

# **Influences of TRIPs Agreement on Competition Policy in Addressing Intellectual Property Rights of Software Patent: Malaysian Perspective**

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## **要 旨**

本論文は、マレーシア法における競争法制と知的財産法制との緊張関係の中でソフトウェア産業をいかに保護するか、主にコンピュータ・ソフトウェアの知的財産権の保護を中心に論じている。マレーシアの国内法は、ソフトウェア産業の発展のために十分な手当をしていない。そこで、マレーシアが加盟する TRIPs 協定の競争政策を調査し、ソフトウェア・プログラムに関する著作権及び特許権の権利者と公衆の利益とのバランスをとることの有効性を考察する。どのようなアプローチが国内ソフトウェア産業の発展に資するか、日米の知的財産法制と競争法制のあり方なども参考に、競争政策の重要性を確認し、TRIPs 協定からマレーシア法に示唆されることを論証する。

**Keywords: Copyright, Patent, TRIPs Agreement, Software Patent, Interoperability**

## **1. Introduction**

Within a globalise society, the influence of international law in any local legal system is inevitable. The area of Intellectual Property is no exception. Malaysia is an actively member of several international treaties relating to Intellectual Property Rights including the Paris Convention for the protection of industrial property and the Berne Convention for the protection of literary and artistic works<sup>1</sup>. Malaysia also a signatory to the Agreement on Trade Related Aspect of Intellectual Property Rights (TRIPs)<sup>2</sup> established by World Trade Organisation (WTO)<sup>3</sup>. It is also a member to the Patent Cooperation Treaty<sup>4</sup>. To an extent, these treaties are major influence in the legislation of Malaysian intellectual property laws as they provide leverage on the wording and structure of the domestic legislation.

Among those treaties; a handful deals directly to the protection of computer software. During the past three

decades, the protection of computer software has evolved from protection under copyright to the patent right. The protection of computer software under patent has been taking the centre stage as an alternative means for protection. Following this, developed countries like United States (US) and Japan have taken the exercise to recognise Software Patent<sup>5</sup>. But there has been mixed reaction from developing countries like Malaysia. Some argued that Software Patent promotes imbalance monopolisation by the right holder within the software industry and thus curtail innovation. In facing this debate, the international societies have been playing an active role in finding a solution. One of the proposed solutions is extending the use of the competition provision provided in TRIPs Agreement.

This paper will look into the influence and the effect of TRIPs Agreement in the protection of computer software towards balancing the competition rule and the public right within the Malaysian perspective. The second part of this paper will address how the intellectual property rights protect the software industry in general. This paper will also attempt to address the approach of TRIPs Agreement in the protection of computer software. In its third part, the paper will look into the competition policy within the TRIPs Agreement; and evaluate the effectiveness in balancing the right given to the right holder and the rights of the general public. It will also discuss in what manner these approaches have tilted the balance of competition within in the software industry. The fourth part of this paper will discuss the importance of competition policy and its problem in limiting the rights of the right holder from monopolising the software industry and misuse the right conferred by the patent law. The fifth part will discuss the influence of TRIPs Agreement (within the perspective of Malaysia) both in the protection of computer software as well as the effect of the competition policy. Finally, this paper will provide its conclusion from its findings.

## **2. Intellectual Property Rights of Computer Software**

### **2.1 Computer Software Protection**

The protection of any intellectual property rights has a common means to enhance and expand the welfare of an economy<sup>6</sup>. The exclusive rights given under the protection would stimulate Research and Development, as well as innovation and this would contribute towards economy growth<sup>7</sup>. Nevertheless in exercising any intellectual property rights, one should fully respect the competition laws. This in turn has put the competition policy on the centre stage; thus leading to discussions between international societies during the

Uruguay Round<sup>8</sup> which concluded an acceptable competition policy under the TRIPs agreement.

The protection of computer software in recent years has been in much debate, starting with the availability of copyright protection and currently the legality of protection within the patent law. Many have cried foul toward this kind of protection mainly because the protection has created an imbalance with the competition policy. However it is agreed by most that intellectual protection is a desirable means in contributing economy growth. Before going further to determine the position, approach and influence of TRIPs agreement within the competition policy of the protection of computer program; we should first look into the viability of the protection with both copyright law and patent law within the current approach and within TRIPS Agreement.

### **2.1.1 Traditional View**

The traditional view in protecting intellectual property of computer software has for more than three decades always been resided under the copyright law. It has been considered as the best method to protect computer software from any infringement by any third parties. Copyright law protection covers the scope of literary, musical or artistic works. The scope is also extended to recording of such works and its publication. As such computer software is seen as part as a literal work given that computer software generally developed from written programming language that consist of a list of instruction which explicitly implement an algorithm which form into a set of task to be carry out by a computer.

The protection of computer software under copyright lies in it literary expression whereby it protects from the copying of the source code that embodies the expression of the computer software. This will directly protected the expression of the working of computer software. Infringement of copyright is determined by the extent of the plagiarism in comparison to the original work. It also determined by the extent of the principle or the core subject matter of the original work is being plagiarised. This means that even if only a small part of a work has been plagiarised, it can constitute an infringement if it relates to the overall importance of the work. However, in practice an infringement of software is determined by looking at the plagiarised part in isolation. For a copyright to be capable of subsisting, the part being plagiarised required the application of some level of skill of the original programmer.

### 2.1.2 Alternative Protection

In recent years there is growing trend of utilising patent law in the protection of computer software. The reason behind this trend is because copyright law does not protect the inventive ideas but merely the expression of those ideas being embodied in the computer software in form of codes. In comparison, patent law would protect the primary inventive idea of the computer software; a patent would entail the right to monopolise the invention since the inventor is entitled to have an absolute and exclusive right of the invention within a specific time period. Thus patent law is seen to be an idealistic and an alternative method to protect computer software within the commercial world.

Thus here lies the concern; the traditional view for granting a patent would be towards an invention that acquired some technical function which is considered to be innovative and non-obvious. Hence, for computer software to be granted a patent can, to a certain extent, be seen an inappropriate because a computer software is traditionally considered to be mere literally work form from a series of algorithms. The working of computer software could be equated to a novel or a play for which the working of the work is being express by a series of certain language.

However, the position of what constitutes to a computer software has changed in the past three decades. Countries like the US have been a strong advocate for Software Patent. The decision of the Supreme Court of the United State in the case of *Diamond v. Diehr*<sup>9</sup> illustrated as such. This case involves a device that used computer software form by a mathematical formula to ensure that the correct timing is used in the process of heating, or curing synthetic rubber. The court held the patentability of the invention by stating that “application of law of nature or mathematical formula to a known structure or process may be deserving of a patent protection”<sup>10</sup>. The court essentially ruled that while algorithms themselves could not be patent but devices that utilised them could. This landmark case to an extent have introduced a new breed of computer software which commonly known as computer implemented invention. This new term is used to describe inventions that use computer software in the implementation of a machine or a process.

However, it is not easy to differentiate a computer software and its application as illustrate in the case. Invention that relates to abstract method such as methods of analysing electronic data or an aspect of computer design prove to be more difficult to distinguish. The differentiation between the computer that

implement it and the computer software that operates it<sup>11</sup> has become blurred as technologies advance. Therefore, the patenting of mere computer software is growing dramatically; countries like the US and Japan has in recent years, recognized patentability of invention created in the form of software program. As such the scope of protection has gone beyond to cover not only to include a computer implemented invention but also mere computer software.

## 2.2 TRIPs Agreement

The approach of protection computer software under WTO has giving a mixed signalled. Under TRIPs Agreement; the issue of computer software have been deliberated considerably; in *Article 10* of the Agreement, it state that Computer Programs, whether in source or object code, shall be protected as literary works under the Berne Convention<sup>12</sup>. With the clarity of the TRIPs Agreement in extending the protection of computer software under the copyright law, the certainty of protection of computer software perpetually resides under the copyright law.

However, the patentability of computer software is still an ongoing conundrum being examined among the signatory of the TRIPs Agreement. This is because of the provision stated under *Article 27* of the said Agreement. *Article 27*<sup>13</sup> expressed the availability of protection under patents for which it shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. The Article further overtly added that patents shall be available and be enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced.

