

IP Protection of Software and Software Contracts in India: A Legal Quagmire!

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Software in India are protectable under copyright law as computer programmes, but the scope of a 'literal' part of a programme and the limits of substantial copying are not yet settled. Author's 'fair use' rights and licence use rights are similarly not clear. Software *per se* is not patentable, but there are no guidelines as in when software is patentable under the Patents Act. But they are protectable as trade secrets under the common law. Software contracts, like any other transaction, are governed by common law principles as embodied in the Contract Act. Contracts can be in the nature of sale or assignment/licence, hence subject to different laws - Sale of Goods Act, Consumer protection Act, Competition Law, tax laws, apart from the relevant IP laws. Because of their peculiar nature, sale of software is not at par with the sale of goods; hence they are generally licensed where the owner has wider rights. Presence of the Internet element in licensing makes these contracts subject to conflict of laws. In contrast to open source licences, proprietary licences curtail substantially the 'fair use' rights. These issues require clarification through a proper legislation. This study examines the Indian law on legal protection of software and takes stock of the types of software contracts and the nature of licences that are generally entered into by the parties.

Keywords: Software, copyright, computer programme, contract law, fair use

The software industry is one of the fastest growing industries since the last quarter of a century. It is a low-cost, intellect-intensive industry, with low barriers to entry. Technological developments have made the intellectual property (IP) protection of computer programmes and those machines and processes that utilize them an important and also a controversial issue.

Software¹ has a market value. With the Internet, software is deliverable through the Net anywhere in the world. Whereas in the past, software were often sold as an integral part of the computer system, today, software products are commonly marketed, sold or licensed, in the form of computer readable media, for example, diskettes and CD-ROMs or directly over the Internet. They are commercialized separately from the computer hardware. While incorporated in a floppy disc, hard disc of a computer or a CD-ROM, the item referred to as software is the series of commands that operates the computer. Though the floppy disc, the CD-ROM and the hard disc are each tangible commodities, which could be bought and sold, the software embedded in these media are intangible and

fall into a very different category.² However, due to its nature, software cannot be treated on the same footing as other traditional goods. When an item of software is sold, the owner of the software does not complete a sale in the traditional sense. Instead, he assigns or licenses some of his rights in the software in favour of the purchaser. The rights assigned would be very specific in their scope, indicating clearly to the purchaser the actions that he/she is permitted to perform in relation to the software.

Computer software, like biotechnology, is subject to fierce competition with a shorter life cycle and can be easily copied. Because of its nature, the owner will have two problems: (i) economic, i.e., others can access it without payment; and (ii) competition, i.e., competitors can make competing products very quickly. Apart from safeguarding the economic interests of the owner, the protection of software through an appropriate IPR mechanism is considered necessary to encourage creativity, innovation and investment. Because software may be copied effectively at no cost, some means of restricting the free copying and redistribution of software work is necessary to preserve an investment in a software product through an appropriate system.

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The study here examines the Indian law on legal protection of software and takes stock of the types of software contracts and the nature of licences that are generally entered into by parties.

Protection of Software under IP Laws

Presently, there are two principal modes of protection of software - copyright and patents prevalent in most of the countries. In highly sophisticated technologies, trade secrets are also allowed. Copyright is the most common means to protect computer programmes because writing of a code is similar to any type of literary work. In many developed jurisdictions, software patents are increasingly being granted. While protection through patents is the strongest form of protection, the criteria required to qualify for patent protection are relatively stringent. Conversely, while the criterion for the grant of copyright protection is significantly less stringent, the protection available through copyright is significantly less. Computer programmes are susceptible to copyright infringement and modern technology facilitates not only piracy of computer programmes, but also easy copying of the entire programme code.³ Inventions in computer hardware, equipment, functional components, devices, etc. are generally protected through patents, in which case the general criteria of patentability are being applied, viz., novelty, non-obviousness and usefulness. However, protection of computer software, which is normally a mathematical formula or algorithm, falls in a separate category.

