COPYRIGHTABILITY OF COMPUTER SOFTWARE IN INDIA

Apsi Adithyakumar, LL.M (IP) PhD, Student of IUCIPRS, CUSAT, Kochi

ABSTRACT

Patent law and Copyright law give different types of protections. A patent law which allows an exclusive monopoly right to inventor over their invention. As comes to Copyright law the protection extends to only expression of ideas not to ideas itself. Copyright protection has no forms in countries those who are the parties to the Berne convention for the protection of literary and artistic work.[1] This means that protection does not depends on compliance with the form of the registration or keeping copies. Most of the countries have copyright protection for computer software which is standardized by international treaties. A patent is usually given when a government body has completed an examination procedure. Although the legislation regulating to the patentability of software is still not standardized internationally, some countries have welcomed the patentability of software while others have diverse systems that recognize inventions aided by computer software. Copyright law protects the original literary works that are expressed in some material forms. Computer program or software are considered to be a literary work because they are written in source code and object codes. The source and object code of computer software are consisting of literal element and so they can be protected by copyright law.

Keywords: copyright law, copyright protection, computer software, Indian copyright law, Berne convention.

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[1] Berne convention, 1886

INTRODUCTION

A computer is a digital electronic machine that can be programmed to carry out sequence of arithmetic or logical operations automatically.[2] In pre 20th century's computers were used only for the calculations. First computer was invented by Charles Babbage and the computer is known as mechanical computer in early 19th century. Post 20th century computers can perform a wide range of set of operations called programs. According to Section 2 (ffb),[3] "computer" includes any electronic or similar device having information processing capabilities. A "computer program" is defined as "a set of instructions expressed in words, quotes, scheme or any other forms, including a machine readable medium, capable of causing a computer to perform a particular task or achieve a particular result"[4]. The definition of computer program explicitly differentiates between the "set of statement or instruction" which is constituting the computer program and the certain result that brings the computer program which is executed by the computers. From the definition of computer program, we can conclude that the computer program is quite simply the code. These computer programs allow computers to perform a wide range of tasks.

Computer programs can be expressed in different type of languages and also ought to be converted into binary forms as to enable the computer to execute them. Machine language is known as the expression of language in binary forms. Computer programs are written in the forms of set of instruction known as "source code". The act classifies this code as literary works, as it is this protected.[5] After writing the source code, an assembler or a compiler is used to generate the object code. The program's language determines whether a assembler or a compiler should be used. A compiler is needed to convert a high-level program into low level assembly language, and an assembler this needed to convert a program into a low-level assembly language. The result of this process is to produce machine readable code that is almost impossible of human to understand, but which can be directly recognized by a computer. Programs in this binary format are called object code. It is clear that the main idea of object code is not revealed when reading code that sets it apart from other literary works.

COPYRIGHT PROTECTION IN COMPUTER SOFTWARE

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[2] https://en.wikipedia.org/wiki/Computer
[3] Indian Copyright Act, 1957 Section 2(ffb)
[4] Ibid, sec 2(ffc)
[5] The agreement on TRIPS, 1995.

The Copyright Act, 1957 protects original literary[6], dramatic, musical and artistic works and cinematography films and sound recordings from unauthorized to use. Unlike the case with patents, copyright protects the expression and note the ideas. There is no copyright protection for ideas, procedures, method of operation or mathematical concept as such.[7] The Copyright Act, 1957 contains provisions for the protection of computer software copyrights in India. Section 2(o),[8] state that literary work includes computer programs, tables and combinations, including computer databases. From the section 13 itself says that the work should be original of the author. The requirement of originality of the work is that originality of expression of ideas and not originality of ideas themselves. One of the main objectives of originality is that it prevents the same work from getting copyright again and again without any addition made to the work. Originality is also a sine qua non to copyright protection[9]. Originality means that the work should be original of the author. By giving an illustration that if the work of a person is not original but a mere copy of someone else original work then the copyright protection cannot be granted to such a person. From the brief analyze we can say that originality requirement should have two main distinctive requirement that are "independent creation" and "creativity". Original means that the particular works owns it's work to the author[10]. A computer program is only considered to be the independent creation of the author if the personal signature of the author is too perceptible in the work.