*Article 27* of the TRIPs Agreement provides an umbrella provision of that “all technology field” shall have the right and shall not be discriminated to be protected under patent law. As such many have argued and insisted that *Article 27* has to a greater extent, allowed the protection of computer software under patent law since it falls under a technology field of “computer software technology”. Further *Article 27* did not have any explicit exclusion or exception towards computer software therein. The Article could be read that software being an invention of a field of technology should be protected under the patent law. Also, the wording “shall be available” to all technology fields as stated in the Article would mean that the protection “should be” or “must be” available to all technology fields<sup>14</sup>.

Therefore, if a member fails to permit computer software (being a part of field of technology) under its notional legislation it could be construed as a non compliant to TRIPs Agreement. However since there is nothing in the Agreement that actually supports such interpretation; due to the absence of a legal definition of the words "invention" and "technology", many have pointed out that the agreement leaves it to the member states to determine what constitutes a patentable invention. Whether or not 'computer software as such' could be considered as an invention within a technology [within the interpretation of *Article 27(1)*] is an open book position.

### **2.3 Copyright vs. Patent**

As such here lays the predicament; under the copyright law what is being protected is the expression of the work. Thus what is protected under the copyright law is the manner that the computer software being expression as a work and not the concept of the computer software itself. Therefore, what copyright protection actually provides is the protection of the direct copying or plagiarising of the computer software. This expression and idea dichotomy plays a crucial role in the need for some to protect their computer software work under the patent law and why copyright law is seen to be insufficient to protect computer software. The foundation of this understanding is that copyright protect the literary expression of the computer software but not the idea that the software represents. In such instance if there are two computer software having two different manners in expression, both are able to co-exist without infringing each other intellectual property rights even if both computer software represent an identical solution or function. The absence of protecting idea under copyright law face a substantial block in protecting computer software since the core part of computer software is usually the idea itself which dictates the commercial value of the computer software.

Thus this is why patent law come into the picture as it protects the overall concept of an invention; the purpose as well as the idea of the invention. Such protection provided under the patent law would fill the void in copyright law in protecting computer software in a holistic manner. The core reason for the protection of computer software under the patent law is due to the fact that copyright law is lacking in the protection of idea. As highlighted earlier; what is being protected under copyright law is the expression of the work while patent law protects the idea of the work. Both intellectual property rights protect two different concepts; as such that copyright and patent are two very different types of protection with each, protecting computer

software at a different level of generality and to differing extent<sup>15</sup>; and thus are able to co-exist. With computer software protected under the patent law, it would indirectly promote the development of the software industry and computer related industry<sup>16</sup>. This is because computer software is seen to the next technology; it is viewed as the new “wheel” whereby the invention of the wheel to a greater extent has accumulated many more inventions being made thereafter. Thus, some are in the view that without the protection of patent law the incentive to innovate will dry up and the growth of the new economy will be grinded to a halt<sup>17</sup>.

Although some may think that it is a bit extreme to say that the absence of protection computer software will halt the growth of new economy but this view does carry some weight especially considering that the current industrial world is relying more on the advances of computer software and thus in the near future there is an increasingly possibility that computer software would take over the role of most hardware in the day to day industrial process. Therefore to deny the availability of protection of patent law to computer software would in turn be seen as denying the protection of hardware that having the same technical effect of what is intended by the computer software. So, should a double standard be used in extending patent rights to computer software merely because it utilised software, not hardware, although both are able to satisfy the patentability of an invention under the patent law.

The nature of computer software also merits the protection of patent law being extended. Computer software provides a set of instruction that allow a machine to indicate, perform or achieve a particular function, task or result<sup>18</sup>. The technical interaction between hardware and software exhibit certain technical behaviour as such the link of technical interaction between hardware and software would justify the protection of patent law being extended to computer software. Further the protection of computer software under patent law is subject to revocation, unlike copyright whose right is granted automatically and it does not have a channel in disputing the value of the work. With patent protection, in the instances whereby computer software being granted a patent; such patent will be able to be challenge by a third party.

Consequently, the current status of protecting computer software has increasingly expanded, both copyright law and patent law are capable to protect computer software; albeit these two classes laws protects different characteristic of computer software. With this in mind, a substantial and functional competition rules should

be ascertained to control the abusive of the monopoly right in order as to avoid further imbalance within the market.

### **3. TRIPS Agreement Competition Policy**

#### **3.1 TRIPs Agreement**

The sole purpose of TRIPs Agreement in regulating all aspect of intellectual property was establish to a general standard of the protection of intellectual property rights. However, the TRIPs Agreement also contains provision on competition policy. Although the competition policy may be minimal but its implication and influence to its member are significant as each signatory of the TRIPs Agreement are obliged to abide by those rules.

The main competition policy in the TRIPs Agreement is set out under *Article 8*. There are several others provisions namely *Article 31* and *Article 40* both of which address the limitation of intellectual property rights. These anti competition policies provide leverage in controlling anti competitive action by the rights' holders.

##### **3.1.1 Article 8**

*Article 8* of the agreement set out a blanket provision for its member to control any activities considered as anti competition; the provision extends the power ability for the member to control or provide remedy to any situation that would adversely affect the public. The article consists of two parts. The first part of the article reads as below;

*"Members, may, in formulation or amending their laws and regulations, adopt measure to protect public health and nutrition and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement"*<sup>19</sup>.

The first part gives rights to control any anti competition action by enacting laws or provide regulation within its jurisdiction to the same effect. However, such protection needs to be consistent with the terms set out in

TRIPs Agreement. When read on its own the first part appears to be theoretical as, it provides generic reason which is neither general nor specific. However the second part of this article provides certain clarification. The second part provides:

*“Appropriate measures, provided that they are consistent with the provision of this Agreement, may be needed to prevent the abuse of intellectual property rights by right holders or the resort to practices which unreasonably restrain trade or adversely affect the international transfer of technology”<sup>20</sup>.*

When reading together, *Article 8* permits members to exercise “appropriate measure, provided it is consistent with the provision of this Agreement” by “formulation or amending laws and regulation” if such circumstances “may be needed” in the event “to prevent the abuse of intellectual property rights by right holder or the resort to practice which unreasonably restrain or adversely affect the international transfer of technology”.

The second part of the article provides more explanation and thus could be seen as the “real” anti competition policy within this article. It clearly identifies the extent of prevention measure that is allowed. It indentify three main characteristic of anti competition practice: (i) abuse of the intellectual property by the right holders, (ii) practices which unreasonably restrain trade and (iii) practice which adversely affect the international transfer of technology. *Article 8(2)* also recognized the member’s power in preventing unilateral acts including refusal to deal and other forms of exercising intellectual property that may be deemed to constitute abuse<sup>21</sup>.

However, as a whole *Article 8* has its restriction, whereby it does not applicable to other anti competition practice that does not directly relates to Intellectual property rights, such as mergers and acquisition and joint ventures<sup>22</sup>.

The second part of *Article 8* also set out the necessity test<sup>23</sup>; for which member may exercise any prevention if it is deem to be necessary to do so. This test is to ensure a balance between allowing freedom to achieve regulatory objective through measures of their own choosing, and discouraging member from maintaining measure that unduly restrict trade<sup>24</sup>. The need for preventing the abuse of intellectual property rights by the

right holder is bound by the necessity of such prevention to the extent that measure of prevention is necessary to “achieve the member’s policy objective”<sup>25</sup>.

