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ARTICLES

NOTES & COMMENTS

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UNIVERSITI TEKNOLOGI MARA (UiTM)

An Introduction

Universiti Teknologi MARA (formerly known as MARA Institute of Technology) is Malaysia's largest institution of higher learning. It had its beginnings in 1956 as Dewan Latihan RIDA, a training centre under the supervision of the Rural Industrial Development Authority (RIDA).

Nine years later Majlis Amanah Rakyat (MARA) Act, 1965 provided for a change of name from Dewan Latihan RIDA to Maktab MARA (MARA College). The Act also defined a new role for the MARA College -- to train Bumiputras (literally it means "the sons of the soil" - ie the indigenous people) to be professionals and semi-professionals in order to enable them to become equal partners with other ethnic groups (ie the former migrants, especially the Chinese and Indians) in the commercial and industrial enterprises of the nation.

In 1967 Maktab MARA was renamed Institut Teknologi MARA (ITM) (or MARA Institute of Technology). In August 1999, the Institute was upgraded to university status and named Universiti Teknologi MARA (UiTM).

As part of the government's affirmative action policies, UiTM provides education and training in a wide range of sciences, technology, business management and professional courses to 56,408 full-time students in 2000. Another 3,156 have enrolled for off-campus courses. In addition, there are 7,725 students in distance-learning and flexible-learning programmes.

The main campus stands on a 150-hectare piece of land on a picturesque hilly area of Shah Alam, the state capital of Selangor Darul Ehsan, about 24 kilometres from the city of Kuala Lumpur.

The Universiti has also established branch campuses in the various states of the Federation: Sabah (1973), Sarawak (1973), Perlis (1974), Terengganu (1975), Johor (1984), Melaka (1984), Pahang (1985), Perak (1985), Kelantan (1985), Penang (1996), Kedah (1997) and Negeri Sembilan (1999).

The Universiti currently offers 184 programmes conducted by 18 Faculties. These programmes range from post-graduate to pre-diploma or certificate levels. More than half of these are undergraduate and post-graduate programmes, while diploma programmes account for an additional 39%. Some of the post-graduate programmes are undertaken in the form of twinning programmes, through collaboration with universities based overseas.

The following 18 Faculties currently run programmes in the University:

Accountancy; Administration and Law; Applied Science; Architecture Planning & Surveying; Art & Design; Business & Management; Civil Engineering; Education; Electrical Engineering; Hotel & Tourism Management; Information Technology & Quantitative Science; Mass Communication; Mechanical Engineering; Office Management & Technology; Performing Arts; Science; Sport Science & Recreation.

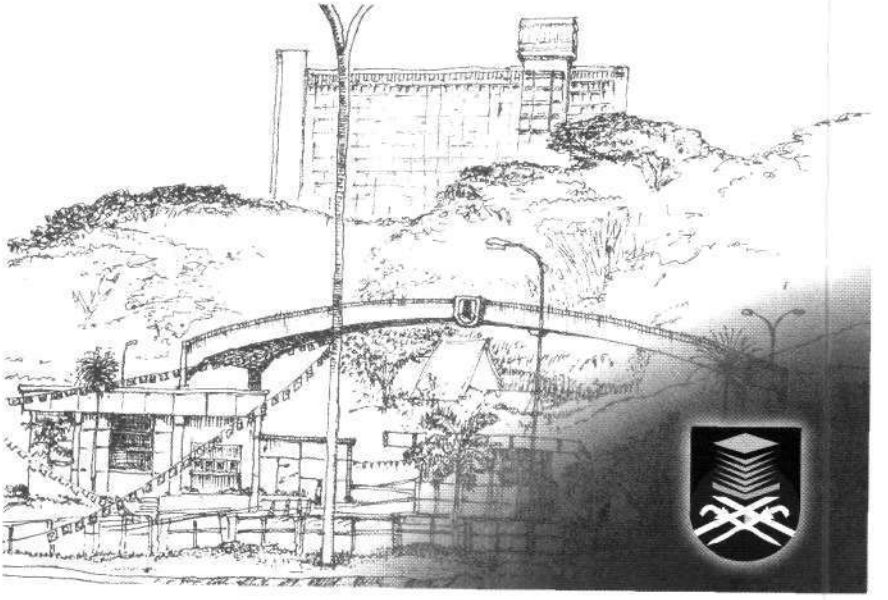
In addition to faculties there are 17 'academic centres' to cater various academic, business, technological and religious needs of the campus community. They are Extension Education Centre (PPL); Language Centre; Centre for Preparatory Education; Resource Centre for Teaching and Learning; Total Quality in UiTM (CTQE); Department of Academic Quality Assurance & Evaluation; Computer Aided Design Engineering Manufacturing (CADEM); Malaysian Centre for Transport Studies (MACTRANS); Text Preparation Bureau; Bureau of Research & Consultancy; Malaysian Entrepreneurship Development Centre (MEDEC); Islamic Education Centre; Centre for Integrated Islamic Services; Business & Technology Transfer Centre.

THE FACULTY OF ADMINISTRATION AND LAW, UiTM

The Faculty of Administration and Law (formerly known as the School of Administration and Law) was founded in 1968. It began as a centre offering British external programmes, the LLB (London - External) and the Chartered Institute of Secretaries (now Institute of Chartered Secretaries and Administrators). The only internal programme offered then was the Diploma in Public Administration and Local Government (DPALG). In 1978 the LLB (London - External) programme was terminated and replaced by the current internal LLB programme. The LLB is a three-year academic degree course based on the structure of the undergraduate law programmes normally offered in the British universities. Unlike most of the British LLB programmes, however, the LLB at the Faculty is conducted on a semester system. In 1982 the Faculty introduced a one-year LLB (Hons) programme towards which graduates of the LLB could advance their studies. The LLB (Hons) is a professional and practice-oriented programme that provides training to students for their career in the legal practice as Advocates and Solicitors. The delivery of the curriculum for this course adopts the method and strategy of simulated or experiential learning. Because of the unique experience it provides to students in their legal training this course has acquired wide recognition and acceptance among the Malaysian public.

The Faculty of Administration and Law enjoys strong connections with the legal profession, particularly the Malaysian Bar, and the industry. It takes pride in continually developing pioneering options in its degree programmes, both at the academic and professional levels. In 1995 the Faculty introduced the degree of Bachelor in Corporate Administration (Hons) to train young and bright Malaysians to hold office as Company Secretaries. In the pipe-line are some new courses - Bachelor of Law and Management (Hons), Bachelor of Administrative Science (Hons), Masters of Law and Executive Masters in Administrative Science.

The Faculty currently comprises some 70 academic staff from both the disciplines of law and administration. It has about 600 students reading for the LLB and LLB (Hons) and 500 students reading for the Diploma in Public Administration and Bachelor in Corporate Administration (Hons). The Faculty admits about 200 students each year.



Main Entrance to Shah Alam Campus

EDITORIAL NOTES

This law journal had a long period of gestation in the Faculty. There were several attempts in the past, by individuals or the faculty collectively, to bring about its parturition. It is no easy task to initiate an academic journal, regardless of the discipline it represents. It demands a high degree of commitment in time, energy and attention. It calls for an intense love of labour for scholarship among a critical mass of the faculty members, either in the editorial board or as article contributors. But, at long last, this journal has arrived.

Many factors led to this successful launch. The recent elevation of this institution to university status created its own impetus. Our strong law programme and its capable teachers demanded, and will benefit from, this specialist forum for academic debate and analysis. There is support within the legal profession and among our many distinguished alumni for such a journal, too. We are delighted by the synergy and collaborative goodwill the notion of a journal has evoked. So, we were able to marshal much expertise and experience to bring out this inaugural issue of the Journal.

Academic faculty at UiTM are part of the worldwide network of academia. We must participate in discussions and debates over issues that are not only of direct academic and professional concern but also of importance to the general public. A journal such as this facilitates reflective and disciplined participation. In doing so, it helps the Faculty, and the University, to undertake its noble role in serving the general community.

A learned journal is one of the major measures by which the weight and prestige of an institution are judged. It reflects the institution's maturity and ability to manage and conduct its specialist discipline. It reflects a confidence among its faculty to offer themselves to be evaluated in the open market place of ideas, and it serves notice of the faculty's readiness to serve the community at large. This Journal, in no small measure, marks the coming of age of the Faculty.

The Journal functions also as a meeting point for law teachers and practitioners who share a common interest in various areas of law. It provides them a source of information on the current and topical issues in their specialised areas. It creates a forum for the exchange of ideas and for engaging in discourse over sometimes intricate and often vexed legal issues. Much is gained by the legal fraternity, as well as the legal system, through such engagements and encounters.