There are important reasons for choosing copyright protection for computer software. First of all, computer programmes are basically writings, and, under Article 2(1) of the Berne Convention, the purpose for which writings are created is irrelevant from the viewpoint of their qualifying as literary works, if they are original intellectual creations. Copyright protects the expression (form) of an idea and not the idea itself. It cannot be used to protect a procedure, process, system, method of operation, concept, principle or discovery. Secondly, copyright subsists in original works that are capable of being reproduced from a fixed medium. Article 10(1) of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) provides copyright protection to computer programmes.⁴

Computer programme as defined in the amended Copyright Act⁵, means a set of instructions expressed in words, codes, schemes or in any other form,

including a machine-readable medium capable of causing a computer to perform a particular task or to achieve a particular result. The words 'schemes or in any other form' would seem to indicate that the source code and object code of a computer programme are entitled to copyright protection. The source code and object code reflect the author's creativity in devising and choosing the specific programme instructions, arranging the order of commands, etc., and represent author's individual approach towards using the computer's capabilities to accomplish the subject task. The concept or idea of algorithms in the form of flow chart or other logical flow diagram frequently used in computer programming is not capable of copyright protection. On the other hand, a patent will not be granted merely for an abstract idea, such as a mathematical theorem or algorithm. Almost in all jurisdictions, patent laws create exception in respect of scientific discoveries, laws of nature, algorithms and mathematical formulae. However, computer programmes represent a form of applied mathematics with unprecedented innovative qualities and with the widespread use of computers, the limits of such exceptions are being tested with time and are increasingly being pushed for patent protection in many countries.

IP Protection of Software in India

In India, the growth of software and service-related industry has been a phenomenon since the 1990s, which has registered a consistent compounded annual growth of software exports above 50 per cent. Within the global sourcing industry, India has been able to increase its market share from 51 per cent in 2009 to 58 per cent in 2011 (ref. 6). The high growth rate is attributable to the service portion, virtually making the industry as 'software services export industry'. India's market share in global packaged software so far has been as low as 0.5 percent compared to 23.1 percent in customized software. To keep its edge in the software sector globally, the Government of India formulated the Indian IT Action Plan in May 1995, and formed the National Task Force on Information Technology and Software Development in May 1998 with the mandate to formulate the National IT Policy.^{6,7} IP laws have also been suitably amended. However, there is no specific law dealing exclusively with the computer software. Software is protectable under the copyright and patents laws and can also be protected through trade secrets. But despite the legal protection, the jurisprudence on software protection is

not well developed in the country, and in most of the cases, the courts follow the American or British judicial approach. The Information Technology Act 2000 (later amended in 2008) accords legal recognition to digital signatures, electronics records and the framework for the prevention of computer crimes, but does not deal with IP protection to computer software.

Software Protection under the Copyright Regime

Under the Copyright Act, 1957, computer programmes are considered 'literary works' [Section 2(o)]. 'Literary work' covers work, which is expressed in print or writing irrespective of the question of its literary merit or quality. It must be expressed in some material form, i.e., writing or print or in some form of notation or symbols, which means in a form capable of either visually or audibly recreating the representation of the original work. Although the Act defines a computer programme⁸, it does not differentiate between source code and object code and they are covered under the Act as the literal elements of computer programme. In addition, copyright law also protects the appropriate non-literal elements of computer programmes, i.e., their overall structure or organization. Computer software includes many items like the programme manuals and papers, computer printouts, punch cards containing information in a particular notation, magnetic tapes, discs required for operation of computers or any perforated media or information storage device. Magnetic tapes and discs, including floppy disc containing information recorded by means of electronic impulses (as a form of writing in notation) may be considered as databases and are forms of literary work by definition. But the concept or idea of algorithms, frequently used in computer programming is not capable of copyright protection. However, programmes devised for operating computers are accepted to be within the ambit of artistic and literary work and thus protectable.⁹

Computer databases are protectable as literary work¹⁰ even when they only involve 'sweat-of-the-brow' and no creativity or selection skills.¹¹ This is in contrast to US approach, as laid down in the *Fiest v Rural Telephone*,¹² where the US Supreme Court excluded the protection of white pages of a telephone directory on the ground that copyright law only protects works involving creativity, judgement or skill but not labour. Further, programmes that are designed

for operating computers are generally accepted as within the ambit of artistic and literary work. To qualify for protection as a 'literary work', however, a programme should be original.