### 3.1.2 Article 40

The title of *Article 40* itself is self explanatory as indicated in Section 8 of the TRIPs Agreement as “Control of Anti Competition Practice in Contractual Licensee”. This provision consists of four distinct parts whereby only the first two parts deal directly with control on anti competition practice. The other two parts address the procedural factor. The first part of the provision provides:

*“Members agree that some licensing practices or condition pertaining to intellectual property rights which restrain competition may have adverse effect on trade and may impede the transfer and dissemination of technology”<sup>26</sup>.*

What being provided in the first part is very theoretical; it acknowledge that some licensing practices can amount to anti competition practice but it fall short in identifies them. In theory the first part merely drawn the attention that members are able to intervene in order to restore competition. The second part of the provision further set out example of anti competition practice; the provision provides:

*“Nothing in this agreement shall prevent Members from specifying in their legislation licensing practices or conditions that may in particular cases constitute an abuse of intellectual property rights having an adverse effect on competition in the relevant market. As provided above, a Member may adopt, consistently with other provisions of this agreement, appropriate measures to prevent or control such practices, which may include for example exclusive grantback conditions, conditions preventing challenges to validity and coercive package licensing, in the light of the relevant laws and regulation of that Member”<sup>27</sup>.*

There are three requirement that need to be establish in order for a member to rely on this provision; (i) the nature of abuse need to be within the licensing practice, (ii) it need to constitute to an abuse of intellectual property right and (iii) the anti competition practices need to have an adverse effect on competition<sup>28</sup>.

The second part of the provision also provides examples for anti competition practices that include but not

limited to exclusive grantback condition and coercive packages licensing. The list is not exhaustive in nature. The list is drawn from clauses usually found in patent and know how licensing agreement<sup>29</sup>. With an open-ended interpretation that can constitute as an anti competition practice, the provision is able to covers a wide range of abuse within intellectual property right which could includes trademark and copyright licensing. Such notion is consistent with the interpretation made by *WTO Panel in Mexico –Telecom*<sup>30</sup>, the panel, in references to *Section 1.2* of the *WTO GATS Reference Paper on Basic Telecommunication* (the Paper), express that the phrase “anti competition practices” goes beyond than the listed example in *Section 1.2*<sup>31</sup> but should be read accordance to the purpose of the Paper that is to “implement a pro competition regulatory framework designed to prevent continued monopoly behaviour”<sup>32</sup>.

However, the control and prevention that a member can utilize under this provision is restricted to only licensing practice and condition and therefore it cannot include dealings which are unilateral in nature. This would include practice such as refusal to deal, discriminatory practice and selective grant of licensing.

### 3.1.3 Article 31

*Article 31* plays a different role in addressing anti competition practices; this provision provides members the right of usage of patent without authorization, which includes use by the government or by third party authorized by the government<sup>33</sup>. This provision further provides 12 conditions for the usage, among those, *Article 30 (k)* can be consider a manner in preventing anti competition practice. It provides:

*“Member are not obliged to apply conditions set forth in subparagraph (b) and (f) where such permitted to remedy a practice determined after judicial or administrative process to be anti competitive. The need to correct anti competitive practices may be taken into account in determining the amount of remuneration in such cases. Competent authorities shall have the authority to refuse termination of authorization if and when the conditions which led to such authorization are likely to recur”*<sup>34</sup>.

This provision provides the capacity for member to force the right holders to surrender his rights and allows the usage of the patent in lieu of pre determine remuneration. In other word the provision permits the member to enforce compulsory licensing in the circumstances that a judicial or administrative process have determine that an anti competition practice is present. Such compulsory licensing enforcement can be

authorize without prior request to the right holder<sup>35</sup> and does not limit to the domestic market of the member<sup>36</sup>. The provision to an extent give the prerogative for the member to correct any unilateral anti competition practice by enforcing compulsory licensing towards the right holder, for which *Article 40(2)* is unable to do.

### **3.2 Impact of TRIPs Agreement**

It is important to acknowledge that the purpose of TRIPs Agreement is not to lay out the laws regarding intellectual property right but merely to set out guideline and minimum standard. A member has the obligation to implement these standards within its local legislation and regulation; and shall be free to determine the appropriate method in implementing the provisions therein<sup>37</sup>. As a member, it has to give effect to the provision of the TRIPs Agreement<sup>38</sup>. With this in mind, the provision on anti competition set out in the TRIPs Agreement would have a substantial impact if those provisions have been legislate or promulgated domestically by the members.

The importance of these anti competition provisions leads directly to the root of TRIPs Agreement, the weight that it carries reflect the necessity of having certain limitation in controlling the absolute right that been granted to the right holders.

The competition policies in the TRIPs Agreement give the prerogative for its member to control or prevent any practice of anti competition. The protection of intellectual property rights under the TRIPs agreement goes beyond protecting the right holder's rights; it also has the purpose of protecting from abuse of the intellectual property right by the right holders. This notion is supported by Note 3 of the TRIPs Agreement which states:

*"For the purpose of Article 3 and 4, "protection" shall include matters affecting the availability, acquisition, scope, maintenance and enforcement of intellectual property rights as well as those matters affecting the use of intellectual property rights specifically addressed in this Agreement"*<sup>39</sup>.

The prevention of the abuse of intellectual property right (which includes anti competition practices) could be considered the subject matter of TRIPs Agreement. In other words the provision relating to prevention of the

abuse of intellectual property carries the same weight as other provision therein. This means that member's competition legislation and regulation need to be in accordance to the fundamental principle of TRIPs Agreement<sup>40</sup>. This notion is consistent with *Article 63*; this provision under the subtitle "transparency" is pertaining to the member's obligation to make certain information publicly available. Within this provision it is identified that the subject matter of TRIPs Agreement is to include "the availability, scope, acquisition, enforcement and prevention of the abuse of intellectual property rights"<sup>41</sup>.

In reading the wording of the anti competition provisions therein<sup>42</sup>, the prerogative in preventing an abuse of intellectual property right requires the measure to be "consistent" with the TRIPs Agreement and "appropriate". So, although members have the right to take up measures in correcting anti competition practices, the rights are limited.

The notion of consistent lead to the core TRIPs Agreement, whereby measure to prevent and control anti competition practices cannot be a mere pretext to undermine the minimum standard of intellectual property right protection guaranteed by the TRIPs Agreement<sup>43</sup>. The measures cannot go beyond the right confer therein, it can be parallel with the objective of the TRIPs Agreement set out in *Article 7*; which highlighted that the protection of intellectual property right should contribute to the promotion of technological innovation in a manner to balance rights and obligation<sup>44</sup>. As for the notion of appropriate, it is not easy to comprehend since the consideration of appropriateness differs in various situation and opinion. Nevertheless the fundamental of appropriate should reflect the members need to achieve a specific goal and discouraging of adopting measures that will unduly restrict trade<sup>45</sup>.

In order for a member to give effect to the provision of anti competition provided therein, the requirement of consistency and appropriate need to be fulfilled at all cost. However to what extent can this measure be expanded? Herein, this part of the paper has highlighted the basis of the competition policy within the TRIPs Agreement but what is lacking is what type of measure is the member cable to take in order to fall within its obligation set out in the Agreement.

The impact of the TRIPs Agreement preventing anti competition practice cannot be taken lightly, however the prevention measure set out in the TRIPs Agreement focus mainly on the circumstances of licensing. Nothing

therein expresses other manner of prevention. It is also noted that the members are given the freedom to implementing the protection of intellectual property right which include matters affecting them. This brings us to the current predicament, the misuse of intellectual property right of a software patent; the misuse of the right holder of a software patent goes beyond permission on licensing, the vast right holder will agree to license but ultimately limit the usage of the software for which some of the usage would be permitted if the program is being protected by copyright. A computer program main characteristic is to be utilising with the communication of other computer programs and its working for the purpose of interface between two or more computer program. The communication or the interoperability of two computer program would enhance the workability of these two computer program. Therefore by having an absolute right to the computer software by patent, some right holders have restrict its use and thus substantially limit innovativeness within the software industry.

The absolute right granted for software patent have created fundamental problem within competition law because of the usage and the characteristic of computer software. Several problems have been identified and they include software tying, refusal to license, pricing abuses, limitation in development and absent of market choice have been widely identified. As such software patent has becoming a means to control the market within the software industry. Some technical methods such as decompilation or reverse engineering for the purpose of interoperability among other computer program have also come into the picture, whereby the restriction of utilising this technical method have been seen as a tool to control the exclusive right granted to the computer software by software patent. In such circumstances, the limitation of such control need to be introduced and implement in order to balance the right between the right holder and the public. Thus, to what extent can the TRIPs Agreement influence its member to implement the limitation? This will be further discuss and elaborate in the next part of this paper.