Law teachers, as members of the broader academic community, are aware that it is no longer tenable for them to function solely within their traditional ivory towers, isolated from the reality of the world outside. For career and professional advancement, and for taking their rightful role in the community, no academic can confine

herself to her classroom or departmental audience. She must reach for a wider audience. The recognition (or lack of it) that she gains from her peers, both within and without the discipline, will speak for her standing and credibility in the community, both scholarly and otherwise. This Journal will serve as one channel for the Faculty members to reach that wider audience.

There are relatively few academic legal journals in this country. Most existing legal publications cater for the professional needs of legal practitioners. One ramification of this is that there are few discourses on theoretical and abstract legal issues. Yet these issues are important for the fuller appreciation and development of the law and the legal system, by the legislature, the reform bodies and the courts. This Journal will try to answer this need and stimulate discussions on issues that are of interest and relevance to the academic and broader communities.

The labour and skill required for this Journal to thrive will challenge the staff of the institution and the supporters of this initiative among the profession and the wider community. We hope the Journal sails well in fair winds.

Our wish is that Malaysia's legal profession, its legal academic circle and the many students and practitioners of law in this country and elsewhere will benefit from this forum for analysis and reform. We hope this Journal makes an important contribution to debate on vital legal matters in our society. We hope, too, that our quest for self-expression and critical reflection among the members of the legal academia will be assisted by this Journal. It is with great pleasure and some satisfaction at the completion of this worthy task that we complete this inaugural Editorial.

UiTM LAW REVIEW

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Volume 1 2001

ARTICLES

RESHAPING THE COPYRIGHT LAW FOR THE PROTECTION OF WORKS IN THE DIGITAL ERA

*by DR LIM HENG GEE**

Introduction

In recent years there has been a flurry of legislative activities in relation to intellectual property laws. The resulting amendments and introduction of new rights were carried out mainly to ensure that Malaysia is in compliance with her obligations under the World Trade Organisation's Agreement on Trade-Related Aspects of Intellectual Property Rights (WTO-TRIPS Agreement).[1] Among the new laws promulgated were the Trade Marks (Amendment) Act 1994, Industrial Designs Act 1996, Copyright (Amendment) Act 1997, Copyright (Amendment) Act 2000, Patents (Amendment) Act 2000, Trade Marks (Amendment) Act 2000, Geographical Indications Act 2000, the Optical Discs Act 2000 and the Layout Designs (Topographies) of Integrated Circuits Act 2000. This article discusses only the relevant amendments to the Copyright Act 1987 (the Act) which have impact on how works in the digital era could be properly protected. The main vehicle for these changes is the Copyright (Amendment Act) 1997 (the 1997 Amendment Act). Therefore, discussion in this article will focus mainly on the provisions of the 1997 Amendment Act. Where relevant, reference will also be made to the Copyright (Amendment) Act 2000.

The 1997 Amendment Act is one of several "cyberlaws"[2] enacted in 1997 in conjunction with the launching of the Multimedia Super Corridor (MSC). The various flagship projects envisaged in the MSC involve extensive use of computer technology by the relevant information technology companies. Hence there is a need to boost investors' confidence that the technologies that are brought in, and the products resulting from the use of these information technologies, are protected

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1 This Agreement obliges member countries to adopt certain minimum standards of intellectual property rights protection.

2 See also the Computer Crimes Act 1997, Telemedicine Act 1997 and the Digital Signature Act 1997. Another Act is the Communications and Multimedia Act 1998, which came into effect on 1 April 1999. The new Act repeals the Telecommunications Act 1950 and the Broadcasting Act 1988, and hence both the communications and multimedia industry are now brought under a single regulatory regime.

from unauthorised copying or other commercial use by competitors. The various cyberlaws laws are, therefore, enacted to ensure the success of the MSC project by providing effective regulatory, administrative and enforcement mechanisms and protection for information technology based activities related to the MSC Project. Specifically, the aim of the Copyright (Amendment) Act 1997 is to strengthen the copyright law in relation to products associated with information technology-based activities like computer programs and multimedia works and to ensure that the law is in tune with the needs of technology companies operating in the MSC.[3]

This article examines critically how the amended provisions enhance copyright protection in relation to computer software, computer-related works such as multimedia products and databases. The effectiveness of the former provisions is examined and the new provisions are analysed to determine the extent to which computer-related products are further protected under the copyright laws by the introduction of new restrictions for certain Internet-related activities which harm the interests of copyright owners. After all, it has to be borne in mind that in the information and communications technology (ICT) era, works that are created are all going to be in digitised forms. Therefore, the copying or piracy of copyright materials is no more anchored to hard copies like cassettes, compact discs and printed books.

The various amendments to the Copyright Act 1987 are in line with international developments in the field of copyright to align the copyright law with developments in digital technologies.[4] In the absence of any local judicial pronouncement on the effect of these new provisions, reliance will be placed on commentaries and judicial pronouncement on similar provisions elsewhere. Prior to the 1997 amendments, computer programs and associated multimedia works were already protected. The amendments confirm existing case law, reinforce existing provisions and introduce specific new provisions to prohibit certain activities that arguably could be enjoined under the provisions prior to the amendment.

Protection of Computer-related Works Prior to the Amendments

Prior to the 1997 amendments, specific references to computer programs were found only in s 3 and s 40 of the Act. The other provisions of the Act which have

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3 The explanatory statement to the Bill states that "technological development, especially information technology, has challenged traditional concepts of copyright protection. The proposed establishment of the Multimedia Super Corridor (MSC) will generate both challenges and opportunities for Malaysia. The success of the MSC will, to a certain extent, be determined by the contents that move through. These include educational works, entertainment products and information that are protected under the copyright law. For the MSC to realise its full potential, it is essential that adequate legal protection be made available to these works. The Act is proposed to be amended towards this end, taking into account recent international developments in respect of certain copyright works".

4 Most the amendments incorporated in the Act follow closely the provisions of the World Intellectual Property Organisation (WIPO) Copyright Treaty adopted by the Diplomatic Conference on 20 December 1996. Although Malaysia has not ratified this Treaty, it has basically adopted all the provisions therein. This is consistent with the Government's intention to update the Copyright Act to ensure that it is in line with international developments and to ensure compliance with the WTO-TRIPS Agreement.

relevance to the protection of computer programs or computer-related works are all couched in technology neutral terms. Section 3 of the Act defines a computer program to mean "an expression, in any language, code or notation,[5] of a set of instructions (whether with or without related information) intended to cause a device having an information processing capability to perform a particular function 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;"

The above definition corresponds to that contained in s 10 of the Australian Copyright Act 1968 (as amended in 1984). The import of the phrase "whether with or without related information" was the subject of different contentions in *Autodesk Inc v Dyason (No. 1)*.[6]

In that case, the first appellant owned the copyright in a computer program known as AutoCAD. To avoid piracy of its program, the appellants developed a hardware lock device called an "AutoCAD lock" (a dongle), without which the AutoCAD program could not be run. The third respondent, after making a close examination of the operation of the AutoCAD lock, designed an alternative device called an Auto Key lock, which performed the same function as the AutoCAD lock. The AutoCAD program was a compilation of programs which together comprised the relevant software. One of those programs was known as Widget C which operated in conjunction with the AutoCAD lock. A crucial part of Widget C was a look-up table. The third respondent incorporated in the Auto Key lock an EPROM (Erasable Programmable Read Only Memory) program so that, in effect, it operated as a look-up table which produced the same reading as the look-up table which was part of Widget C when read in the manner adopted by Widget C.

Counsel for the respondents argued that the phrase "whether with or without related information" implicitly excluded related information, not being itself instructions, from the scope of copyright protection. The court, by a majority, held that the 127-bits of information contained in the look-up table of the Appellants' Widget C program did not of itself constitute a computer program within the meaning of the definition in section 10 of the Copyright Act 1968. This was because it did not by itself amount to a set of instructions. However, it was a substantial part of Widget C and its reproduction in the Auto Key lock amounted to a reproduction of a substantial part of that program. In fact, Gaudron J specifically said that "ordinary usage and the language and the context of the definition compels

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5 Note that the phrase used in the definition would comply with the requirement of the WTO-TRIPS Agreement that "computer program, whether in source or object code, shall be protected as literary work" - see Article 10(1) of the WTO-TRIPS Agreement.