A. Idea – Expression Dichotomy

The fundamental principle of copyright law is that copyright protects the expression of ideas, but not the ideas itself.[11]The primary object of the copyright law is that to promote the useful works. Therefore, copyright acts to promote people to create the ideas of others while secondly, protect the right of the authors in the original expression of their ideas.[12] The only test in India to comparison between two computer program is the test of facial similarities pronounced by the court in the case of R.G Anand[13]. Interestingly, the test was designed to come by books of film, and comparing two computer programs using the same para meters he is clearly absurd. But despite these absurd comments, viewers are being tracked to compare the two programs.

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[6] Supra n.3, sec 13

[7] The agreement on TRIPS, 1995, Article 9(2)

[8] Supra n.3, sec 2(o)

[9] Cammer international Inc V. Russ berrie and Co, 657F.2d 1059,1061 (9th cir.1981)

[10] Burrow-giles lithographic co vs sarony, 111 US 53,58 (1884)

[11] Baker V. Selden, 101 U.S. 99, 102 (1879).

[12] Feist publications, Inc V. Rural Tel.Serv. Co. Inc, 111 S. Ct. 1282, 1290(1991).

[13] R G Anand v. Deluxe Films, 1978 AIR 1613. (Division bench judgment.)

The scope of copyright protection that court extended to computer programs is directly related to how courts draw a line between idea and expression. Over the years, the protection that copyright law applies to computer programs has been expanded. Originally, Copyright Act protected only written code that made up a computer program. Usually, the court expanded the protection of nonliteral structure and organization of computer programs.[14] Broadly speaking, non-literal elements in a computer program pertain to the overall structure, sequence and organization of the elements of a program and note to the written codes.

B. Literal and Non- Literal elements.

The definition of computer program itself includes the two codes, object code and source code. A computer programs literal element known as source code. The non-literal element of the computer program defines as the structure, sequence, organization, screen displays, menu structure and user interface of software. It also argued that nonliteral element is not protected by Copyright Act 1957. Literal element are those elements that are concerned with the literal aspects of computer program, that is, the court expressed in literary language. Literal copying is also known as direct copying of code. In altai test[15] the court proposed a three-part method, known as the 'Altai' or "abstraction-filtration-comparison" test to determine if elements of a computer program qualify for copyright protection and could subject a defendant to liability. The test has a structured approach to analyzing computer programs under traditional doctrines of copyright law developed to differentiate unprotectable ideas from protectable expression.[16]

a) Literal Elements

The literal element of computer software is a statutory protection given under Indian Copyright Act 1957. Protection against direct copying of program code is legally available because all steps included in such copying can be traced either directly or through a reverse engineering process. In the landmark cases, William's electronics, Inc V. Artic international, Inc[17]and Apple Computer, Inc V. Franklin Computer corp[18] the court dealt with the copyrightability of literal aspects or coded aspects of computer programs. After these early cases, it was clear that

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[14] Johnson Controls V. Phoenix Control Sys, 886 F.2d 1173, 1175 (9th Cir. 1989).
[15] Computer Associates International, Inc. v. Altai, Inc., 982 F2d 693, 702 (2d Cir. 1992).
[16] http://euro.ecom.cmu.edu/program/law/08-732/Copyright/CopyrightInfringementOfSoftware.pdf
[17] Williams Electronics, Inc. v. Artic International, Inc., 685 F.2d 870 (3d Cir. 1982).
[18] Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3d Cir. 1983)

the literal elements they are copyrightable in any format, whether the source code or object code.

b) Non-Literal element

The non-literal elements of computer program include its user interface, which is manifested in its structure, sequencing, and organization. The protection of programs interface is more important to the creator than the literal characteristics reflected in the source code and object code. The creator or author concern over the user interface grows since it has been shown in industrial practices that various structure codes might result in similar looking in user interface, leaving the author with a little to pursue in the name of legal protection. Article 2 of the Berne convention[19] and Article 10 of TRIPS agreement[20] deals with the collections of literary or artistic work and combination of data or other materials.