## **4. Monopolisation within the Software Industry**

### **4.1 The Current Status**

The protection of computer software has been a grey area within the intellectual property law, with copyright law in the lead in protecting all computer programs which nevertheless have been extended to the patent law in the last decade. What is protected under the copyright law is the expression of the program and the patent

law have extended the protection to the idea behind the expression.

The protection of computer software under patent law would mean that an absolute monopoly right will be granted. However, computer software is slightly different in its nature as it covers several techniques and features. Typically a computer software comprises of many techniques and features in its development. It has been argued that the development of a computer software is base on a logical process; whereby the process of writing computer software is involved in finding a solution that would be independently made by programmers trying to resolve the problem<sup>46</sup> that has already been solved by other programmer. Under the patent law this act is not permitted if the process of such solution have been patented then the monopoly and intellectual protection are granted to the first programmer that solve it. As such this will detract competition and the innovativeness within the field of computer software technology; and thus would ultimately limit any innovation.

Unlike other industry, computer software is a work base on a programme language; it is initially a form of writing similar to an essay<sup>47</sup>. As such the traditional protection of computer software under copyright law is sufficiently adequate. A comparison between computer software and music can be made to illustrate the point that copyright law is sufficiently adequate. The intellectual property musical works are protected under copyright law, as such both works are created by a written expression of a particular language; musical notes that represented the expression of the musical work are similar to the program language that represented the expression computer of software. Similarly to both work the musical notes are unable to produce any sound by itself, the need of a musical instrument to play the notes in order to generate sound that represent the musical written notes. Computer software has an identical approach whereby the written program of the computer software would unable to produce any result, only when it is “played” or “run”; then only will the computer software be able to produce the result that it represents.

As such it can seen that both music and computer software is generally the same type of work which currently is correctly protected under the copyright law. The extension of the protection of computer software to the patent law would to some degree validated that the expression of a work is able to be protected by patent law and effectively would negate the purpose of patent law which is to protect the idea of an invention. So if a computer program is able to be protected under patent law then there is no reason not to allow the same

protection to musical work. If such situation happens then the music industry would be less innovative as only a selection of people would be allow to perform a certain type of music genre.

The relation between competitions policy and intellectual property rights could be seen as two sides of the same coin; both competition policy and intellectual property right is playing the same role as thus could lead to a “catch-22” situation. On one side, the purpose of intellectual property protection is to give inducement for creativity and innovative by give incentive of market leader; however the exploitation of those right by the right holders to an extent limit choices to the public by the act of monopolising the market with only one product. On the other side, by not providing the limited right to a newly created innovation, it would lead to the flood gate of imitation of the product. Although this would generate a competitive environment, ultimately it will discourage innovation as it does not provide an incentive to be creative and innovative.

Within the software industry, the above predicament is more evident, the innovations in software industry have 2-fold function; on one hand, it promotes competition and deserves rewards in the form of intellectual property right. Yet, on the other hand it may be a means to prevent competition due to the specific of high tech market, such as network, spill-over and winner takes all affect which have been carried out by major firm within the software industry<sup>48</sup>.

The current software industry maintains a dominant market, it can be seen that the software market is a classic example of network market where one product or standard tend towards dominance within the commercial market<sup>49</sup>. For example the Microsoft Window application, it can be assumed that within the software commercial market most all personal computer utilise Microsoft Window application as a standard operating system hence it have created a benchmark within personal computer user. Therefore, new software application need to interoperate with the Microsoft’s operating system in order to gain a slice of the market. Without the compatibility, new applications have the difficulty to penetrate the market. Hence, to benefit from the dominance market of Microsoft Window and penetrate the market, development of new software application need to be able to be compatible with the current market leader.

This chain reaction creates a “network effect” whereby one user of a product becomes more valuable as more

people use it. Software patent have accelerate the network effect, so much so that only a handful market leaders are able to maximise its control in monopolising the software industry.

The network effect creates a standard to one particular technology; and as a result one particular computer software becomes dominant in the market<sup>50</sup>. Hence, it created a de-facto benchmark that “arises from the operation of market product and reject it competitor”<sup>51</sup>. A great concern here is that by creating a dominant standard, one software firm may “lock in” the whole market, making it impossible for other programs to interoperate and so impossible to compete. Of course the competitor may attempt to migrate to a completely different standard, and create a new network effect but this would significant destabilise the standardisation process<sup>52</sup> and thus weaken the technology progress.

As such in order to maintain and gain a fair competition within the software industry, compatibility of file formats, network protocols and interfaces between competing software products are required to be able to interoperate with each other<sup>53</sup>. However, with the protection of computer software fall within software patent, interoperability have been restricted since software patent have to an extent create monopolies on file formats, network protocols or interface<sup>54</sup>.

Therefore, limitation to the right granted under software patent needs to be address, it is important to reach a compromise between competition policy and intellectual property rights policy. There is the need to come to a middle ground in order to benefit all parties involved in particular the consumer.

## **4.2 Limitation**

The purpose to limit software patent is not to undermine the right holder’s right under the law; it is purely for the purpose of innovativeness. Some valid concerns have been address by the open source movement, it is highlighted that software patent may covers file format, interface and protocol thus could hinder the interoperability of different computing system. In order to proceed with any interoperability for patented software, license from the right holder is required. However some licenses have restricted provision on interoperability and some right holder even refuse to license the patent at all<sup>55</sup>.

Thus licensing method to an extent is not sufficient to support the process of interoperability. It is knowledge

that computer software can also be protected under the copyright law. The duplication of functionality and interoperability are permitted by the copyright law to some extent; however it is prohibited under the Patent law.

The issue of reverse engineering also comes into the picture; many believe that the limitation for software patent should include the ability to reverse engineer for the purpose of interoperability. Note that information of interoperability is needed in order for the process of interoperate to begin, without such information then reverse engineering is required to extract the information. If the information is given willingly then there is no need for the reverse engineering in the first place.

Thus this bring is to the notion that the best way to allow interoperability is by providing certain limitation. Solution to this increasing need for software interoperability should address both the ability to legally access the underlying source code forming the basis of a patent and the ability to use that patented source code to active interoperability product without fear of patent infringement<sup>56</sup>. Nevertheless, to what extent does this limitation of interoperability covers need to be addressed in detail in order not to undermine the right granted to the right holder under the law.

### **4.3 Reverse Engineering and Interoperability**

#### **4.3.1 Purpose**

The term reverse engineering within the software industry included the act of decompilation and disassemble of the object code into readable source code<sup>57</sup>. In general, the purpose of reverse engineering is to look into how things work. Developed country like the US have considered reverse engineering as a tool of innovation, whereby the US Supreme Court have held that reverse engineering was an essential part of innovation because it lead to advance in technology<sup>58</sup>. There are two main reasons why there is the need to reverse engineered computer software; the first is to make software that can interoperate with the software being studies and secondly is to make product that will compete with it<sup>59</sup>.

There are two different type of reverse engineering, first is the “white box reverse engineering” which mean the decompiling of the object code to reveal its structure and figure out the interface specification

interoperability purpose. The second is “black box reverse engineering” whereby the program’s input and output of the software is looked into. Both types have various purposes but ultimately it is mostly used for the purpose of interoperability and maintenance.

The need for interoperability goes parallel with the characteristic of computer software. The main characteristic of computer software is its ability to function through the communication with other software. The multi-layered structure of computer software, in which the function of computer software at upper level are performed based on those at lower levels<sup>60</sup>. Thus, to create a competitive environment within the software industry it requires the ability for upper level software to use function and rules of lower level software<sup>61</sup>. Therefore, to restrict the communication between two computer software by any means (albeit it is permitted by law under the exclusive right of intellectual property law) would undercut the full capacity of functional computer software.

Most software firm would protect the object code using a technology protection measures, thus would unable others to utilise the object code for the purpose of interoperability. As state early in this paper; copyright protection allow reverse engineering for the purpose of interoperability, however patent law prohibit such act since the act able to reveal the ideas behind the computer software. With this mind, limitations for the purpose of interoperability need to be introduces within the law of Software Patent. However, caution needs to be taken as to only allow the limitation for the purpose for interoperability, whereby it is able to access the computer program so that we can look at it and make sure that we can make the programs talk and communicate to each other to maximise its function and not replacing it.