6 *Autodesk Inc v Dyason (No. 1)* (1992) 173 CLR 330; 104 ALR 563; [1992] RPC 575 259 (H Ct, Australia). See also *Autodesk Inc v Dyason (No. 2)* (1993) 25 IPR 33; [1993] RPC 259 (H Ct of Australia).

the conclusion that the words 'set of instructions (whether with or without related information)' extend to comprehend information as well as commands." Hence, his Lordship held that there was no basis for the argument that the Copyright Act did not extend copyright protection to information forming part of a set of instructions, if that information were a substantial part of the relevant set of instructions.[7]

The only relevant Malaysian case on this issue is *Creative Purpose Sdn Bhd v Integrated Trans Corp Sdn Bhd*,[8] which involves quite similar circumstances to those that occurred in *Autodesk*. In *Creative Purpose*, the defendants were alleged to have infringed the plaintiffs' computer program when they "patched" or modified two files in the plaintiffs' program to circumvent or by-pass the "dongle", a hardware attachment fitted to the printer port of a computer. Without the dongle, which was a security feature for the programs, the programs could not be used. By the modifications to the plaintiff's programs, the defendants were able to reproduce and distribute unauthorised programs for use without the dongle. Following *Autodesk*, the Court held that the modifications carried out by the defendants to circumvent the "dongle" was an infringement of the copyright, although it was done without direct copying of the original program.

It is worth noting that in *Creative Purpose* the judge held that "a set of instructions which is embedded into an integrated circuit is conferred protection as well". He went on to say that "it is my finding that the definition under s 3 of the Act should be read broadly so as to include all manifestation of that set of instructions which can be read by a computer in whatever converted form. This would therefore clearly cover the 'dongle' device of the plaintiff."[9]

The other section, s 40 of the Act, allows for the making of a "back-up" copy of a computer program if "the reproduction is made for the purpose only of being used, by or on behalf of the owner of the original copy, in lieu of the original copy in the event that the original copy is lost, destroyed or rendered unusable".[10] However, while the heading of s 40 is entitled "Back-up copy of computer program", it may be possible to argue that s 40 is intended to permit more than the making of a back-up copy of a computer program for use in case the original copy is destroyed, etc. This is because s 40(1), besides referring to the making of a reproduction of a work, also mentions the making of "a computer program being an adaptation of the work". Further, s 40(1)(b), besides referring to use of the back-up copy in the

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7 See *Autodesk Inc v Dyason (No. 2)* (1993) 25 IPR 33; [1993] RPC 259 (H Ct of Australia), at 282.

8 *Creative Purpose Sdn Bhd v Integrated Trans Corp Sdn Bhd* [1997] 2 MLJ 429.

9 *Creative Purpose Sdn Bhd v Integrated Trans Corp Sdn Bhd* [1997] 2 MLJ 429, per Kamalanathan Ratnam JC at 437.

10 See s 40(1) of the Act. Note that by virtue of s 40(2), this right to make a back-up copy of a computer program does not apply if the original copy is an infringing copy. Nor does it apply if there is express prohibition against such copying made known to the purchaser at the time of acquiring the original copy.

event that the original copy is lost or destroyed, also refers to use in the event the original copy is rendered unusable. This section may allow for the making of an adaptation of the program to enable it to be used in an upgraded computer system belonging to the purchaser of the original program.[11] Hence it is submitted that in the event the owner of the computer program wishes to retain the ability to maintain or upgrade the software, he should include provisions to that effect in a written software maintenance contract. In the absence of such an express agreement, it is arguable that the purchaser of the program would be free to adapt it to allow for use in his computer system.

Multimedia products are, to a certain extent, protected under the former provisions. A multimedia work is a work containing text, music, video, photographs, audio, film, artistic works, broadcast etc, all in a single format of digitised information.[12] However, protection of such products depends on invoking the various copyright subsisting in the underlying works. For example, if the multimedia product were to encompass elements of musical, artistic and literary works, as well as sound recordings and films, then the various owners of the underlying copyright would have to be involved in enforcing their various separate rights.

Databases are basically compilations, and hence are protected as a form of literary work.[13] As long as the necessary criteria are met, they are protected under the copyright law. However, it is uncertain how stringent or minimal the standard expected is.[14]

How the 1997 Amendment Act Seeks to Enhance the protection of Computer-related Works

Basically, three strategies were adopted. The first two were by redefining various terms used in the Copyright Act 1987 and the clarification of the existing law. The third was by the introduction of new rights.

1. Redefinition of terms and conditions for subsistence of copyright

Various amendments were made to s 3, the interpretation section of the Act. The purpose of these amendments is to widen or make the definition less restrictive and more suitable to cater to or encompass the emerging information technologies.

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11 The adaptation of a computer program to enable it to be used in an upgraded computer system was in fact held not to be an infringement of the exclusive right of the copyright owner in the US case of *Aymes v Bonelli* 33 USPQ 2d 1768. In that case, the Court of Appeal for the Second Circuit held that the owner of the copyright in a computer program could not prevent person for whom the program was written from adapting it to run on upgraded computer system, in the absence of agreement to the contrary.

12 Strictly speaking, the term "multimedia" is a misnomer. In a multimedia work, it is the types or categories of works that are multiple - not the type of media. The very premise of a so-called "multimedia" work is that it combines several different elements or types of works into a single medium, for example, a CD-ROM, not a multiple media. See comments in Intellectual Property and the National Information Infrastructure, September 1995, at 41-42.

13 See the definition of "literary work" in s 3 of the Act.

14 This problem is dealt with later in the section on "The areas of uncertainty and the future".

The first redefinition is with reference to the definition in s 3 of the Act of "tables or compilation" as examples of a literary work. The former phraseology used was "tables or compilations, expressed in words, figures, or symbols (whether or not in a visible form)". The new definition now states "tables or compilation, whether or not expressed in words, figures or symbols and whether or not in a visible form". A comparison of the two versions shows that the meaning of "tables and compilations" has been expanded to encompass works which may not have been expressed in words, figures or symbols. This is potentially of great relevance to the electronic database industry. Under the former definition, it may be argued that compilations of data in electronic databases may not fall within the definition since they are not expressed in words, figures or symbols, but are mere digitised signals.

An interesting provision introduced by the 1997 Amendment Act is the new s 7(2A) which provides that copyright protection does not extend to any idea, procedure, method of operation or mathematical concept as such.[15] It is trite law that ideas as such are not protected under copyright law; only the expressions of the ideas are protected.[16] It is uncertain whether the new subsection is intended to be a mere restatement of the existing law or whether it is intended to significantly expand the range of materials ineligible for copyright protection. Further, while the statement of principle is clear, the practical application of this principle is not always easy. This question will be discussed later in the article.

2. Clarification of the existing law

Derivative works of existing works are already protected under the Act as original works.[17] However, due to an oversight, s 13 of the 1987 Act - the section which enumerates the exclusive rights given to a literary, musical or artistic work, a film or a sound recording - makes no reference to a derivative work. While it is strictly not necessary because of the presence of s 8, it is felt prudent to include derivative works in the list of works given the exclusive rights under that section. Besides this, the further significance of the change to s 13 is uncertain. It may be argued that the change is also intended to extend copyright protection to multimedia works. However, as will be discussed later, the present structure of the Copyright Act may not bear this out.

3. Redefinition and introduction of new rights

Prior to the amendment, the owner of the copyright in a literary, artistic or musical work, a film or a sound recording is given the exclusive rights to reproduce, perform,

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15 See also Art. 9(2) of the WTO-TRIPS Agreement, which provides that "Copyright protection shall extend to expressions and not to ideas, procedure, methods of operation or mathematical concepts as such."

16 See, for example, *Hollinrake v Truswell* (1890) 25 QBD 99 which held that copyright does not extent to phrases, ideas, or methods; *L.B. (Plastics) Ltd v Swish Product Ltd* [1979] RPC 551, per Lord Wilberforce at 619, "There be no copyright in a mere idea ...". See also *Goodyear Tire & Rubber Co v Silverstone Tire & Rubber Co Sdn Bhd* [1994] 1 MLJ 348.

17 See s 8(1) of the Copyright Act 1987.

broadcast and communicate by cable, the work, and also to distribute copies of the work to the public. Section 13(1) of the Act, as amended, now provides that the owner has the exclusive right to control in Malaysia the following acts:[18]

a. reproducing the work in any material form,
b. communicating the work to the public,
c. performing, showing or playing the work to the public,
d. distributing copies of the work, by sale or other transfer of ownership,
e. commercial renting of copies of the work to the public.