The Indian courts in numerous cases have attributed the same meaning to 'originality' as under British law.¹³ Originality for the purpose of copyright law relates to the expression of thought, not originality of ideas; and in the case of literary work, with the expression of thought in print or writing (in a concrete form). The degree of originality required for copyright protection is minimal; the emphasis is more on the labour, skill, judgement and capital expended in producing the work. To acquire a copyright, no formalities are required. It can be registered with the copyright office, but it is not mandatory. In the case of computer programmes, the law does not require the disclosure of source code and copyright for software can be registered without fully revealing the source code.

Ownership of Copyright

The author of a work is the first owner of the copyright as provided under the Act (Section 17). However, in the cases of employer-employee relationship, if a work is made in the course of employment under a contract of service or apprenticeship, the employer shall be the first owner of the copyright in the absence of any agreement to the contrary.¹⁴ These rules relating to employer-employee relationship in a copyright work are applicable, *mutatis mutandis*, to computer programmes as well.

The owner of the copyright has the exclusive right to reproduce and distribute his work and to make derivative works out of that. Any unlicensed storage, reproduction, issuance of copies or adaptation of an item of copyrighted software would constitute an infringement of software under the provisions of Indian copyright law. Furthermore, if any person other than the owner of the copyright or licensee sells or hires the programme to any other person, the former is guilty of infringing the copyright in the programme and it matters little whether such a sale is in respect of a programme that has on an earlier occasion been sold by the owner of the copyright or not.

Scope of Protection

Despite computer programmes being recognized in the Copyright Act as a literary work, its scope has

remained largely untested by the courts so far. Nevertheless, the scope of protection is closely linked to the issue of infringement. Though the Act protects the literal aspect of the computer programme, it is not yet settled as to what actually constitutes the literal part of a programme. There could be non-literal elements of a computer software that could be infringed. The copying of programme design and structure can also result in copyright infringement. This form of infringement has its origin in infringement of other works, particularly plays and stories, where courts have expressly stated that copyright protection does not extend only to the words.¹⁵ The question in computer software cases has been with respect to the limits of substantial copying, and as to what portions of the programme fall within the scope of copyright protection.¹⁶ This issue has links to the jurisprudence underlying copyright law itself – in particular, the ‘idea-expression’ dichotomy. Article 9(2) of the TRIPS Agreement provides that ‘copyright protection shall extend to expressions and not to ideas, procedures, methods of operation or mathematical concepts as such.’ The Copyright Act does not recognize the idea-expression dichotomy in the protection of copyright as such. In *R G Anand v Delux Films*,¹³ the Supreme Court, apart from ‘look and feel’ test, also went into the ‘abstraction test’ as laid down in the US in *Nichols v Universal Pictures*¹⁷ by identifying the generality in the theme in the script of the play and the film. The Court found no violation of copyright by the defendant, and concluded that there was nothing to show that the similarities in the defendant’s work were the result of copying, but the result of the common theme of both the works.¹⁸ In subsequent cases also, the courts in India followed this approach to the hilt, without adding any further clarification.¹⁹

No precise tests have been laid down as to what portions should be accorded protection and how much protection is appropriate. These are important aspects to decide in giving protection to computer programmes, by separating the idea from its expression. In any case, such a distinction between protected ‘expression’ and protected ‘detailed ideas’ should in practical terms make little difference. The ‘look and feel’ approach seems to be the predominant test for copyright cases. The basic aim of such an approach is to look at the work as a whole, and see if it has been infringed or infringes. The ‘abstraction test’, as adopted in *Computer Associates v Altai* in the