#### **4.3.2 Implication**

There is a strong need for program to interoperable and to ensure compatibility between file formats, network protocol and interface, as well as the need for a common language and standard<sup>62</sup>. The software industry has reached to a stage where it becomes more complex and interdependent with other programs. Where a technology that becomes a de facto standard is controlled by a single patent holder, the right holder has significant power and control over every company and individual that seeks to create computer software that is compatible<sup>63</sup>.

In developing a computer software that may be compatible with a particular program, the interested party would have to request for the software patent to be license for the purpose of interoperability otherwise without such license their actionable might be an infringement. However, what should the interest party do if such request is refuse by the right holder? To illustrate this situation we could consider a situation within the Software games industry. A development company of a new game need to utilise the source code of the games console in order to create communication of both interface for it to be working. For illustration purpose, let say the component needed is protected under the software patent. Without the permission of the right holder to usage the source code any act done by the developer would be consider an infringement. Although the purpose of usage is merely for the interface to interoperability with one other, as without it, it would be impossible.

In the situation illustrate above, the request for the interoperability information is only for the purpose to create software game that is able to communicate with the game console interface. Generally, most right holder would allow a technology transfer to a third party that they agreed to and thus restricting others. This mean, only selected few that able to penetrate the market, and indirectly cultivate monopolisation within the software game industry.

As a whole picture a licensing procedure of software can discourage the innovation of the software industry<sup>64</sup>. The main reason for this assumption is that possibility of the refusal of the right holders to provide such licensing for purpose of interoperability. Even if a licence is granted for the purpose of interoperability, the licensing fees being paid in lieu of the license can also create a barrier of usage to use and would effectively reduce the number of available product<sup>65</sup>. Furthermore, interoperability licensing fees could ultimately limit those who cannot meet the licensing criteria such as open source developer and academics' who are already restricted to only using royalty free patents<sup>66</sup>.

The European Court of First Instance (CFI) had the opportunity to address this issue under the case *Microsoft*<sup>67</sup> whereby in this case Microsoft refuse to supply interoperability information arguing that its refusal cannot constitute to an abuse of dominant position within the meaning of Article 82 of the European Community Treaty (EC)<sup>68</sup>. The reason for the refusal was base firstly on the fact that the information is protected by intellectual property right and secondly the criteria in that, an undertaking in a dominant position

can required to grant a license to a 3<sup>rd</sup> party, were not satisfied in this case<sup>69</sup>. The commission held that “there is no need to decide whether Microsoft’s conduct constituted a refusal to license intellectual property rights to a third party ... since the strict criteria against which such a refusal may be found to constitute an abuse of a dominant position within the meaning of *Article 82* of the EC.”<sup>70</sup>

In the *Microsoft’s case*, the CFI clearly identified that the restriction of supplying interoperability information under its license provision amount to a conduct of anti-competition. What this case had established is that, interoperability is a legitimate method within the development of computer software. Whether or not the interoperability information is protected under intellectual property was not important. The core issue here is that, restriction is prohibited and that, interoperability could be considered a valid limitation within the software patent.

The report of US Federal Trade Commission provides a very interesting observation pertaining to the characteristic of a software industry<sup>71</sup>. Under the report, it highlighted five characteristics of software industry; a) innovation occurs on a cumulative basis; b) required low capital; c) rapid rate of technological change; d) alternative means beside patents for fostering innovation and e) the infancy of patent protection in software industry<sup>72</sup>. These characteristics do not justify the monopoly rights that it receives from the protection of patent. This is because, unlike other industry, the computer industry maintains a flexible attribution having a high technology turnover with minimum investment. Therefore, it is reasonable to balance the right given with legal limitation such interoperability in order to maintain a competitive market of computer software to benefit the general public.

#### **4.4 TRIPs Agreement Position**

Nothing in the TRIPs Agreement actually address the issue of limitation of software patent, then again nothing therein even address specific issue of limitation altogether. It has been acknowledged that what TRIPs provides is the minimum standard of protection of intellectual property rights whereby, the members have the obligation to set those standards within its domestic legislation in the manner that they see fit.

What is provided under the TRIPs Agreement is the manner which member can prevent the abuse of intellectual property right<sup>73</sup>. The Agreement also provides the prevention of abuse of licensing provision for

intellectual property rights<sup>74</sup>. Here the question arises, whether the limitation of interoperability for software patent fall within any of the provision in the TRIPs Agreement? *Article 30* of the TRIPs Agreement provides:

*"Members may provide limited exceptions to the exclusive rights conferred by a patent, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interest of the patent owner, taking account of the legitimate interest of third party"*<sup>75</sup>.

Reading the *Article 30* as a whole, it can be assumed that member would have a legitimate means to include limitation for the purpose of interoperability within its domestic law without being inconsistent with the TRIPs Agreement. Here the article clearly provided the test that all exception is needed to be a limited exception to the exclusive rights is permitted, and such limited exception does not unreasonably conflict with the exploitation and prejudice the right holder's right.

Nevertheless the limitation of interoperability might fail the test provided under *Article 30*, since it can be argued that the interoperability exception is not a "limited exception", this is because if the limitation for the purpose interoperability is introduced by member of the TRIPs Agreement, such limitation will affect the whole aspect of software patent and thus, would unreasonably conflict the exploitation of the exclusive right and prejudice the right holder.

Further, *Article 27* of the TRIPs Agreement should be taken into consideration when any exception is being introduced by its member. *Article 27(1)* of the TRIPs Agreement provides:

*"... Subject to paragraph 4 of Article 65, paragraph 8 of Article 70 and paragraph 3 of this article, patents shall be available and patent right enjoyable without discrimination as to the place of innovation, field of technology and whether products are imported or locally produced"*<sup>76</sup>

Therein, the phrase "right enjoyable without the discrimination as to the field of technology" plays a crucial role that is any exception introduced must not be discriminated to only one particular technology field. The limitation for the purpose of interoperability only has an effect on the technology of software and does not apply to any other sector of technology<sup>77</sup>. Thus in reading the article 30 together with Article 27, it would

seem that exception of interoperability might be inconsistent with the provision of TRIPs Agreement.

However, *Article 8(2)* of the TRIPs Agreement provides that a “consistent” and “appropriate” measure can be taken by members to prevent the abuse of intellectual property. If so, a legal limitation of reverse engineering for the purpose of interoperability, if it is appropriate and consistent, this limitation may be exercised by members of TRIPs without being in breach of the Agreement. Nevertheless the word “consistent” here means that it is consistent with the provision provided under the TRIPs Agreement. Therefore, *Article 8(2)* must be read together with *Article 27*, which bring us back to the issue of “discrimination of one particular technology field” that been highlighted herein.

However, one should wonder if software falls within *Article 27* in the first place. It could be argued that it might not. The TRIPs Agreement notes that the ordinary meaning of *Article 27* neither exclude nor included software as part of a field of technology since no definition in the agreement express the word “invention” or “field of technology”. To a certain extent the usage of software<sup>78</sup> is used in all fields of society as an example field of investment, learning. All these fields are clearly not “field of technology” but risked of becoming a fair game for the patent system under the software patent and thus would damage the legitimacy of a working patent system<sup>79</sup>.

It is noted that the TRIPs Agreement have not explicitly recognise software patent; and thus many have the opinion that computer software should not able to protect under patent law. The European Community have mirrored this opinion by rejecting a bill on introducing patent right to computer implemented invention<sup>80</sup>. Therefore if software does not fall within a field of technology under *Article 27* then there can't be any obligation for the members under *Article 27*<sup>81</sup>.

Nevertheless, as acknowledged earlier TRIPs agreement only set out minimum standard of intellectual property right, thus countries like US and Japan have recognised Software Patent being a legitimate patent protection. Therefore, if a member recognises Software Patent within its domestic legislation then the notion of introducing limitation for the purpose of interoperability is sure to come into conflict of TRIPs Agreement.