The new right of "communication to the public" replaces the previous exclusive right to broadcast or communicate the work by cable. "Communication to the public" is defined as "the transmission of a work through wire or wireless means to the public, including the making available of a work to the public in such a way that members of the public may access the work from a place and at a time individually chosen by them."[19] The last part of this definition is important because as will be seen later, it is significantly wider than the two previous rights which it replaced.

This provision is made necessary by the ease with which piracy of computer software and other computer-related works can be carried out by the existing technologies. Digitisation of information, whether it be text, data, video or audio, and the ease with which these works can be electronically transmitted globally, merged, manipulated and transformed into different works, have made control of copyright protected works increasingly difficult. With the Internet era of interactivity and on-line services, the increasing powers of fibre optic cables and advances in compression techniques, the ability to duplicate and diffuse a work to an infinite number of homes has increased by leaps and bounds. To upload and download software, or other copyright works like sound recordings, from websites, newsgroups and bulletin boards, is just a matter of a few key strokes or clicks of the mouse. In fact, the latest problem of the recording industry is the direct result of further improvements in compression technology. The development of the MP3 data file format,[20] while a boon to legal distributors of musical works on the Internet, has also facilitated the downloading of "free music" from unauthorised websites. Coupled with the emergence of Napster,[21] the software and on-line service that

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18 In the case of copyright in a published edition, work of architecture and broadcast, the exclusive rights are provided for in ss 9(3), 14 and 15 respectively.

19 This definition follows that laid down in Article 8 of the World Intellectual Property Organisation Copyright Treaty [WIPO Doc. CRNR/DC/94], adopted by the Diplomatic Conference on 20 December 1996.

20 See S Patrick, "And Now, Cyber Pirates" The Star, 25 Feb 1999, section 2 at page 14. MP3 is a digital data-file format that compresses music files to manageable levels so that it occupies less disk space and also enables Internet users to download these files into their personal computer fairly quickly.

21 See J Moran, "Get the Picture Straight" In-Tech, 5 Sept 2000 at 35, PJ Huffstutter, "Music Copyrights Virtually Disappear" In-Tech, 13 June 2000 at 36 and PJ Huffstutter, "Napster Defends Itself in Lawsuit" In-Tech, 11 July 2000 at 6.

allows people to swap unauthorised digital song files over the Internet, the music industry seems to be facing a losing battle with Internet piracy of musical works. Similarly, the recent development of the video equivalent of the MP3 format, the DivX, has caused anxiety among the owners of the copyright in films, since this new format could compress video files to a much manageable size for posting and downloading off the Web without sacrificing its broadcast quality.[22]

The new right is thus widely defined to cover online transmissions and the provision of facilities to enable the downloading of software and other copyright works stored on various sites on the World Wide Web through "on-demand" access. To cater to the concerns expressed by communication carriers and Internet Service Providers regarding their exposure to liability under Article 8 of the WIPO Copyright Treaty (from which the new Malaysian s 13(1)(aa) is derived), the Diplomatic Conference adopted an Agreed Statement in relation to Article 8 which reads:

> It is understood that the mere provision of physical facilities for enabling or making a communication does not in itself amount to a communication within the meaning of this Treaty or the Berne Convention.

However, the above principle has not been enacted in the 1997 Amendment Act. Moreover, the Agreed Statement only exempts communication carriers and Internet Service Providers from liability for the "provision of physical facilities". In other words, it is intended that the provision of physical facilities does not amount to a primary infringing act of "communicating the work to the public". It does not per se exempt them from the possibility of being held liable for "authorising" or "causing" an infringing act.[23]

The former right of "distribution of copies of the work to the public by sale, rental, lease or lending" has now been broken up into two distinct rights. The first, under s 13(1)(e), grants the exclusive right to control in Malaysia the distribution of copies to the public by sale or other transfer of ownership.[24] The new s 13(1)(f) gives the owner the exclusive right to control the commercial rental of a work to the public. The change is significant, since the rights contained in the former s 13(1)(e) could be construed as including the right to control the non-commercial

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22 See M Musgrove, "Now Showing on Your Browser" In-Tech, 11 July 2000 at 39.

23 See F Macmillan and M Blakeney, "The Internet and Communication Carriers' Copyright Liability" [1998] EIPR 52, for a useful list of citations of the cases involving the liability of service providers in other jurisdictions and an argument for the complete exemption for communication carriers and Internet Service Providers from any type of copyright liability in respect of the provision of the Internet infrastructure. See also RL Hails, "Liability of On-line Service Providers Resulting from Copyright Infringement Performed by their Subscribers" [1996] EIPR 706, and A Kang, "Infringement and Enforcement of IPRS on the Internet", Intellectual Property in Asia and the Pacific, January-June 1998, p 25.

24 This exclusive right is now subject to the proviso introduced by s 6 of the Copyright (Amendment) Act 2000 that "the exclusive right to control the distribution of copies refer only to the act of putting into circulation copies not previously put into circulation in Malaysia and not to any subsequent distribution of those copies or any subsequent importation of those copies into Malaysia."

lending of works protected by copyright. Under the new s 13(1)(f), it is clear that the copyright owner's rights do not extend to the lending activities of public libraries. The commercial rental right is also subject to the new s 13(2)(p), which excludes the right to control the commercial rental of computer programs where the program is not the essential object of the rental. These changes are consistent with the provisions of Article 11 of the WTO-TRIPS Agreement and Articles 6 and 7 of the WIPO Copyright Treaty. However, the Malaysian provision goes further than that required under both the WTO-TRIPS Agreement and the WIPO Copyright Treaty. Under the Malaysian provision, the rental right is available to the owners of all types of work. In contrast, the WTO-TRIPS Agreement requires the rental rights to be extended only to computer programs and cinematographic works. The WIPO Copyright Treaty, in addition, covers also works embodied in phonograms. It may legitimately be asked whether, in our haste to ensure compliance with our international obligations, we have not gone too far?

Before the 1997 amendments, a person committed an infringement if he, without the consent of the owner, did or caused any other person to do an act the doing of which is controlled by copyright.[25] Another form of infringement is provided for by s 36(2) which relates to the activities of importers of infringing articles into Malaysia for commercial purposes. Two new infringing acts are provided under the 1997 Amendment Act by ss (3) and (4) of s 36.

Under the new s 36(3), copyright is infringed by any person "who circumvents or causes any other person to circumvent any effective technological measures that are used by authors in connection with the exercise of their rights under this Act and that restricted acts, in respect of their works, which are not authorised by the authors concerned or permitted by law".[26] In this context, the term 'effective technological measures' would include anti-copy devices that prevent or make harder the copying of work, like the Serial Copy Mangement Systems, or the use of encryption, password systems or digital envelope.[27] The phrase "permitted by law" is significant because the new right is not intended to undermine or take away the application of the existing exceptions provided by s 13(b) of the Act.[28]

The inspiration for s 36(3) of the Act would appear to be s 296 of the United Kingdom Copyright, Designs and Patents Act 1988, the section created to protect

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25 Section 36(1) Copyright Act 1987.

26 This follows the requirements of Article 11 of the WIPO Copyright Treaty which states that "Contracting Parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restricted acts, in respect of their works, which are not authorised by the authors concerned or permitted by law."

27 See generally, S Dusolier, "Electrifying the Fence: The Legal Protection of Technological Measures for Protecting Copyright" [1999] EIPR 285.

28 See the Agreed Statement Concerning Article 10 of the WIPO Copyright Treaty.

devices designed to circumvent copy-protection. *BBC Enterprises Ltd v Hi-Tech Xravision Ltd*[29] relates to the construction of s 298 of the UK Act, the section on protection of encrypted signals for broadcasts and cable programmes.[30] The plaintiff operated a satellite-delivered television service which was intended to be received only by members of the public who were authorised by the plaintiff to receive the service on payment of a fee. The signals were encrypted, and the service could only be viewed by the use of a decoder. These decoders were made available for sale or hire only through the plaintiff and its authorised distributors. The defendant was a specialist manufacturer of decoders, which marketed and maintained systems for the reception of satellite transmissions. It had been supplying its customers with decoders by which the plaintiff's encrypted transmissions could be received and decoded. The result was that its customers were able to receive the plaintiff's programmes without payment to it of any fees. The Court of Appeal held that the relevant sections give a right to the rights owner not to have others make apparatus or devices designed to be of use to persons not authorised by him to receive the programmes.

