**PATENTABILITY OF SOFTWARE RELATED INVENTIONS IN SRI LANKA: SPECIFIC GUIDELINES WITH REFERENCE TO SOPHISTICAED JURISDICTIONS**

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**INTRODUCTION**

The main purpose of granting a patent for an invention is to stimulate industrial inventions and also granting limited monopoly rights to the inventors. On the other hand, it would increase the public availability of information on new technological developments. As mentioned in section 63 of the Intellectual Property Act of 2003 of Sri Lanka, an invention is patentable if it is new, involves an inventive step, and is industrially applicable. In many instances, some creations did not fulfill the requirements of novelty and the innovative steps and thus lost its patentability. Software- related inventions can be recognized as one of them. As mentioned by Lloyd (2004), “although there appears globally to be an increasing willingness to bring software related inventions within the ambit of the patent system, only a small proportion of computer program will display the necessary degree of novelty and inventiveness to qualify for that form of protection” (309). This situation is quite similar with Sri Lankan law as Sri Lanka still does not recognize the patentability of software – related inventions but only of computer programs. The objective of this research is to analyses the possibilities of recognizing software related inventions under the patent requirements of Sri Lankan intellectual property law. The methodology of this research is based on more specifically, a doctrinal analysis of foreign legislations on software patentability and reviewing of research articles and policy reports. This research article is based on the findings which are already collected and the research is still ongoing.

# PROBLEM STATEMENT

The problem of this research is to examine whether the existing law for patents in Sri Lanka is adequate to recognize software related inventions as a patentable invention or not.

# AIM

The aim of this research is to analyze some progressive jurisdictional legal and policy backgrounds which can be adopted as positive guidelines to ensure the patentability of software– related inventions in the event that Sri Lankan judiciary would come across any controversial issues of patenting software in the future.

# OBJECTIVES

Find more sophisticated guidelines from other doctrinal jurisdictions to recognize software related inventions under the ambit of the patent law of Sri Lanka.

# METHODOLOGY

The methodology of this research is based on more specifically, a doctrinal analysis of Sri Lankan law and foreign legislations on software patentability and reviewing of research articles and policy reports.

# RESULTS AND DISCUSSION

The word software is considered to be ambiguous. Thus, in place of this ambiguous term the concept of a computer implemented invention has been introduced. Based on their own

criteria countries all over the world create their own definition for software protection being guided from the World Intellectual Property Organization model provisions. According to that, software is something which refers to a computer program, program description and program user instructions. Computer programs mean a set of instructions expressed in words, codes, schemes or any other form connected with a machinery process itself. In many countries the recent trend relating to the protection of software related inventions can be recognized under the capacity of patentability. The basis for granting a patent is that the creation should include the inventive steps and the capability of industrial application. The crucial hardship involved in this process is to identify the necessary degree of the novelty and the inventive steps of a software. The question arises against this backdrop as to whether the existing laws governing patents of Sri Lanka necessarily recognize software as a patentable invention. As mentioned in Section 63 of the Intellectual Property Act No 2003 an invention is patentable if it is new, involves an inventive step and is industrially applicable.

Furthermore, as per the Section 64 of the 2003 Act,

Section 64. “(1) An invention is new if it is not anticipated by prior art.

1. Prior art shall consist of;

(a)everything disclosed to the public, anywhere in the world, by written publication, oral disclosure, use or in any other way, prior to the filing or, where appropriate, priority date of the patent application claiming the invention;

(b)the contents of patent application made in Sri Lanka having an earlier filing or, where appropriate, priority date than the patent application referred to in paragraph (a), to extent that such contents are included in the patent granted on the basis of the said patent application made in Sri Lanka.”

Section 65: “an invention shall be considered as involving an inventive step if, having regard to the prior art relevant to the patent application claiming the invention, such inventive step would not have been obvious to a person having ordinary skill in the art.”

Applicability of the above-mentioned provisions is not quite simple when it comes to a software related program. As mentioned by Bernard Chao (2013), in his research work ***Finding the point of Novelty, in software patents***, “courts should first examine the limitation that embodied the point of novelty to determine whether it describe a patentable concept (i.e. the law of nature, a natural phenomenon, or an abstract idea.) If it does, the court should then determine whether the other limitations bring the concept in to the real patentable subject matter. This occurs when the other limitations are both concrete and strongly connected to the point of novelty” (pp. 1217-1260).

It is noted that the computer program and software are protected under copyrights law in most countries like Canada, Germany, European Union, India, Pakistan and United State. However, some features involved with the formation of a software can’t be protected under the copyrights law. As mentioned in a recent case ***SAS Institute Inc. v World Programming Limited***“neither the functionality of a computer program nor the programming language and the format of data files used in a computer program in order to exploit certain of its functions constitute a form of expression of that program and, such, are not protected by copyright in computer programs for the purposes of that (software) directives”. This proves that copyright is not adequate for the protection of software as it only considers the protection of expressions of ideas not the mechanical version of the ideas. According to Durell (2000) a software can be recognized as a set of commands written by a programmer in a chosen computer language that can be run by a computer. It can be said that software is an invention which includes both literary and technical aspects. Protection under the intellectual property law for software should recognize these two different aspects. Sri Lankan position with this regard is that it

still does not recognize the difference between the mere expression and the mathematical or systematic level of expression.