The four tests for nonliteral element infringement in computer programs are :

I.   **The Whelan approach**.

In Whelan Associates Inc V. Jaslow Dental Laboratory Inc[21], the Third Circuit Court of Appeals become the first court to seriously consider the question of non-literal infringement in US. In this case the court concerned of two competing programs of the management of dental laboratories called Dentalab. The program was created by whelan and marketed by Jaslow Inc. And another program was Dentcom and which was created and marketed by Whelan. The program was written in a different language and also in a different computer system. The main and serious question to be answered in by the appeals court was whether copyright could be subsisted in nonliteral elements. And the next question was whether there was any infringement in this case. For answering these questions, the court proceeded to develop a test for what parts of non-literal elements could be protected and also on the idea expression dichotomy. The fundamental principle of copyright law states that copyright law only protects expression of ideas not ideas itself. In the case Baker V. Selden[22] The US Supreme Court had held that which

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[19] Berne convention, 1886, Art.2(5) of Berne convention: "collection of literary or artistic work such as encyclopedias and anthologies which, by reason of the selection and arrangements of their contents, constitute intellectual creations shall be protected as such, without prejudice to copyright in each of the works forming part of such collections."

[20] The agreement on TRIPS, 1995, Art.10(2) of TRIPS agreement: "compilations of data or other material, rather in machine readable or other forms, which by reason of the selection or arrangements of their contents constitute intellectual creations shall be protected as such."

[21] Whelan Assocs., Inc. v. Jaslow Dental Laboratory, Inc., 797 F.2d 1222.

[22] Supra n.11

part of the work as idea and which depends on expression of the nature of works. The purpose or function of a utilitarian work will be the idea of that work, and what is not necessary for that purpose or function will be part of the expression of that thought. If there are various means to achieve the desired end, then the particular means chosen and is not necessary to achieve the end. Therefore, there is an expression, not an idea. In Whelan case the court followed the Baker's[23] case and formulated it tests on this basis. In whelan case court held that in a computer program, the function or purpose of program would be the idea, and every so often was part of expression. From the decision of the court we can conclude that the concept of having computer program for managing the dental lab would be an idea so it is beyond the scope of copyright protection and also the structure of program would be protected expression.

II.   The Paperback approach- A three part test to determine copyrightability.

The second important approach of copyrightability of nonliteral element in the case Lotus development corp V. Paperback software international[24]. In this case the court examined that whether the interface of a program is protected or not? for determining the answer to this question, the court formed a three-part test to determine copyrightability of nonliteral element was whether the user interface of popular spreadsheet program Lotus 1- 2- 3 was protected by copyright.

The *First step* in involves Considering the distinction between the ideas and expression within the program along with a scale moving from most general to most particular conception. For analyzing this step the court adopt another test known as Hand's abstraction test formulated in Nicholas V. Universal Pictures[25] this involves the separating of various element from a program and also moving from the general to particular for the purpose of distinguishing ideas from the expression.

The *Second step* involves focus on whether the alleged expression of ideas is limited to the elements essential to the expression of the ideas or also includes identifiable elements that are not essential to every expression of ideas. For identifying this step incorporates the doctrine of

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[23] Supra n.11
[24] Lotus Development Corp. v. Paperback Software International, 740 F.Supp.37 (1990)
[25] Nichols v. Universal Pictures Co., 45 F.2d 119, 121 (2nd Cir. 1930)

merge[26] and scenes a faire[27] which are traditional exceptions to copyright.

The *Third step* involves that having identified the element of expression not essential to every expression of ideas the decision maker consider whether these elements are a crucial part of alleged copyright work.