The new provision will thus dispense with the need to rely on s 36(1) of the Act by proving that the supplier of such devices is liable for "causing" an infringing act. If the situation in *Autodesk Inc v Dyason (No. 1)* mentioned earlier were to occur in Malaysia after the 1997 Amendment Act, the respondent's activities would be caught by the new s 36(3).[31]

Subsection (4) of the same section provides that copyright is infringed by any person who knowingly performs any of the following acts knowing or having reasonable grounds to know that it will induce, enable, facilitate or conceal an infringement of any rights under this Act:

(a) the removal or alteration of any electronic rights management information without authority;

(b) the distribution, importation for distribution or communication to the public, without authority, of works or copies of works knowing that electronic rights management information has been removed or altered without authority.[32]

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29 *BBC Enterprises Ltd v Hi-Tech Xravision Ltd* [1990] 1 FSR 217.

30 Note that the definition of "broadcast" has now been expanded by the 1997 Amendment Act to include "the transmission of encrypted signals where the means for decrypting are provided to the public by the broadcasting service or with its consent."

31 *Autodesk Inc v Dyason* (No. 1) (1992) 173 CLR 330; 104 ALR 563; [1992] RPC 575 259 (H Ct of Australia). For a commentary on this case, see Andrew Christie, "The Australian High Court decision in Autodesk" (1992) 4 Intellectual Property in Business 25.

32 Subsections (4) and (5) practically mirror the provisions of Article 12 of the WIPO Copyright Treaty.

In view of the increasing reliance on technological measures to prevent unauthorised use and collective management to enable proper control and monitoring of authorised use,[33] ss (4) is meant to work in tandem with ss (3). This subsection protects against the removal of any features in the work which are meant to identify the work as originating from a certain source or which enable the owner to keep track of the amount of use of the work for the purpose of royalty payment. An example of such a feature is the use of digital watermarking to add information to digital images, audio and video files which is normally invisible to the naked eyes, but which could be traced and detected with the relevant software 'reader' in order to identify the authenticity or copyright owner of works. Further, by using a 'spider' or 'Web-crawler', it is possible to trawl the Internet to search for files which contain a particular watermark for the purpose of detecting unauthorised reproductions and distributions.[34]

The Areas of Uncertainty and the Future

Despite all the above amendments, for the reasons given below, the scope and extent of protection for computer programs, multimedia works and databases is still murky under the Copyright Act 1987. Despite the recent amendments, there are still a lot of unanswered questions in relation to these works.

a. Computer program

The Act provides little guidance about what to expect in relation to the question of infringement of copyright in a computer program. To appreciate the problem, it may be instructive to have a basic idea of the stages involved in creating a computer program. The programmer starts with functional specifications, notes, documentation, flow charts or plans, etc to produce the design of the overall structure of the program. The design of the program is then implemented by writing the program's code in source code.[35] The source code is then converted, often by some kind of compiler or assembler program, into an object code, which provides the magnetic signals that drive the machine. The object code is in a "low-level" language, a string of O's and I's.[36]

Software infringement cases have generally fallen into two categories; literal copying of part of or the whole of a computer program and non-literal copying,

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33 See Thomas C Vinje, "A Brave New World of Technical Protection Systems: Will There Still be Room for Copyright?" [1996] 8 EIPR 431.

34 See generally, T Page, "Rights Management: Digital Watermarking as a Form of Copyright Protection" Computer Law and Security Report Vol 14 No 6 1998, 390, and S Lai, "Digital Copyright and Watermarking" [1999] EIPR 171.

35 These are written in specially designed "high level" languages, such as FORTRAN, COBOL, BASIC etc, which could be read and understood by the computer programmer.

36 See Andrew Christie, "Designing Appropriate Protection for Computer Programs" [1994] 11 EIPR 486.

where the structure, sequence and organisation of the program is copied, and not the codes.

There is no problem in relation to direct disk-to-disk copying. This form of activity is regarded as a copyright infringement. It has also been accepted to be an infringing act where the copyist copies the source or object codes but expresses them in a different language. This is because the expression of the original codes in a different programming language would amount to making a reproduction of the original work.[37]

What is more problematic is where there is a non-literal copying, ie, when there is no actual copying of the source or machine (object) codes, but copying of the non-literal elements of the program such as structure, arrangement or its "look and feel". The question has been framed thus: "The courts, in applying the copyright laws to computer programs face a dilemma; either they limit copyright protection to literal copying, thus giving the plagiarist the chance to easily escape liability, or they extend protection to the logic, design and structure of the program thus giving copyright owners monopoly rights over ideas and methods originally reserved to patents".[38]

In *Whelan Associates Inc v Jaslow Dental Laboratory Inc*,[39] the US Court of Appeal for the Third Circuit held that the copyright in a computer program could be infringed even in the absence of copying of the literal code if the sequence or organisation of the program were copied. The Court likened the copying of the structure of the computer program to the taking of the plot in a play. Since copyright of other literary works could be infringed even when there was no substantial similarity between the work's literal elements, eg, when the plot of a play was copied, therefore, by analogy the copyright in a computer program could be infringed, even in the absence of copying of the literal code, if the structure was part of the expression of the idea behind a program rather than the idea itself. While paying homage to the distinction between unprotectable ideas and protectable expressions of the idea, the court developed a test for distinguishing between the two:

> [T]he line between idea and expression may be drawn with reference to the end sought to be achieved by the work in question. In other words, the purpose or function of a utilitarian work would be the work's idea, and everything that is not

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37 See s 3 of the Act: "reproduction" means the making of one or more copies of work in any form or version ...". See also the definitions of "adaptation", "copy" and "material form" in s 3 of the Act. In the United Kingdom, s 21(4) of the CDPA 1988 provides that "In relation to a computer program a 'translation' includes a version of the program in which it is converted into or out of a computer language or code or into different computer language or code, otherwise than incidentally in the course of running the program."

38 G Schuman, (1988) 4 Computer Law and Practice 109.

39 *Whelan Associates Inc v Jaslow Dental Laboratory Inc* [1987] FSR 1.

> necessary to that purpose or function would be part of the expression of the idea. ... Where there are various means of achieving the desired purpose, ... the particular means chosen is not necessary to the purpose; hence, there is expression, not idea.[40]

This decision has been heavily criticised for the broad definition of a program's idea, thus unduly broadening the exclusive rights of the copyright owner.[41]

In *Computer Associates International Inc v Altai Inc*,[42] the court adopted a different test, the so-called "Abstraction - Filtration - Comparison Test". Under the *Altai* approach, the court would initially dissect the allegedly copied program's structure and isolate each level of abstraction contained within it. The second stage would involve filtering out those elements of that program which are not copyrightable, for example, when their particular inclusion at a particular level was "idea", or was dictated by considerations of efficiency, taken from the public domain etc. Once the court has filtered out all the unprotectable elements of the allegedly infringed program, the remaining elements will constitute the core of protectable expressions. The core of protectable expression would then be compared with the defendant's program to determine whether the defendant copied any aspect of the protected expression.

The courts in the United Kingdom have also to face similar difficulties in deciding how to demarcate the unprotectable ideas from the protectable expressions. *In John Richardson Computers Ltd v Flanders*,[43] Ferris J adopted the *Computer Associates Inc v. Altai Inc* test with some modifications. However, this approach was criticised by Jacob J in *Ibcos Computers Ltd v Barclays Mercantile Highland Finance Ltd*.[44] Jacob J felt that the abstraction and filtration test was unnecessary and that the only test which should be applied with regard to such a copyright claim could be taken from the CDPA 1988 and was as follows:

- What are the work or works in which the plaintiff claims copyright?
- Is such work original?
- Was there copying from that work?
- If there was copying, has a substantial part of that work been reproduced?

In the course of his judgment, Jacob J observed that US copyright law in the form of the US Copyright Code did not allow for the protection of ideas or functional works, and that the differences between UK and US law with regard to functionality and compilation were such that no useful conclusions could be drawn from study

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40 *Whelan Associates Inc v Jaslow Dental Laboratory Inc* [1987] FSR 1, per Circuit Judge Becker at 15 - 24.

41 See Julian Velasco, "The Copyrightability of Non Literal Elements of Computer Programs", (1994) 94 Columbia Law Review 242, and further references cited therein.

42 *Computer Associates International Inc v Altai Inc* (1992) 20 USPQ 2d 1641.

43 *John Richardson Computers Ltd v Flanders* [1993] FSR 497.