## **5. Malaysian Perspective on Balancing of Competition Policy and Intellectual Property Rights**

### **5.1 Domestic Legislation**

In examining the influence of TRIPs Agreement has on Malaysian in respect to software patent and competition policy; there is the need to first look at the manner software is protected in Malaysia. The copyright law in Malaysia has taken a centre stage in the protection computer software, though patent law is also playing a role in protecting computer software.

#### **5.1.1 Copyright Law**

The Malaysia Copyright law has clearly indicated that the protection of the expression of work would entail the work of a computer software<sup>82</sup>, it provides a clear but distinct definition of what constituted to “copyrightable work”. It provides six categories<sup>83</sup> of work that eligible for copyright they are (i) literary works (ii) musical works (iii) artistic works (iv) films (v) sound recording and (vii) broadcasts. The inclusion of computer software under the Malaysian Copyright act was done in the recent amendment in 1997<sup>84</sup>, the amending Act has defined literary work to include computer program<sup>85</sup>. This being the case, the 1987 Copyright Act confers copyright owners of computer programs the same exclusive rights and subjects this broad protection to the same fair-use exceptions as in the case of any other literary work.

#### **5.1.2 Patent Law**

However, in recent years the extensions of computer software protection under the patent law have also influenced Malaysia. Nevertheless, the Patent law does not have a specific provision to extend such right. Although, the law is silent on this issue, the Malaysia Patent Office has address in its guidelines. The Malaysia Patent Office Guideline<sup>86</sup> provided the definition of computer program; which is a set of instructions for controlling a sequence of operation of data-processing system.

The Guideline further expresses a clear approach that the Malaysia Patent office is using in determining the patentability of a computer program. It provides that a computer program claimed by itself or as a record on a carrier is not patentable, irrespective of its content but if the subject matter as claimed makes a technical contribution then patentability should not be denied merely on the ground that a computer program is

involved in its implementation. The Guideline gave an example of a data-processing system having a small fast working memory and a larger but slower memory. Then if a new computer program combined the two memories together and organised and result an effect that both memory achieved a maximum space as if the data was loaded entirely in the fast memory. The effect of the program in virtually extending the working memory is of a technical character and might therefore support patentability.

As such, although the Malaysia Patent Act does not explicitly provide the protection of computer software but the approach by Malaysia Patent Office in determining the patentability of computer software is deemed as a protection within the patentability test. Nevertheless it cannot be concluded that the Malaysia's patent law recognises the protection of computer software under the patent law since it merely provides a guideline by the local patent office and thus not a binding legislation. To date the legislations is still silent on this matter. However, looking at the practical approach by Malaysia Patent Office, there is a possibility of the computer software being protected under patent. However, such protection is limited to computer software that resulted to a technical effect as provided under the Malaysian Patent Office's examination guideline.

### **5.1.3 Software Patent**

As noted earlier nothing in the Malaysia Patent Act provides for the protection of software patent. However, the issue whether Malaysia recognises software patent or otherwise is not important anymore since inclusion of software patent within Malaysia patent system is no longer knocking at its door.

This is because; Malaysia Patent Office has adopted a modified system in its examination of patent application. This would mean that a patent application for an invention that has been granted patent in other countries would be exempted from substantive examination and consequently go straight to modified substantive examination. The reason for this is not only because substantive examination offers more flexibility and easy approach in determining the patentability of an invention but also because the Malaysian patent Office views that other patent office have already gone through the application in detail earlier. Thus through this a software base patent have been granted a patent in Malaysia<sup>87</sup>.

## **5.2 Balancing the Right of Software Patent in Malaysia**

With indirect inclusion of software patent in Malaysia patent system, the consideration of the limitation of

such right comes into the picture. Therefore, an important question that needs to be asked is: does software patent have an adverse impact towards Malaysian business within the software industry? Malaysia is a technology super corridor centre which aims to expand its technology sectors both with local and foreign base firms. The inclusion of Software Patent can undermine smaller local software firms in its research and development aspect. This is due to the "Patent Thickets" effect whereby one particular software product would have several overlapping patents for its program<sup>88</sup>. This would make development more difficult, since in conducting research and development, a local company needs to ensure that there is no infringement. Additional costs would be incurred to ensure to avoid infringing an existing patent.

With that in mind, the limitation of software patent in Malaysia must be addressed as soon as possible. In following other countries' recommendations on the limitation pertaining to the software patent, the best manner of limitation would be for the purpose of interoperability<sup>89</sup>. Thus, what can Malaysia put forward in balancing this right? The exception of interoperability can be inserted in the Patent Law; however, the practical view of this exception is varying in question. The US has touched this point under the FTC Report<sup>90</sup> which has stressed; an interoperability exception should be narrowly defined so as to not add to already existing confusion regarding potential infringement of software patent.

As such in inserting a limitation for interoperability, the structure of the provision must not be too broad, if so then it would allow for infringement "based solely on some unidentified need for exchange data", which would undermine the right of the right holder. Further the language of the exception must limit the infringement in the presence of some anti-competitive activity. There is the need to define the word interoperability, failure of defining could fall prone to an unintended broad exception and confusion as to what might constitute an infringement use versus a permitted act use.

The approach of introducing interoperability as a tool of limitation has been attempted by the European Community Bill<sup>91</sup>; which recognised the need for interoperability and it contained limited language relating to decompilation in the form of reverse engineering for the purpose of interoperability for patented software<sup>92</sup>. The importance of interoperability within the software industry is needed in order to promote competition, as interoperability would not undermine the right of a software patent but instead it would ensure the ability of new software to communicate freely with the patented software<sup>93</sup>. Hence in Malaysia's attempt to balance the

right of software patent in promoting competition, the best approach is to introduce limited exception under the law for the purpose of interoperability.

### **5.3 Influence of TRIPS Agreement: Competition vs. Intellectual Property Rights**

As highlighted earlier, TRIPs Agreement has provided some competition policy under *Article 8*, *Article 30(k)* and *Article 40*. So; to what extent do these provisions influence Malaysian domestic legislation? It is acknowledged that TRIPs Agreement merely provides the minimum standard of protection of intellectual property. The competition policy in the TRIPs Agreement does not stipulate “precise obligation” for the exercise of intellectual property right in relation to the application of competition law principle. It just provides discretion to the members in enacting and to put force the minimum standard in the national competition legislation<sup>94</sup>. In other words, *Articles 8*, *Article 31(k)* and *Article 40* of the TRIPs Agreement “recognize and interventionist power of members over intellectual property right in relation to anti competitive practice”<sup>95</sup>.

Member must comply with their obligation under it. However the TRIPs Agreement does not contain uniform law on intellectual property right. What it provides are merely a minimum standard of intellectual property rights protection which may be differently implement by the member; and it gives substantial discretion and lee way to the domestic laws<sup>96</sup>, this is in accordance to *Article 1(1)*, which provides:

*“...Member shall be free to determine the appropriate method of implementing the provision of this Agreement within their own legal system and practice”<sup>97</sup>*

The approach of implementing the provision of TRIPs Agreement is, divided into two: monist and dualist. The monist approach is usually applicable to countries with a civil law whereby the international agreements are incorporated directly into domestic law. This means the provisions of the international agreement are self-executed. However, for the dualist approach (usually applicable to countries with common law tradition is considered using the dualist approach) the international agreement cannot be self-executed. International agreement with dualist approach needs to incorporate into domestic law by domestic legislation.

Malaysia is considered to be a country that uses the dualist approach. This is evident with regards to the

competition policy in TRIPs Agreement, whereby it has incorporated some of the competition provision set out in TRIPs Agreement into its domestic legislation; as for example *Article 40* of the TRIPs Agreement have been incorporated within the domestic Patent Act under *Section 37* and *45*. The wording of the Malaysian provision to an extent is very similar to TRIPs Agreement counterpart. Without the incorporation of the provision of TRIPs Agreement in the Malaysian Patent Act the provision of the TRIPs agreement would not have any effect.

