between the listings of the two programs. The US Court of Appeal (3rd Circuit) distinguished between the idea and expression and held that the purpose sought to be achieved, namely, the running of dental labs was the *idea*, which was not protected by Copyright and stated that it was quite acceptable for others to write similar programs in different languages. However, in this instance the structure of both programs was the same and so did the look and feel and because both were done by the same person, it was held that there was a possibility of a copyright infringement.

In *Lotus Development Corp vs Borland International Inc*,⁹ Lotus claimed that the defendant (Borland) had copied the same menu system for a competitive spread sheet program. Both products were electronic spreadsheets intended to facilitate accounting and other processes that involve the manipulation of and display of numerical data. It was held that the menu command hierarchy in the Lotus 1-2-3 spread sheet was an idea and therefore not copyrightable.

⁸ 1987 FSR 1

⁹ [1997] FSR 61

Even in UK the trend has been similar¹⁰. Therefore, if a company develops a unique piece of Software which proves to have extensive marketing success, then, another company could develop their own version in order to gain a share of the market (based on the first program). Copyright Law does not prevent this as long as the first program is not literally copied (i.e subject to disk to disk copying) or adapted. This principle in a way has been established in the EU Software Directive¹¹. Article 1(2) of the said Directive explicitly requires all EU member countries to protect Computer Programs as literary works but to exclude from protection “ideas and principles which underlie any element of a computer program, including those which underlie its interfaces”.

4.0 ADDITIONAL PROTECTION MEASURES FOR SOFTWARE

A new feature of the IP Act No. 36 of 2003 is the inclusion of a specific provision granting adequate protection to “undisclosed information”. This is consistent with Article 39 of the TRIPS Agreement. Section 160(6) of the Act provides that the disclosure and acquisition of undisclosed information without the consent of the “the rightful holder” would constitute an act of unfair competition. Section 160 (6)(b) further elaborates the above stating that the disclosure, acquisition or use of undisclosed information by others without the consent of the rightful holder may result from (a) industrial espionage (b) Breach of contract (c) Breach of confidence etc.

Therefore, these provisions in the IP Act of 2003 in effect gives statutory recognition to the English common law principles under the Law of confidence, providing sufficient safeguards to all aspects information, including the ideas behind the software¹² and information relating to preparation of Software. The requirement is to have proper contractual arrangements between the owner of such information and the user. The use of Non-disclosure Agreements (NDA) accompanying contracts of employment has become a phenomena in the Software industry even in Sri Lanka. In the context of the above provisions the breach of such contractual obligations would attract the provisions of Section 160(6) (b) of the IP Act of 2003 and may constitute an act of unfair competition.

Even prior to the enactment of the IP Act of 2003 confidential information was protected by means of contract law through appropriate contractual measures such as Non-disclosure agreements. In *Precision Tech Services (Pvt) Ltd vs Ingram Micro Asia Ltd*,¹³ the Commercial High Court of Colombo recognized in principle the concepts embodied in a non-disclosure Agreement and granted an enjoining order preventing the defendant from making use of the information provided by the Plaintiff under a NDA. However, the enjoining order was dismissed on technical grounds. At the time this case was instituted before the Commercial High Court of Colombo, the Section 160 of the IP Act of 2003 (discussed above) was not force and the basis of the action was on breach of contract. In the context of the provisions contained in the IP Act of 2003 the Plaintiffs in similar

¹⁰ eg:- Cantor Fitzgerald vs Tradition (1999) & IBCOS Computers vs Barclays Mercantile Ltd [1994] FSR

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¹¹ Directive 91/250/EEC

¹² Eg:- Northern Office Microcomputer vs Rosentein [1982] FSR 124

¹³ H C (Civil) 156/2001 (1)

actions would be able to institute proceedings for an act of Unfair Competition under Section 160 of the IP Act of 2003.

Most companies, especially those developing software with unique features, seems to increasingly rely more and more on alternative measures such as the law of confidentiality to protect their products from possible infringement. The enforcement of these measure depend a lot on the ability of a court in a particular jurisdiction to give meaning and effect to contractual mechanisms used by companies to safeguard information shared with others (including employees). The additional features provided under Section 160 of the IP Act No. 36 of 2003 facilitate this to a great extent.