44 *Ibcos Computers Ltd v Barclays Mercantile Highland Finance Ltd* [1994] FSR 275.

of US case law since it would be unsuitable for deciding UK cases. He held that the fact that a particular program had a functional role within the main program did not prevent it from being copyrightable, even if the function performed could only be expressed in one of a limited number of ways. If skill, labour, and judgement could be shown to have gone into its development, it could be copyrighted. The US test, reliant as it was on ascertaining which elements of a program were "dictated by efficiency, external factors or ... taken from the public domain" and thus not protectable, was too complicated and might lead to a reliance on US case law.[45]

How is the Malaysian court going to approach the question of non-literal copying? Will there be the traditional reliance on the UK approach or would the US approach be adopted? Reliance on the UK approach may be justified prior to the 1997 Amendment Act, since the basic principles of Malaysian copyright law espoused in the 1987 Copyright Act were firmly rooted in the UK copyright doctrines. However, the same cannot be said of the position after the 1997 amendments to Malaysian copyright laws. As was mentioned earlier, the provisions of the 1997 Amendment Act were derived from the WIPO Copyright Treaty. The framing of the provisions of this Treaty was heavily influenced by Continental European and US doctrines. Hence faithful reliance on UK case law and approaches may no longer be justifiable.

This brings us back to the question asked earlier, ie, is the introduction of the new s 7(2A) meant to be a mere restatement of the existing law, or is it meant to increase the range of materials not protected by copyright law? It is worth emphasising that the amendment brings our Malaysian copyright law closer to the US position. It may be that Parliament, to prevent excessive anti-competitive effects of granting copyright protection, decided to statutorily reinforce the case law position by providing for additional barriers to protection. If this argument is correct, then it would appear that US concepts like scenes a faire etc are incorporated into the Act, and a judge is duty bound to exclude all these features from copyright protection.

The UK approach would go against the Malaysian statutory requirements. In the words of one commentator, "in the UK, the consequences for the protection of computer programs are particularly important since the test of infringement does not seem to disregard elements dictated by function or by external factors in the comparison of the plaintiff's and defendant's product."[46]

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45 For a commentary of this case, see Laurence Jacobs, "Demystifying Computer Infringement of Computer Software - Ibcos Computers v Barclays Mercantile" [1994] 5 EIPR 206. For a discussion of the Australian position, see Kenneth Fong, "Non-literal Copying Infringes Copyright in Software - Data Access Corporation v Powerflex Services Pty Ltd (1996) 33 IPR 194 (Federal Court of Australia)" [1997] 5 EIPR 256.

46 Luis Gimeno, "Protection of Compilation in Spain and the UK" [1998] 29 IIC 907 at 918.

Under the present Act, besides the "fair dealing" defence for purposes of private study and non-profit research, etc, there is no decompilation or reverse-engineering exception for the purpose of ensuring interoperability between competing programs.[47] One possible argument for saying that this omission is not crucial is to contend that the decompilation defence may possibly be covered by the prohibitions in s 7(2A). Based on a similar provision in the US Copyright law,[48] the US courts have held that there could be no reliance on copyright protection when a program is copied for the purpose of interoperability.[49] Will the Malaysian court adopt this pro-competition approach? It is interesting to note that a first instance court in Singapore has upheld the right to decompile a computer program to make the defendant's product compatible with the plaintiff's. In *Aztech Systems Pte Ltd v Creative Technology Ltd*,[50] Creative alleged that in investigating Creative's Sound Blaster compatibility and in developing its Sound Blaster compatible sound cards, Aztech had infringed Creative's copyright in the firmware in Creative's chips as well as in two pieces of software. The court held that Aztech's dealing with the software constituted fair dealing for the purpose of private study, and hence did not constitute an infringement of copyright. The Singapore Court of Appeal, however, held that the private study exception did not include private study for commercial purposes.[51]

b. Multimedia products

Another potentially troublesome area which could give rise to numerous debates relates to multimedia products. It has always been assumed that a multimedia product is protected under the copyright law. However, before a work could be protected by our Copyright Act, it has to fall within one or more of the categories of works listed in s 7 and s 9 of the Act. Section 9, which relates to copyright in a published edition, is for present purpose irrelevant to the discussion. Under s 7, only a literary, artistic or musical work, a film, sound recording and broadcast are

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47 Under Article 6 (the decompilation defence) of the European Directive on the Legal Protection of Computer Programs (91/250/EEC), reverse engineering will be allowed without authorisation from the copyright owner when it is "indispensable for obtaining information necessary for interfacing a program that has been created independently of other programs". This means that if a manufacturer produces a new program, which it plans to use in conjunction with a rival's incompatible program, it can decompile the competitor's program to work out a third program - an interface - that would link the two.

48 Copyright protection under US law does not extend to any "ideas, procedure, process, system, method of operation, concept, principle, or discovery ... " - see 17 USC, s 102(b).

49 See *Sega Enterprises Ltd v Accolade Inc* (1992) 977 F 2d 1510, and Richard H Stern, "Reverse Engineering of Software as Copyright Infringement - An Update: Sega Enterprises Ltd v Accolade Inc" [1993] 1 EIPR 34. Cf *Atari Games Corp v Nintendo of America Inc* (1993), and see Richard H Stern, "Reverse Engineering for Future Compatibility - Atari v Nintendo" [1994] 4 EIPR 175. For menu command hierarchy, see Michael Schwarz, "Copyright Protection is 'Not on the Menu' - Lotus Development Corp v Borland International, Inc" [1995] 7 EIPR 337 - The United States Court of Appeals for the First Circuit reversed the District Court's finding that Borland had infringed the copyright in the Lotus 1-2-3 menu command hierarchy (user interface). The Court of Appeals ruled that there is no copyright in the menu command hierarchy because it is a "method of operation" which the Copyright Act specifically excludes from protection.

50 *Aztech Systems Pte Ltd v Creative Technology Ltd* [1996] 1 SLR 683.

51 See Creative Technology Ltd. v Aztech System Pte Ltd [1977] 1 SLR 621.

eligible for copyright protection. The question is under what category of work, in terms of the Copyright Act, is a multimedia product?

Under the Act, a multimedia product could conceivably fall under one of two possible categories of work, ie, a broadcast or a film. A broadcast is defined in section 3 of the Act to mean "a transmission, by wire or wireless means, of visual images, sounds or other information which:

(a) is capable of being lawfully received by members of the public; or

(b) is transmitted for presentation to member of the public,

and includes the transmission of encrypted signals where the means for decrypting are provided to the public by the broadcasting service or with its consent".

The essence of the definition of a broadcast is that it presupposes a "transmission". In the case of multimedia products fixed in CD Roms, there would obviously be no "transmission." In the case of multimedia products made available on-line, while such act may amount to a "transmission" and hence falls within the definition of a "broadcast", the multimedia product per se would not be a broadcast.

The next possibility is that a multimedia product could be classified as a film. Section 3 of the Act defines "films" to mean "any fixation of a sequence of visual images on material of any description, whether translucent or not, so as to be capable by use of that material with or without any assistance of any contrivance:

a. of being shown as a moving picture; or

b. of being recorded on other material, whether translucent or not by the use of which it can be so shown,

and includes the sounds embodied in any sound-track associated with a film."

The problem with this definition is that not all multimedia products are intended to be "shown as a moving picture". Hence the definition is not broad enough to encompass all possible types of multimedia works.

It is submitted that a multimedia product, in itself, could not be fitted easily under the existing categories of works. In the final analysis, a multimedia work is merely a collection of different categories of works in digitised form. This would mean that for enforcement purposes, the various individual owners of the separate underlying works would have to be involved. It is doubtful whether this would be practical. Problems would also arise when it comes to the licensing of multimedia products. Since it is a collection of diverse works which may be owned by different owners, permission would have to be sought from the various owners. This would

be time-consuming and could cause insurmountable problems in terms of identification of the various authors and owners and question of apportionment of rights in the final multimedia products.[52]

c. Protection of databases

As mentioned earlier, databases are protected as literary works under the Copyright Act. While it seems quite clear that the 1997 Amendment Act seeks to protect electronic databases by widening the scope of "tables and compilations", there is no further attempt to lay down any guidelines as to what would constitute a protectable database. This is important because there could well be arguments as to what criteria would be used to determine the availability of copyright protection for such compilations. To be protected, s 7(3)(a) of the Act requires that "sufficient effort has been expended to make the work original in character". It should be noted here that as long as the compilation is regarded as an original work it will be protected, regardless of whether the contents are themselves eligible for copyright protection or not. Hence there could well be copyright protection of a compilation which contains contents which are not protected by copyright, as for example, when it contains selections of works which are out of copyright. However, it is unclear what is the proper meaning to be ascribed to the term "effort". Is the "effort" required a creative, intellectual effort, or would a mere physical effort be sufficient? In other words, would mere physical labouring suffice to fulfil the requirement that "sufficient effort" should have been expended in making the work? In the absence of any legislative guidance, reference has to be made to the case law.