Each member of the TRIPs Agreement can stipulate and enforce its own intellectual property rights regime to promote a competitive environment for innovation and/or diffusion of new products and technology provided it respect the TRIPs Agreement minimum standard<sup>98</sup>. To a greater extent, it provides the opportunity for Malaysia to protect against anti competitive abuses of intellectual property rights by not only incorporating the provision within existing legislation but also to enact a separate competition law. Currently Malaysia does not have any single anti competition legislation, having the minimum standard set out therein, would take Malaysia one step forward in legislating a single competition legislation.

The implementing of the competition policy set out in TRIPs Agreement is not only an obligation but also a right of members. Therefore in order to take advantage of the TRIPs Agreement competition flexibility every member should promulgate national legislation addressing intellectual property rights related anti competitive practices regardless of whether it is a monist or dualist country<sup>99</sup>. However, in the matter concerning software patent with regard to competition policy, the TRIPs Agreement influence is very restrictive and minimum. The article that concern competition policy within the TRIPs Agreement mainly address the economic practices of anti competitive. *Article 8* gives a broad statement on the right of the member to allow a certain (measures deems appropriate) to avoid the abuse of intellectual property rights. *Article 40* merely regulate contract license of intellectual property in controlling anti competition practice; and *Article 31(k)* addresses matter with regard to compulsory licensing. All these articles could not address the problem that software patent encounter. As discussed on the previous section, the limitation for the purpose of interoperability within software patent has the possibility being inconsistent to the provision of TRIPs Agreement.

Nevertheless, it should be noted that the purpose of establishing the rule set out in the TRIPs Agreement is to give members the ability to promote effective and adequate protection of intellectual property rights and to

ensure that measures to enforce intellectual property rights do not themselves become barriers to legitimate trade<sup>100</sup>. Hence by introducing a limitation for the purpose of interoperability that would promote competition within the software industry goes consistent with the objective of TRIPs Agreement as a whole. The validity of interoperability as a limitation under software patent have yet to be contested but what important is to ensure that such limitation exist in order to give a right balance between intellectual property right and competition policy.

## **6. Conclusion**

The TRIPs Agreement was initiated under the forerunner of the WTO. It is the most comprehensive multilateral agreement on intellectual property covering all intellectual property instruments. It provides guidelines for the harmonisation of intellectual property laws under the WTO, which mean that all members have substantive TRIPs obligations. This paper has highlighted the protection of computer software within the intellectual property rights and; detailed the problem that this protection has cultivated. This is because computer software can be protected not only by copyright law and trade secret it can also be protected by patent. With software you can get at least two bites of the apple simultaneously; it is automatically copyrighted and it can be patented as well.<sup>101</sup>

It is noted that the functionality of computer software depend on the communication between other programs. Thus, there is the need for interoperability within the software industry, in order to utilise it's the full capacity. Nevertheless, with the exclusive right granted under software patent, many right holders have restrict the process of interoperability since this process would constitute to an infringement of the patent under the law and ultimately would allow the right holders to control the market. To avoid such control, limitation to the right granted need to be address. This paper also addressed the legitimacy of such limitation within the TRIPs Agreement.

The TRIPs Agreement have provides certain limitation to combat anti competitive practices but nothing therein focus solely on software patent, thus the TRIPs Agreement have to read as a whole in order to include any limitation for the purpose of interoperability. It is unknown if such limitation is permitted and relevant to this issue, because a member have the obligation to be consistent with the provision of TRIPs Agreement.

However, the need of limitation is a pressing issue and, should be introduced in order to promote competition market. To prohibit such limitation would mean that TRIPs Agreement have given too much control to the right holder but, to permit such limitation can also undermine the provision set out therein. Is it desirable for members to be permitted to introduce such limitation within the domestic law because this goes in tandem to the intention of the TRIPs Agreement which is; to promote effective and adequate protection of intellectual property right that including cultivating a fair competition market within the software industry.

## ENDNOTES

- 1 The Paris Convention and the Berne Convention is among the several conventions being established by the World Intellectual Property Organisation. Malaysia is a member of both Paris Convention and Berne Convention since January 1989 and October 1990 respectively.
- 2 TRIPs Agreement is administered by WTO, it was established during the Uruguay Round of Multilateral Trade of the General Agreement on Tariffs and Trade (GATT) in 1994. Malaysia became the signatory of the TRIPs Agreement on January 1995.
- 3 The World Trade Organisation (WTO) was established by the Marrakesh Agreement in 1994, for which WTO came into force on January 1, 1995
- 4 Malaysia became the member of the Patent Cooperation Treaty on August 2006.
- 5 US and Japan have been considered the leader promoting Software patent within their local legislation. The manner the protection is further elaborate in the second part of this paper.
- 6 EC Report; Communication From the European Community and its Member States, Working Group on the Interaction between Trade and Competition Policy (98-3720) 25 Sept 1998.
- 7 *ibid.* at pg 1.
- 8 *supra* note 2.
- 9 *Diamond v. Diehr*, 450 U.S. 175, 209 USPQ 1 (1981).
- 10 *ibid.*
- 11 Chris Reed and John Angel; *Computer Law Fifth Edition* (Oxford University Press ) pp.136-137.
- 12 TRIPs Agreement; Part II, Section 1, Article 10(1).
- 13 TRIPs Agreement Part II, Section 5, Article 27(1).
- 14 Alan Story; *Intellectual Property and Computer Software-A Battle of Competing and Access Visions for Countries of the South*, International Centre for Trade and Sustainable Development (ICTSD) and United Nations Conference on Trade and Development (UNCTAD), Issue Paper No.1(2004), pg 25.
- 15 David A. Einhorn; *Copyright and Patent Protection For Computer Software: Are They Mutually Exclusive?*, Journal of Law and Technology, PTC Research Foundation of the Franklin Pierce Law Centre; 1990 at 278.
- 16 Daniel J. M. Arridge; *Challenging Claims: Patenting Computer programs in Europe and the USA*. Intellectual Property Quarterly, No. 1 [2001], pg 22 to 35.
- 17 Richard Poynder; *Patenting Software*, the article can be found at [http://dialspace.dial.pipex.com/town/parade/df04/patenting\\_software.htm](http://dialspace.dial.pipex.com/town/parade/df04/patenting_software.htm)
- 18 Patentability of Computer Software and Business Methods, WIPO-MOST Intermediate Training Course on Practical Intellectual Property Issues in Business, Organised by the World Intellectual Property Organisation (WPO) in cooperation with the Ministry of Science and Technology of the People's Republic of China; Geneva, November 10 to 14 2003; prepared by the International Bureau; WIPO/IP/BIS/GE/03/07; November 7, 2003, available at [www.wipo.int/edocs/mdocs/sme/en/wipo\\_ip\\_bis\\_ge\\_03/wipo\\_ip\\_bis\\_ge\\_03\\_7-annex1.pdf](http://www.wipo.int/edocs/mdocs/sme/en/wipo_ip_bis_ge_03/wipo_ip_bis_ge_03_7-annex1.pdf)
- 19 TRIPs Agreement Article 8(1).
- 20 *ibid.* at Article 8(2).
- 21 Macro Ricolfi, Is There An Antitrust Antidote Against IP Overprotection Within TRIPS? *Marquette Intellectual Property Law Review* Volume 10:2 at 305; see page 311.
- 22 Tu T. Nguyen; *Competition Rules in the TRIPS Agreement- The CFI's Ruling in Microsoft v. Commission and Implication for Developing Countries*, IIC Vol. 39 5/2008, 558, at page 559.
- 23 WTO Working Paper domestic Regulation, Necessity Test in WTO, S/WPDR/W/27, 2 December 2003 see paragraph 3
- 24 *ibid.* see I.A.4.
- 25 *ibid.*
- 26 TRIPs Agreement, Article 40(1).