5.0 LICENSING AND CATEGORIES OF SOFTWARE

It should be noted that Software is generally not sold. In other words the nature of software is such that its ownership does not change hands. The usual norm is for Software to be licensed. As per the terms and conditions stipulated in the license agreement the end-user receives an authorization to use the Software. Therefore, the license agreement is a contractual measure to regulate and govern the use of Software. The License Agreements could be generally classified as End-user License Agreements, Shrink-wrap licenses and Source Code License Agreements.

Based on the level of IP protection and Licensing methodology, Software could be categorized into 4 broad groups, namely

- (a) Bespoke Application Software
- (b) Retail Software
- (c) Shareware Software
- (d) Open Source Software

These would be discussed in detail during the presentation.

6.0 COPYRIGHT & INTERNET - CHALLENGES

The Internet affords a new medium for traditional types of creative expression and enables new types of expression. It also makes infringement of protected rights substantially easier¹⁴. The Internet's challenges to copyright law arise from the digitization of information and the creation of the networked environment. The Internet forces policymakers to ask what interests should society protect, whose interests should be protected, from whom, how and where?

(a) The challenge of Internet technology

¹⁴ U.S. Copyright Office, *Project Looking Forward Sketching the Future of Copyright in a Networked World*, May 1998 (prepared by Professor I. Trotter Hardy, College of William & Mary, School of Law), at p. 13

Digitization has made it much easier to manipulate, reproduce, and distribute protected works. Digital content can be combined, altered, mixed, and manipulated easily. Furthermore, digital material can be copied repeatedly with no loss of quality. Digital compression allows extremely large volumes of information to be stored on a single device and to be transmitted online.¹⁵

As a networked environment, the Internet is global, decentralized, and interactive. Multiple types of protected works can be brought together in a single webpage; multiple authors can contribute to one project; and components of a single online product may reside on multiple servers. A single act of infringement may involve multiple persons (an uploader, a downloader, and an intermediary service provider).

Posting on the Internet is sometimes compared to broadcasting, because one single act of posting can communicate information to an indefinite number of people worldwide. However, broadcasting is traditionally based on “point-to-multipoint” transmission, with an active communicator and passive recipients. The Internet, by contrast, supports both “point-to-multipoint” and “point-to-point” service. Much content is distributed only “on demand” of a recipient, giving her much greater control over the content and the circumstances under which it is accessed.

(b) Decentralized infringement

The Internet today can function as a worldwide “duplicating machine, enabling anyone to make perfect copies” or unauthorized derivative works “at low cost and to distribute them all over the world.”¹⁶ Decentralized infringement is not an Internet-specific phenomenon: it has a long history, from photography, to photocopying, to analog audio tapes, digital audio tapes, video tapes, computer software, and so on. However, the rate of infringement brought about by the Internet is unprecedented. Estimates of the global losses from pirated music, books, films and entertainment software range into the tens of billions of dollars.¹⁷ In 2004, the Motion Picture Association of America (the entity globally representing the interests of American film makers) sent out over 100,000 cease and desist letters or infringement notices to Internet service providers in Europe, the Middle East and Africa demanding that they stop infringing activity by their users. The volume of such letters was up 275 percent over 2002.¹⁸

“Peer-to-peer” (P2P) is perhaps the most prominent example of decentralized infringement. P2P schemes date back to 1998, to the birth of a company called Napster. The company provided free software to the public allowing a user to find exact copies of digital music files that others had put on their computers and to transfer them through

¹⁵ European Commission, *Green Paper Copyright & Related Rights In The Information Society* (COM (95)) 382 final; 19 July 1995

¹⁶ Alvise Maria Casellati, *The Evolution of Article 6.4 of the European Information Society Copyright Directive*, 24 Colum. VLA J.L. & Arts 369, Summer 2001 (“Casellati”).

¹⁷ For a partial estimate, see Phil Hardy, *Trade losses of US copyright holders due to music piracy rose 5.5% to \$2.26bn in 2003, according to IIPA survey*, Music & Copyright, March 17, 2004.

¹⁸ The International Herald Tribune, *Web Piracy of Movies takes off worldwide; Downloading grows fastest in Europe, OECD study finds*, July 9, 2004.

Napster's server onto the user's own computer. The record companies successfully sued Napster. However, while Napster was easy to stop by shutting down its central server, other "true" peer-to-peer schemes soon emerged, operating without any central servers. Today, peer-to-peer sharing takes place on a huge scale. For example, according to 2002 statistics, the Kazaa song swap software – one of the available products for peer-to-peer sharing - was downloaded 273 million times, and in just one month in 2003 852 million music files were shared online.