United States has not been followed in India in any case.²⁰ There, the court evolved a three-stage test, commonly known as the ‘abstraction-filtration-comparison’ (AFC) test to come to the conclusion of infringement of copyright. This dichotomy, however, is of doubtful application in cases relating to design and structure (non-literal elements) of a computer programme. The application of the ‘look and feel’ test has a limited application in software. In software, the need has been felt to protect the idea in producing a particular visual display (non-literal part) as this may be of more importance than its expression. The development of a similar product using a different environment, platform, compilers including decompilation/reverse engineering is also an issue of concern.²¹ Indeed it seems there is, in practical terms, no difference between ideas and expressions and general ideas and detailed ideas.²² The protection accorded to compilation in copyright law can also be used to protect the computer programme as a whole, in which the ‘abstraction test’ can be used which is particularly suited to computer programmes. As the nature of the work in this case is highly technical, it is not possible to simply use the test of an ordinary spectator or viewer.

In software, copyright laws protect everything except (1) when the expression is an industry standard, such as the Microsoft command structure starting with file, edit, window, help at the top of most software programs; (2) if the expression is functional or necessary to accomplish a functional task such as compatibility. Thus icons *per se* are not protectable. Source code and object code can be protected, so long the code is not an industry standard or necessary to accomplish functional task. Object code and source code are the literal portions of the program and protectable under the Copyright Act. However, in software, the protection of idea related to visual display of a programme can be of more importance than its expression. These are strictly speaking the non-literal parts of the programme, but are protectable as a part of the overall structure or organization of the computer programme.

Author’s Rights

The Copyright Act protects the author’s economic and moral rights in the copyrighted work as stated in Sections 14 and 57 respectively, including the rights in computer programmes. In the case of computer programmes, the copyright owner is entitled to

reproduce the work, issue copies of the work to the public, make any cinematographic film or sound recording in respect of the work, make any translation or adaptation of the work, apart from the right 'to sell or give on commercial rental or offer for sale or for commercial rental any copy of the computer programme.' Such commercial rental does not apply in respect of computer programmes where the computer programme itself is not the essential object of the rental. This provision on rental rights is in line with Article 11 of the TRIPS Agreement and was added in the Act in 1999. Even though the TRIPS Agreement does not specifically protect the moral rights, these rights are protected under the Copyright Act (Section 57).

The Act provides the 'fair use' and reverse engineering exemptions to owner's rights as in the case of 'literary work' (Section 52). In relation to computer programmes, the following acts are not considered as infringement of copyright:²³ '(aa) the making of copies or adaptation of a computer programme by the lawful possessor of a copy of such computer programme, from such copy – (i) in order to utilize the computer programme for the purpose for which it was supplied,²⁴ or (ii) to make back-up copies purely as a temporary protection against loss, destruction or damage in order only to utilize the computer programme for the purpose for which it was supplied.' Reverse engineering is permitted in Section 52(ab) – 52(ad). It is important to note that reverse engineering in many cases, particularly in software, is a developmental need, and which would not be possible under patent regime.

Licence Use Rights

The owner of a copyright has the right to assign or grant licence in respect of his copyrighted existing or future work. The agreement for the same needs to be in writing to be valid. It shall specify the duration, territorial extent, royalty, revision, extension and termination of the assignment/licence. The assignment usually provides for possession of the software for a specific period of time. At the end of the period of assignment, all rights in the work/software return to the owner, unless the assignment is renewed (Section 30-A). The terms of the licence are governed by the mutually agreed terms between the parties. However, the author's special rights (moral rights) can be exercised even after the assignment of the copyright.²⁵ The question, however, does arise whether a licence agreement can take away

the 'fair use' rights from the licensee. Section 52 of the Act is silent on this point, though, as per Section 57, moral rights cannot be taken away by way of a licence agreement.

Software Protection under Patent Law

Protection of software through copyright is a limited option. The copyright law does not protect an idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, or embodied in an otherwise copyrightable work. Thus, while the expression of a method of operation in a computer code is copyrightable, the underlying method of operation and principles of a computer programme cannot be protected by copyright. Functional aspects of computer programmes are excluded from copying. Further, copying for reverse engineering is a 'fair use', so also the reverse engineering of trade secrets is permissible.