It can be stated that according to Article 2 (1) of the Bern Convention for the protection of literary and artistic works 1886 the expression ‘literary and artistic works shall include every production in the literary, scientific and artistic domain, whatever may be the mode or form of its expression and the written expressions of codes which were used in a software related invention can be protected under the copyright law.’ As mentioned above any software including both literary and technical aspects cannot be protected under copyright laws.

USA already recognized the patentability for software related inventions in the case of ***Diamond v Diehr*** (450 U.S 175). In this case court had to decide whether a patentable claim became invalid because they include mathematical formulas. The decision of this judgment is connected with the both aspects we discussed above, literary and technical aspects. It was held that any of a patentable claim does not become invalid because they include mathematical formulas. It ensured that any mathematical formula which is connected with a structural process may warrant patentability. Furthermore, the decision of this case encourages the premise that any software be considered as literary and technical work. This can be recognized as a positive judgment as it ensures that the combination of steps in a process may be patentable even though all the parts of the combination seems to be familiar or introduced before. The judgment of this case provides for better guidance which can be used whenever a matter has arisen before the courts of Sri Lanka regarding the patentability of software related inventions. Furthermore, as mentioned in the case *State Street Bank & Trust Company V Signature Financial Group* (149 F.3D 1368), mathematical algorithm is also patentable as long as their application produces a useful, concrete and tangible result’. These definitions for the recognition of software can be used as a guide to Sri Lankan law as well.

Furthermore, basic requirements for granting a patent in Sri Lanka is defined in the **Section 63** of the IP Act as,

* + New (novelty)
  + Inventive step (non-obviousness)
  + Industrial applicability

However, proving the facts of novelty and inventive steps are difficult when it comes to software related inventions. Thus, it is important to analyze some other doctrinal jurisdictions in order to propose some guideline to fathom the requirements of granting software related inventions to Sri Lankan IP law.

In the case of ***In re Sobel***. the European technical board held that patentable computer program would not lose its patentability merely because additional features fall within subject matter excluded under 52(2)-19. This case was influenced by European perspectives and if an invention consists of non- patentable features but with patentable features can be fairly considered as patentable. After long terms of arguments, in early 1990 Federal Circuit Court USA proposed that if the entire process was simply a mathematical algorithm, then the invention was not patentable; if, on the other hand, the invention used software to manipulate and compute numbers that represented real world value, then the invention was patentable.

Finally, in 1995. the Patent Office USA decided to set out some guidelines for their courts. They came up with the Final Computer Related Examination Guidelines in 1996 which applied to both hardware and Software related patent. It introduced what can be called patentable software. Accordingly,

* those having significant post solution activity, meaning that the software program is used to control something external to the software routine (such as curing rubber)
* those having precompute process activity, meaning software programs that manipulate numbers representing concrete, real world values (such ae electrocardiography signals and seismic measurements.)
* those claimed in connection with a specific machine or product. This can be accomplished by defining specific code segments or routine in the patent application. or by claiming the invention in connection with a specific type of computer or memory structure can be patentable.

These are the extremely progressive criterion which can be applicable to Sri Lanka in the event that the judiciary is faced with the controversial issue of patenting software.

# CONCLUSION

The conclusion of this research can be clearly cited with a quotation of Jason Chaleckion his work Applicability of Patent Protection to Software Inventions, “Practically it is the case that any computer program. Through fairly mechanical manipulations, can be represented equivalently as a mathematical algorithm (which the courts have ruled cannot be patented) or as the manufacturing process for hardware (which courts have ruled can be patented). A common sense standard for what constitutes software may well fail if there becomes an inventive to change how the invention is represented. Theoretically, the road is equally murky. Patents, as we recall, were originally conceived to protect ideas themselves, it challenges the policymaker to delineate which ideas deserve protection and which do not. Even if fairness and consistency are satisfied from consideration, it is still quite difficult to judge which set of ideas can be best be nurtured through the promise of protection.”

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# ABSTRACT

Recent technological developments and globalization has converted the implementing of intellectual inventions as well. Recently, software has become an inventive output of human intellect and can be recognized as an intellectual property. Oxford Dictionary definition for software, is sited as ‘the program etc. used to operate a computer: application /system, design, educational musical sharing etc.’ A software can be recognized as an invention which includes both literary and technical aspects. Various international legal instruments such as the Bern Convention, Universal Copyright Convention, World Intellectual Property Organization Copyright Treaty have recognized software under the protection of copyright. Most of these legal instruments ensure the protection of the literal aspects of software related inventions not the technical aspects. It can be said that copyright laws do not adequately protect the complete package of software. Recently, a global trend of recognizing software within the ambit of patent protection has been identified. The main purpose of granting a patent for an invention is to stimulate industrial inventions and also granting limited monopoly rights to the inventors. As mentioned in the section 63 of the Intellectual Property Act of 2003 of Sri Lanka an invention is patentable if it is new, involves an inventive step and is industrially applicable. Generally, some of those software related inventions did not fulfill the requirements of novelty and the innovative steps and thus, lost the patentability. The objective of this research is to analyze the possibilities of recognizing software related inventions under patent requirements of Sri Lankan Intellectual property law. The methodology of this research is based on more specifically, a doctrinal analysis of foreign legislations on software patentability and reviewing of research articles and policy reports. The purpose is to analyze some progressive jurisdictional, legal and policy backgrounds which can be taken as a positive guideline to ensure the patentability of software in the event that the Sri Lankan judiciary face controversial issues related to patenting software in the future.

**KEY WORDS**: Technological developments, Software, Copyrights, Patentability, Guidelines