III.   The Altai approach- The Abstraction- Filtration- Comparison test.

In the case Computer Associates International Inc v. Altai Inc[28] the Second Circuit court found similar to the Whelan's case[29] structure sequencing and organization but the test did not provide a fair method for considering copyright infringement claim with respect of computer software. For identifying this case the court proposed a new three-part method commonly known altai or abstraction - filtration- comparison test to determine whether the element of a computer program qualifies for copyright protection and could therefore subject to a different liability for copying. Basically, that abstraction- filtration- comparison test provide a structural approach to analyzing the computer–program under a traditional doctrine of copyright law developed to differentiate unprotectable ideas from a protectable expression of ideas as well as protectable forms of expression from unprotectable forms. There are various type of tests used to identify copyright infringement cases and also depending the upon the jurisdiction, the altai test, in addition binding District Court in the Second Circuit seems to be emerging as a preferred one with several others circuit have adopted is analyzed or discussed with the approval.

The 1st test abstraction test: In abstraction test the court applies the Nicholas abstraction tests to separate the unprotectable idea of a program from its copyrightable expression. The comparison begins with the code and working backward together with the various level of abstraction and also end with a general statement of programs idea. The level of abstraction test would be the main purpose of the program structured or modulates or algorithm and data structure or source code or object code it can be in different levels.

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[26] "In the copyright law the doctrine of merger postulates that were the idea and expression are inextricably connected, it would not possible to distinguish between two.

[27] The Doctrine of Scene À Faire is a concept in Copyright Law which holds that certain creative works of a genre aren't copyrightable as certain patterns are so recurring and ingrained in a particular genre that they can't be copyrighted, as they are mandatory or customary to that particular genre.

[28] Computer Associates International Inc v. Altai Inc, 982 F 2d693,119 a.l.r.fed 741,92cal(2d cir 1992)

[29] Supra n.21

The 2nd test filtration test: In filtration test court filter the alleged interesting program of each level of abstraction together and various copyright doctrines such as merge and scene faire deny the protection to certain type of materials.

The 3rd test comparison test: in the comparison test. The code developed. What is referred to as the core of protection, and in this case, the Court consider whether the protectable features of two program are substantially identical. Stage of Comparison., during which the decision maker access whether any copying is infringing.

In Indian courts the Altai test is not wholly accepted. In foreign jurisdiction also the altai test were critiqued. Altai test fills the void because we should understand that in the absence of concrete test, which examines two programs, is an elaborate manner.

After discussing the various tests proposed by the courts to the test the copyrightability of known alphabetic elements, it was concluded that the AFC (abstraction- filtration- comparison-test) was closest to the comprehensive test for copyright infringement. However, this test is not only a legal test, but also a technical test that requires a good understanding of programming to apply its properly. Therefore, court should be aware that failure to correctly apply the three-step process, the AFC test, can lead to cases of over protection or under protection.

IV.   The Brown Bag Approach. The Extrinsic- Intrinsic Test

In that case Brown Bag Software V. Symantec Corp[30] the Ninth Circuit Court of Appeals applied the general test of copyrightability to the computer program context. In this case the dispute was concerned an outline program which was created by an independent programmer for Brown Bag. Hand later Brown Bag produced and sold a similar program too Symatec. For determining this case the court evolved two-part test for the understanding substantial similarity.

In the *First test (Extrinsic test)* the court determined that which part of the program were unprotectable. The purpose of this test is to allow the submission of expert testimony to aid the court's discretionary process, and this test also determine the scope of the plaintiff's copyright.

In the *Second test (Intrinsic test)* the court after comparing the extrinsic tests the court finds the objective similarities in the two programs. This part of the test compares the objective similarity

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[30] Brown Bag Software V. Symantec Corp, 960 F.2d 1465 9th circuit 1992

parts of the program to find meaningful similarity in expression according to the response of average reasonable person. Whether or not their boss any significant similarity should be a judge based on the overall concept and feeling of the two works, so the secondary test is subjective in nature.

CONCLUSION

Given the complex nature of computer programs and their consistency with the Indian common law system, courts may up comply with UK concept and principles. As you can see, the essence of granting protection to an individual's intellectual property is to compensate that individual for the intellectual labor expanded on the job. Computer programs cannot be considered general work of literature given in the nature of their highly technical and complex work. Therefore, you should exercise caution when making decisions about copyright protection for your software.