A patent, on the other hand, provides a more secure protection than the copyright or trade secrets, wherein the protection is determined by the scope of the patent and not how the competitor developed the product. By way of a patent, the precise boundary of the patented software is known due to the very nature of the 'claims' laid down by the patentee in the patent document. Patents can be used to protect the ideas in a software; to protect functional aspects of the software; and can be enforced against anyone who implements the patented feature-whether copied, reverse engineered or developed independently.

But for patent protection, it has first to be settled whether computer software is merely an algorithm (generally non-patentable) or a technical invention, entitled to protection. The term 'technical', however, needs a definition and interpretation. It has also to be investigated how this requirement blends with other conditions for patentability, i.e., the invention should be new, non-obvious and industrially applicable (useful). A patent would not be granted for an abstract idea, viz., mathematical formula, algorithm etc., which is incapable of practical application, but where an idea can be given practical applicability as an invention, it can be protected as a patent. As computer software comprise mainly of mathematical algorithms, the requirement of 'technical contribution' or the interpretation of the word 'invention' to which 'technical' may be imminent, needs to be clarified. Another difficulty is related to the requirement of disclosure to the public,

particularly in view of the relative difficulty of detecting misappropriations in a computer programme.

Article 27.1 of the TRIPS Agreement provides that 'patents shall be available for any inventions, whether products or processes, in all fields of technology, provided they are new, involve an inventive step and are capable of industrial application.'²⁶ Though this provision can be stretched for providing patent protection to computer programmes, unlike Article 10 of the TRIPS, there is no explicit provision mandating Members to grant patent protection to computer software. Hence, the countries are free to determine the level of protection to be afforded to software related inventions within their respective jurisdiction. As they contain mainly algorithms, the tangible aspect as a product is under severe doubt for patent protection.

The Patents Act, 1970, before its revision in 2002 and 2005, did not explicitly exclude the patenting in computer software. An invention to be patentable, under Section 2(1)(j), only had to be new, useful, and resulting in 'non-living' and 'tangible things.' An invention was defined as any new and useful '(i) art, process, method or manner of manufacture; (ii) machine, apparatus or other article; (iii) substance produced by manufacture, and included any new and useful improvement of any of them and an alleged invention.' The Act did not specifically mention computer software. But going by the definition of 'invention', software as such in the form of a mathematical algorithm could not be patented, as it did not result into something tangible. But software combined with a machine or computer, under its influence becomes novel machine or computer and becomes patentable. For that purpose, the invention has to fulfill the eligibility requirement of patentability, i.e., it should be a new product or process involving an inventive step and capable of industrial application (Section 2(1)(j) of the Patents Act). Thus, under the pre-revised Act, a software programme on its own was not eligible for protection without hardware, but the embedded system as a part of hardware was entitled to a patent.

Under the pre-revised Act, a few software related patents were granted on the basis of being a new idea and technology and not on software as such.²⁷ The Patents (Amendment) Act, 2002 explicitly excluded computer programmes from patentability. Under Section 3(k) of the current Act, 'a mathematical or

business method or a computer programme *per se* or algorithms' are non-patentable. Patent applications, with computer programme as a subject matter, are first examined as to whether they are mathematical methods, business methods, or algorithms. If the subject matter of an application does not fall under any of these categories, then, it is examined to decide whether it is a computer programme *per se*, which is again not patentable. But when the software transcends this *per se* status, it becomes patentable. Accordingly, an invention may be patented with software forming a component of the invention. Claims directed at 'computer programme products' are computer programmes *per se* stored in a computer readable medium and as such are not allowable. Even if the claims, *inter alia*, contain a subject matter which is not a computer programme, it is examined whether such subject matter is sufficiently disclosed in the specification and forms an essential part of the invention. If the subject matter of a patent application is not found excluded under any of these grounds, it is then examined with respect to other criteria of patentability.²⁸ In other words, a patent application having claims directed to software programme/algorithm with computer instructions cannot be claimed as an invention but if a device/apparatus/system by implementing the software/algorithm solves a technical problem then that particular device/apparatus/system is a patentable invention. To avoid application of Section 3(k), in the claims, hardware components must be shown to form the essential part of the invention and some form of inter-dependence should be shown between the software and hardware components. Exclusively algorithm-based functions should be avoided.