The problem, however, is that the courts have not shown any consistency in applying the test of whether a particular database is "original in character" to qualify for copyright protection. From the cases, the tests vary from "skill and labour" in making the compilation,[53] "skill, judgment or labour that has been involved in making the compilation",[54] "time, skill and experience in the preparation",[55]"work or skill or expense involved in making the compilation",[56] "the product of the labour, skill, and capital",[57] "some labour, skill, judgment or ingenuity has been brought to bear on the compilation",[58] to the exercise of "skill, discrimination, taste and judgment by the author, and as a result of this exercise of his personal qualities he produced the work".[59] At the end of the day, the precise amount of

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52 For the legal issues that may be involved in multimedia projects, see MD Scott and JL Talbott, "Interactive Multimedia: What it is, Why it is important and what does one need to know about it?" [1993] 8 EIPR 284.

53 See *Purefoy Engineering Co Ltd v Sykes Boxall Co Ltd* (1955) 72 RPC 89; *Elanco Products Ltd v Mandops (Agrochemical Specialists) Ltd* [1979] FSR 46; [1980] RPC 213.

54 *Ladbroke (Football) Ltd v William Hill (Football) Ltd* [1964] 1 All ER 465; [1964] 1 WLR 273.

55 *Ladbroke (Football) Ltd v William Hill (Football) Ltd* [1964] 1 All ER 465, per Lord Devlin at 480.

56 *Ladbroke (Football) Ltd v William Hill (Football) Ltd* [1964] 1 All ER 465, per Lord Pearce at 477.

57 *Macmillan & Co v Cooper* (1923) 93 L.J.P.C. 113, per Lord Atkinson at 121.

58 *Football League, Ltd v Littlewoods Pools, Ltd* [1959] 2 All ER 546, per Upjohn J at 551.

59 *Cambridge University Press v University Tutorial Press* (1928) 45 RPC 335, per Maugham J at 340.

knowledge, labour, judgment or literary skill or taste which the author of any book or other compilation must bestow upon its composition in order to acquire copyright in it "cannot be defined in precise terms. In every case it must depend largely on the special facts of that case, and must in each case be very much a question of degree".[60]

Despite years of experience in dealing with such cases, a standard test has still to be evolved as regards the requirement that the work be original in character. Even in relation to adjudicating on a particular case, the various judges involved had enunciated different tests. Be that as it may, it is evident from the various tests adopted that the crucial factor that is determinative of the issue of whether copyright subsists in the compilation is the existence of sufficient labour or expense expended in the creation of the work. In most of the tests listed above, there is no mention of the need for intellectual creativity. Furthermore, it is worth noting that when the court was hard put to find the minimal required amount of work or labour in the compilation, it was not above conferring copyright on the compilation on the ground that enough effort had been put into the gathering of the information.

Hence, it is not surprising that in the common law jurisdictions, of which the United Kingdom is the prime example, the basis or justification for conferring protection on such compilations is said to be based on the "sweat of the brow" theory. Under this doctrine, the key factors in the decision making are skill, time, effort, labour or investment. The "sweat of the brow" theory can be justified in that it "allows protection for any investment of labour and capital that in some way produce a literary result".[61] This approach emerges in cases where the defendants attempted to dissect the work produced into its two component parts - the initial stage which involved making decision regarding the products to be sold, or the calculation of the odds to be offered etc, and the gathering of the required information, and the latter stage where the final produced was finally expressed. It was then argued that it was only the skill, judgment and labour involved in the latter stage that could be considered and that if that part of the operation involved so little skill, judgment or labour then it could not qualify as "original". However, such attempts were invariably rejected on the ground that both aspects of the work involved were so inter-connected as to be inseparable. Therefore, the courts had been reluctant to draw a line between the effort involved in developing ideas and that minimal effort in setting those ideas down on paper, holding that preparatory works could be relevant matter for consideration.[62]

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60 *Macmillan & Co v Cooper* (1923) 93 L.J.P.C 113, per Lord Atkinson at 125.

61 See WR Cornish, *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights*, (2nd ed Sweet and Maxwell 1989) at 270.

62 See, for example, *Ladbroke (Football) Ltd v William Hill (Football) Ltd* [1964] 1 All ER 465, per Lord Reid at 469-470, Lord Hodson at 476-477 and Lord Devlin at 478. See also Upjohn J in *Football League, Ltd v Littlewoods Pools, Ltd* [1959] 2 All ER 546, at 552-553.

In contrast to this approach, the civil law system adopts the theory which confers protection on the basis of creativity in the selection or arrangement of the content of the compilation.[63] In would appear that the United States, which previously subscribed to the "sweat of the brow theory", has now moved closer to the civil law approach. In *Feist Publications, Inc v Rural Telephones Services Co Inc*,[64] the Supreme Court unanimously refused to confer copyright protection in a telephone directory complied by Rural Telephone Services on the ground that the data in Rural's directory were uncopyrightable facts; only their "selection, co-ordination, and arrangement" entitled them to copyright protection. However, because there was "nothing remotely creative about arranging names alphabetically in a white page directory," it followed that the selection, co-ordination and arrangement of Rural's white pages did not possess "the minimal creative spark required by the Copyright Act and the Constitution."

Furthermore, the cases show that whatever the test used, the level of skill, effort etc. required is not high. In the words of Lord Hodson, copyright protection is available "if the [author] has employed more than negligible skill and labour".[65] In fact, the only known reported Malaysian case where copyright protection was denied for a compilation was *Hardial Singh Sekhon v MDC Sdn Bhd.*[66] The plaintiff claimed that he was the author and owner of the reproduced current "Customs

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63 Article 2(5) of the Berne Convention grants protection to "collections of literary works which by reason of the selection and arrangement of their content, constitute intellectual creation." See also Article 9(1) of the TRIPS Agreement which incorporated by reference Articles 1 to 21 of the Berne Convention.

64 *Feist Publications, Inc v Rural Telephones Services Co Inc* 113 L. Ed 2d 358 (1991).

65 *Ladbroke (Football) Ltd v William Hill (Football) Ltd* [1964] 1 All ER 465, per Lord Hobson at 477.

66 *Hardial Singh Sekhon v MDC Sdn Bhd* [1986] 2 CLJ 244. See also *Hardial Singh a/l Hari Singh v Daim Zainuddin* [1991] 1 CLJ 116, per Dato' Mahadev Shankar J at 118, "We are dealing here not with a precedent or a collection of precedents but a compilation of data. In such cases the question is whether Hardial Singh has expended a sufficient degree of labour and skill in compiling and arranging his material for it to be protected as an original work." In the United Kingdom, see the case of *SA. Cramp & Sons Ltd v Frank Smythson Ltd* [1944] 2 All ER 92 (HL), a case in relation to whether copyright could subsist in an almanac consisting of seven tables forming part of the plaintiffs' Liteblue pocket dairy. The plaintiffs relied upon the selection of topics included in the diary. The House of Lords unanimously held that the selection of the information printed in the diary did not constitute an original literary work sufficient to entitle the respondents to copyright under the Copyright Act 1911. On the question of whether the compilation could be regarded as an original work, Lord Macmillan, at 96, said: "Not every compilation can claim to be original literary work even in the pedestrian sense attributed to these words by the law. Thus, to take a few examples, it has been held by this House that to compile from the official time-tables of the railway companies a local time-table showing a selection of trains to and from a particular town is not to compose a work entitled to copyright. Such a compilation may be convenient and useful for the inhabitants of that town but does not require either such labour or such ingenuity in its preparation as to render it fit subject-matter for copyright ... In my opinion, the respondents, in selecting the seven tables in question for inclusion in their diary did not bring into existence a copyright work ... To my mind, the collection is of an obvious and commonplace character, and I fail to detect any meritorious distinctiveness in it ... The inclusion or exclusion of one or more of the tables constituting the ordinary stock material of the diary-compiler seems to me to involve the very minimum of labour and judgment". See also Lord Porter at 97, "Bearing these considerations in mind, the question to be answered is: Have the appellants succeeded in showing that the almanac in question is not susceptible of copyright? I think they have. It is conceded that, if the work, labour and skill required to make the selection and to compile the tables which form its items are negligible, then no copyright can subsist in it. Whether enough work, labour and skill is involved, and what its value is, must always be a question of degree. Different minds will differ, as may be seen in the present case from the divergence of opinion in the courts below. Speaking for myself, it appears to me that it is of the smallest."