What should be the legal response to decentralized copyright infringement? Should the law accept what popular culture promotes or should it crack down on piracy? Should such practices as peer-to-peer be legalized as "fair use?" Should the law create a system of compulsory licenses or impose levies on each Internet account to go to into a special copyright fund to reimburse authors for the possibility of peer-to-peer distribution? Should service providers (intermediaries) be liable for making such infringement possible? Should the law be enforced against individual infringers with vigor?

Or should the information society rely on content owners to develop anti-peer-to-peer technologies to fight infringement?

7.0 COPYRIGHT & INTERNET – International Framework

There is an international consensus that certain issues are ripe and should be addressed in any national legal system today. These issues include:

- (a) ensuring that the reproduction right covers *all* copies of a work, including temporary and incidental copies, while also ensuring that exemptions or limitations to exclusive rights permit users to make temporary copies inherent in computer processing and electronic distribution;
- (b) providing that a copyright holder has an exclusive right to "make available" her work on the Internet either through the right of communication to the public or the right of distribution, through a combination of these rights, or through a new legislatively-devised principle;
- (c) addressing the issue of exhaustion of exclusive rights, to make it clear that online publication does not exhaust the creator's rights;
- (d) establishing liability for circumvention of technological protection measures;
- (e) prohibiting the tampering with digital rights management information; and
- (f) clarifying the liability of intermediaries by, on the one hand, making service providers liable for infringements of which they know or had reason to know, but, on the other hand, exempting them from any active duty to uncover infringements in transactions where they normally do not interfere with content.

7.1 The WIPO Copyright Treaty

By the end of the 1980s, it became apparent that the non-binding standards of "guided development" favored by WIPO were insufficient to combat dramatically increasing piracy and that there was a growing divergence in national responses to the challenges of

the digital revolution. The Internet's "truly spectacular expansion" raised a variety of unexpected challenges to the copyright regime, requiring a global response. Hence, WIPO initiated work on development of new binding norms to account for the advent of digital networks.

The process resulted in two new documents, which are sometimes referred to as the "Internet Treaties:" the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT), which were adopted in 1996 and entered into force in March and May of 2002 respectively. As of August 2004, forty-eight states had entered the WCT, and forty-four had joined the WPPT. The WCT, although a separate treaty rather than a modification of the Berne Convention, mostly complements Berne and adapts it to the digital environment, rather than overriding it or creating an independent framework. It requires that member states guarantee authors' protection with respect to distribution, commercial rental, communication to the public and making available to the public of their works on-line. Explicit protection is provided for computer programs and databases.

In a nutshell, the WCT requires a "Berne-plus-TRIPS-plus" level of protection. Besides adapting old concepts (e.g. reproduction and distribution) to the Internet environment, the WCT introduced two major new concepts, imposing on national legislatures an obligation to provide liability for (a) circumvention of technological protection measures (Article 11) and (b) tampering with rights management information (Article 12). The Treaty also contains specific provisions regarding enforcement of rights (Article 14).

7.2 The WIPO Performance and Phonograms Treaty (WPPT)

The WIPO Performances and Phonograms Treaty (WPPT) can be viewed as an "Internetization" of related rights (rights related to sound recordings and performances). It updates the Rome Convention of 1961 and aims at protecting the interests of performing artists (singers, musicians, etc.) and producers of phonograms. The WPPT ensures that these stakeholders have exclusive rights of reproduction, distribution, commercial rental and the on-line "making available" to the public of their performances or recordings. Furthermore, performers and phonogram producers are granted a right of remuneration for broadcasting and all forms of communication to the public of phonograms published for commercial purposes.

Just like the WIPO Copyright Treaty, the WPPT contains obligations concerning technological measures, rights management information and enforcement. The Treaty recognizes, for the first time in an international instrument, that performers have certain moral rights for their sound performances and those that are fixed in phonograms. Like the WCT, the WPPT aims not at creating any new principles, but at preserving the balance struck in the Berne Convention. After adoption of the "Internet treaties," the WTO and WIPO concluded a working agreement to facilitate the sharing of information and administration of international intellectual property agreements. A little later, in

1998, the WTO and WIPO established a “joint technical cooperation initiative” to ensure developing nations’ timely compliance with the TRIPS Agreement.

8.0 CONCLUSIONS

None of the existing international or national instruments is by any means a comprehensive response to the copyright challenges associated with the Internet revolution. Much of the process of defining policy solutions is left to national policymakers themselves. However, the above-mentioned treaties present a solid framework for national efforts to address the most urgent issues.