- 27 *ibid.* Article 40(2).
- 28 TRIPs Agreement, Article 40(2).
- 29 *Marco Ricolfi*; *supra* note 21 at 311.
- 30 WTO Panel Report, Mexico – Measure Affecting telecommunication Services, WT/DS204/R, 2 April 2004.
- 31 *ibid.* at paragraph 7.231.
- 32 *ibid.* at paragraph 7.237.
- 33 TRIPs Agreement, Article 30.
- 34 *ibid.* Article 30(k).
- 35 TRIPs Agreement, Article 31(b).
- 36 *ibid.* Article 31(f).
- 37 *ibid.* Article 1(1).
- 38 *ibid.*
- 39 See note 3 for Article 3.1 of the TRIPs Agreement.
- 40 *Nguyen*; *supra* note 22, see page 564.
- 41 TRIPs Agreement Article 63(1) (paraphrases).
- 42 It can be said that the true anti competition policy within the TRIPs Agreement are clearly express in Article 40(2) and Article 8(2).
- 43 *Nguyen*, *supra* note 22 at page 564.
- 44 TRIPs Agreement, Article 7 (paraphrase).
- 45 WTO Panel Report, Necessity Test in the WTO, *supra* note 23, at para 4.
- 46 Richard Poynder; *Patenting Software*; 2001 article can be found at [http://dialspace.dial.pipex.com/town/parade/df04/patenting\\_software.htm](http://dialspace.dial.pipex.com/town/parade/df04/patenting_software.htm)
- 47 Phil Salin; *Freedom of Speech in Software*, 15 July 1991 available at <http://philsalin.com/patent.html>
- 48 Maria Lilla Montagnani; *Predatory and Exclusionary Innovation: which Legal Standard for Software Intellectual Property Rights Clash?*, IIC Vol. 37, 304.
- 49 *ibid.* at page 305 and 306.
- 50 Robert Hart, Peter Holmes and John Reid; *The Economic Impact of Patentability of Computer Programs*, 19 October, 2000 Intellectual Property Institute, London.
- 51 Grant C. Yang; *The Continuing Debate of Software Patent and Open Source Movement*, 13 TEX. INTELL. PROP. LJ 171, 186, 2005.
- 52 Aaron D. Chorfoos; *How Far have we come and where do we go from here. The status of global computer software protection under the TRIPS Agreement*, 22 NW. J INTL L & Bus, 287 (2002).
- 53 Jean Paul Smets and Hartmut Pilch; *Software patentability with Compensatory Regulation: a Cost Evaluation*, Upgrade Vol. II, No 6 December 2001, 23 at page 26.
- 54 *ibid.*
- 55 An example of this situation is best illustrated by the granting of the Sorenson patent. The Sorenson patent which concern on digital video compressor. The patent grant apple Computer an exclusive license, Apple Computer then market a product called Quicktime which allows to view digital video compressed according to the Sorenson method on Windows and MacOS only. Other competing product cannot view digital compressed this way because of the exclusive licensing of the Sorenson patent to Apple Computer. See *supra* note 49 at page 26.
- 56 Michael Chapin; *Sharing the Interoperability Ball*, B.U.J.SCI & TECH. L. Vol. 14 220 at pg 227.
- 57 Rohan Mishra; *Reverse Engineering in Japan and the Global Trend Towards Interoperability*, E-Law Murdoch University Electronic Journal of Law, Vol. 4 No. 2, June 1997 see para 10.
- 58 *Bonito Boats Inc. v. Thunder Graft Boats Inc.* 1989, 489 U.S. 141; 109 S. Ct. 971.
- 59 Pamela Jones; *Software, Reverse Engineering and the Law*, LWN Net 2 May 2005; access at <http://lwn.net/articles/134642/>
- 60 Ministry of Economic Trade Industry Japan, an Interim Report of “Study Group on the Legal Protection of Innovation” (herein after refer as METI Report), Commerce and Information Policy Bureau, 11 October 2005.
- 61 *ibid.* see paragraph 1.
- 62 *Smets & Pilch*; *supra* note 52.
- 63 Evan & Layne-Farrar; *software patent and open source, the battle over intellectual property rights*, 9 VA. JL& TECH 10, 2004 at 16.
- 64 Maxwell E; *Open Standard Open Source and Open Innovation*, Innovation Technology Government Globalisation Summer 2006 at 126.
- 65 *ibid.* at 127.
- 66 Miko Valimaki; *Software Interoperability and Intellectual Property Policy in Europe*, 3 EUR REV of POL TECH, December 2003 at 5 n 5.
- 67 *Microsoft v. Commission*, CFI 5/2001, 7-201/04, 17 September 2007, 39 IIC 504, 2008.
- 68 Article 82 European Community Treaty provides:  
Any abuse by one or more undertakings of a dominant position within the common market or in a substantial part of it shall be prohibited as incompatible with the common market insofar as it may affect trade between Member States. Such

abuse may, in particular, consist in:

- (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;
- (b) limiting production, markets or technical development to the prejudice of consumers;
- (c) applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
- (d) making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

69 *supra* note 64, see paragraph 312.

70 *ibid.* see paragraph 229 and 375.

71 US Federal Trade Commission Report (herein after refer as FTC Report), To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy, Chapter 3, October 2003, see page 44.

72 *ibid.* at page 44 and 45.

73 See *Article 8* and *Article 30* of the TRIPs Agreement.

74 See *Article 40* of the TRIPs Agreement.

75 *Article 30*, Exception to Rights Conferred, TRIPs Agreement.

76 *Article 27(1)*, sentence two, TRIPs Agreement.

77 Karl-Friedrich Lenz; *TRIPS and Software Patent in Japan*, University Aoyama Gakuin Law School, January 2006, <http://k.lenz/LB>

78 Karl-Friedrich Lenz; *TRIPS Agreement and European Software Patent Legislation*, Aoyama Law Review No. 47 2005 1, at pg 21.

79 *ibid.* at page 19 ; the statement is in respond to the introduction for the proposal of computer implementation patent under the European Community, which was rejected by the community in 2005.

80 In 2005 the bill for computer implemented invention under the Commission Proposal for Directive of the European Parliament and of the Council on the Patentability of Computer-Implemented Inventions was rejected by the Community.

81 *Karl-Friedrich Lenz*, *supra* note 75 at page 8.

82 Malaysia Copyright Act 1989, Part 1; Section 3.

83 Malaysia Copyright Act 1987 Part II Section 7 (1) (a) – (f).

84 Malaysia Copyright (Amendment) Act 1997 (Act A994) which came in force on 1<sup>st</sup> April 1999.

85 Malaysia Copyright Act 1987 Part I Section 3 under the definition of “literary work”; sub section (h).

86 Guidelines for Patent Examination in the Intellectual Property Corporation of Malaysia; Chapter IV Provision 3.6.

87 Ditesh Kumar, *Software Patent: Background, Discussion and Illustration of Harm*, 23 April 2006, at page 9, illustrate an example of a Malaysian patent granted to NEC company under the Patent Number MY100183-A. The patent is for a traffic data system, it was granted based on the fact the same patent was already been issue in United States. unpublished access at [http://foss.org.my/projects/papers/Software\\_Patents.pdf](http://foss.org.my/projects/papers/Software_Patents.pdf)

88 FTC Report *supra* note 71 at page 52.

89 Japan and US have address the issue of limitation of interoperability in METI and FTC Report respectively. See note *supra* 60 and 71.

90 FTC Report *supra* note 71 at page 51-53.

91 *supra* note 77.

92 *M. Chapin*, *supra* note 56 at page 235.

93 *ibid.*

94 Working Group on the Interaction between Trade and Competition Policy, Communication From the European Community and its member States, 98-3720, 25 September 1998, at paragraph 22.

95 *Nguyen*, *supra* note 22, at page 562.

96 *ibid.*, at page 568.

97 Article 1(1) TRIPs Agreement second sentence.

98 Carlos M. Correa; *Trade Related Aspect of Intellectual Property Rights- A Commentary on TRIPS Agreement*, at vii (Oxford University Press, Oxford 2007).

99 *Nguyen*, *supra* note 22 at page 567.

100 See the Preamble to the TRIPs Agreement.

101 Although the notion of patent software as only be acceptance generally by developed country as such US and Japan, nevertheless EU have rejected the patent software bill. Malaysia do not have a specific law allowing or prohibit software but generally software have been granted patent by most jurisdiction which always fall within the process of patent application. However under this paper what is being set out is not the legality of software patent but the limitation of the software patent.

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