Duties Order" and that the defendant had, inter alia, infringed his copyright in his work. The said "Customs Duties Order" was basically a reproduction by the plaintiff of all the information contained in the various Customs Orders published from time to time. The defendants applied to strike out the statement of claim under Order 18 r. 19(1) of the Rules of the High Court on the ground that the statement of claim disclosed no cause of action and was frivolous and vexatious. In allowing the application, the Court held that the plaintiff had no cause of action on the question of copyright infringement. In order to maintain an action for copyright infringement, the plaintiff had to show that the "Customs Duties Order" was original in character. Since the work was copied wholesale from all the relevant official publications, it could not be regarded as original in character, and hence no copyright could attach to it.

From the above, it would appear that at the very least some element of choice must be present in making the compilation to qualify it for copyright protection. In other words, even if substantial labour may have been expended in creating the compilation, if the minimum required element of choice or selection is missing, no copyright can subsist. It fact, this requirement was specifically alluded to by Justice Dato' Shanker with reference to the next stage in the *Hardial Singh* saga.[67] In the course of his judgment, Dato' Shankar made certain comments in relation to Hardial Singh's claim to copyright in his work. His Lordship said, "the element of original composition if any by Mr Hardial Singh was not readily observable, because the way he arranged his factual material followed the Government format. His failure to show that his compilations were original lay in his incapacity to demonstrate that he had imposed some sort of unique pattern or order on the material he had copied which was not to be found in the Government publications. Mere listing of facts is not enough to make something a literary work, however laborious the undertaking."[68] His Lordship's comments seem to be in line with the approach in the *Feist* decision discussed earlier.

The above statement is significant when the compiler decides to create a comprehensive database. In this scenario, the work of gathering of the materials is usually completely mechanically and involves almost no creativity in the selection and arrangement of the data. Since no element of choice or selection may be involved in making the compilation, the database may be deprived of copyright protection.

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67 Having failed in the civil suit in the High Court, Hardial Singh then purported to invoke the process provided by s 133 of the Criminal Procedure Code, so that criminal prosecution could be brought against the defendants. The Magistrates dismissed the complaint. He then filed an appeal against the decision of the Magistrates in refusing to take cognisance of his complaint. Before this appeal was heard, Hardial Singh then claimed to have a right to prosecute the defendants by virtue of s 380(2)(c) of the Criminal Procedure Code. He thereupon filed a criminal application in the High Court Registry in Shah Alam praying for an order for "suspension and interdict" [sic]. The High Court dismissed both the appeal and the criminal application - see *Hardial Singh a/l Hari Singh v Daim Zainuddin* [1991] 1 CLJ 116.

68 See *Hardial Singh a/l Hari Singh v Daim Zainuddin* [1991] 1 CLJ 116 at 118.

However, the very commercial value and usefulness of the database may be ascribed to the fact that the database is comprehensive and up-to-date, ie, if the database comprise a comprehensive, non-selective compendium of all the facts on a particular subject. Herein lies the weakness of the prevailing approach to the protection of databases in Malaysia and other common law countries. In the knowledge-based economy and society envisioned by the MSC and the new millennium, electronic databases will be increasingly produced and utilised, and will become increasingly important in modern business. They will be stored, made available and distributed via the Internet or other means in accessible and searchable form. In such forms, they are highly vulnerable to being illicitly reproduced and networked. If these electronic databases are not protected, the huge investment that has gone into their production will not be recouped, thus serving as a disincentive to produce them. The problem is not so grave in the case of copyright in compilations the contents of which are themselves protected by copyright. There is at least the underlying copyright to fall back on in case of infringing use.

Another problem in relation to protection of databases is that under the "sweat of the brow" theory, a defendant who copied a substantial portion of a computerised data base could be held liable for copyright infringement, whether or not the original arrangement of the data was copied. This is because liability rested on the unauthorised taking of the plaintiff's industrious collection, not on copying of the selection or arrangement of the data collected. In contrast, where the databases are protected by reason of the intellectual creativity of the author through the selection and arrangement of their content, the defendant can escape liability for copying the plaintiff's data merely by rearranging them.

To compound the problem further, s 8(1)(b) of the Act is now amended by s 4 of the 2000 Amendment Act. Under the amended s 8(1)(b), "collections of mere data whether in machine readable or other form, eligible for copyright which, by reason of the selection and arrangement of their contents, constitute intellectual creation" [Emphasis added] are regarded as derivative works and hence protected as original works. The objective behind this amendment is unclear. If it is meant to protect the collection of mere data, then the objective has not been achieved since under the amendment, before collections of mere data could be protected, there must be evidence that the selection and arrangement of these data constituted intellectual creation. As was mentioned earlier, in the case of a comprehensive database, it will be difficult to argue for the existence of intellectual creativity. In fact, the amendment might lead to a situation where the plaintiff argues that his database is a compilation and hence protected as a literary work under s 7(1)(a) read together with s 3 (definition of a literary work), whereas the defendant would rely on s 8(1)(b) and argues that the plaintiff's work is a collection and hence not protected in the absence of intellectual creativity.

In this context, it is worth nothing that, partly in response to the US *Feist* decision, and partly due to the fact that the countries of the European Union adopt varying

standards for the protection of databases, the European Union has adopted the EC Directive on the Legal Protection of Databases.[69] This Directive is intended to harmonise protection of databases in the European Union countries. Databases which are original (in the sense of the Database Directive) in their selection or arrangement enjoy copyright protection. One important innovation found in the Directive is the creation of a sui generis right to protect the investment made in databases which, irrespective of whether they qualify for copyright protection or not, are to enjoy a 15 year right to forbid unauthorised extraction or re-utilisation of substantial part of their contents for commercial purposes.[70]

It is time to confront the problems of compilations in uncopyrightable works to ensure proper protection for the investment expended in their creation. Instead of paying lip-service to copyright doctrines with the resultant distortion of the fundamental legal concepts of copyright law, it would be better to follow the steps of the European Union and introduce a new sui generis right to protect such works. It is noteworthy that among the agenda of the WIPO's Work Program in the coming years will be the preparation of a draft treaty on a sui generis system of protection for databases. It is likely that in whatever form the final treaty will be enacted, the system that is likely to be followed will mirror that of the EC Directive on Legal Protection of Databases.

Conclusion

While the 1997 Amendment Act is a step in the right direction, there are still many uncertainties in the law relating to computer software which need to be addressed. Only time will tell whether the present structure suffices or whether there is a need to reformulate basic copyright concepts pertaining to the new technologies and to create new copyright subject-matters to ensure proper protection for multimedia works and other software products.[71] In the meantime, it is imperative that judges keep abreast of legislative developments and trends in the case law of other jurisdictions to enable them to come to fair and balanced decisions in cases involving computer programs and computer-related works. The challenge for the courts is how they can construe the new provisions of the Act in such a way as to enhance the legitimate rights of the copyright owners and at the same time prevent the potentially anti-competitive effects of the provisions from hampering or stifling the legitimate efforts of competing software developers in coming up with

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69 EC Directive on Legal Protection of Databases (OJ 1996 L77/20) adopted on 11 March 1996.

70 Note that Article 7 of the European Directive specifically states: "Member States shall provide for a right for the maker of a database which shows that there has been qualitatively and/or quantitatively a substantial investment in either obtaining, verification or presentation of the contents to prevent extraction and/or re-utilisation of the whole or substantial part ... of the content of that database." (Emphasis added)

71 For an interesting article on the various options for reform, see Andrew Christie, "Reconceptualising Copyright in the Digital Era" [1995] 11 EIPR 522.

competing programs and other software. They would have to construe the various provisions purposively so as not to be out of touch and harmony with prevailing trends. Thus, they will need to be sensitive to and be aware of developments elsewhere, and be willing to draw upon overseas judicial experience on issues relating to the ICT era. Copyright law is now not a matter of domestic concerns only. The various additions to the law are based on internationally agreed norms after negotiations and taking into consideration the views and legitimate concerns of the various interest groups. It is hoped that the correct construction of the various provisions will lead to a balanced situation where development of the ICT industry will not be hampered by over-broad or over-restrictive interpretations. The ultimate question may be whether there is a need for a completely new set of cyberlaws or whether it may still be possible to try to fit the square peg of information technology concepts into the round hole of traditional intellectual property regime.