The reason for not considering software as patentable subject matter is to avoid duality of protection available to software. But subject matter of copyright can be only the literal presentation of software which includes coding, decoding or algorithm form; while it is their algorithms form that the Patents Act does not consider as patentable subject matter.

The provision on computer software in the amended Patents Act in India is akin to Section 52 of the European Patent Convention (EPC), but there are no corresponding guidelines on computer related inventions by the Indian Patent Office, unlike the EPO (1985), USPTO (1996) and JPO (1997). The amended Patents Act makes computer programmes

per se unpatentable, but in the absence of any official examination guidelines, except the Patent Manual (legally non-binding) with very brief and vague interpretation of Section 3(k) and without any explanation/examples of what is patentable; it needs judicial exposition to provide the necessary input on what is and what is not software programme *per se*. Because of lack of patent examiners, case law, and database on prior art on software patenting, the growth in software patenting is hampered. Nevertheless, on the lines of EPC, there may be guidelines on whether software have a 'technical effect' thus deserving patent protection so that software patents do not get restricted only to embedded software. For that, 'technical effect' would require a thorough explanation.

As in copyright, the Patent Act allows assignment/licence or the creation of any other interest in a patent by an agreement between the parties, which should be in writing, specifying the terms and conditions governing their rights and obligations. The document containing the agreement should be registered with the Controller of Patents within six months of the execution of the document (Section 68, Patents Act).

Protection as Trade Secrets

Trade secrets in software could include its idea, structure or design specifications. They can sometimes be used to protect functional aspects of software. This approach depends on the nature of the software and how it is distributed. For example, modern compiler technology has generally outpaced decompiler technology, so that often reverse engineering a compiled object code is more difficult than developing a product from scratch. Software distributed only as object code can be partly protected as a trade secret if the source code is kept confidential.

But trade secrets as a mode of protection have certain limitations. The owner has no recourse against parties who are able to reverse engineer the secret from publicly available information. Codes when written in interpreted languages or Java byte codes, is easy to reverse engineer, and not well suited to trade secrecy protection. In fact, any technology, like software technology, that is easy to copy, is not fit for protection by trade secrets. Even where the software licence contains a stipulation that the licensee shall not disclose any confidential information relating to the licensed software,²⁹ that may not prevent third party to access it.

In India, presently, there is no specific legislation to protect trade secrets.³⁰ However, common law remedies are available under the contract and tort law. Contractual protection of trade secrets is limited to the parties to the contract and has no effect against third parties that act in good faith. Parties standing in contractual, quasi-contractual or fiduciary relationship, with varied forms of contract, such as non-competition or non-disclosure agreements are covered under Section 27 of the Contract Act, 1872. Regulations that limit contractual restrictions on a licensee's use of know-how once it becomes publicly known, or after the expiry of reasonable time once the licensing contract comes to an end are defensible. Similar is the position with respect to shrink-wrap licences that impede purchasers from reverse-engineering mass-produced, publicly distributed product. The trade secret protection is designed to guarantee the licensor's rights to its technology. But in trade secret and know-how licences, the licensor and licensee can become potential rivals. In order to ward off such an eventuality, licensing agreements contain restrictive clauses, which make them subject to the scrutiny of the courts. If there are confidentiality or non-compete clauses, then the licensee is bound by those terms.

Software Contracts

Software contracts, like many other transactions, are governed by the common law principles as embodied in the Indian Contract Act. Contracts can be in the nature of sale or assignment/licence. If the computer software is considered as a 'good', the Sale of Goods Act, 1930 will have relevance in the formation and execution of the sale contract. Section 2 (7) of the Sale of Goods Act defines 'good' as 'every kind of movable property other than actionable claims and money, and includes stock and shares, growing crops, grass....' This definition of 'goods' includes all types of movable properties, whether tangible or intangible.

However, the information content of the software, whether tangible or intangible, is of indeterminate nature, which has made the issue very debatable. In *Tata Consultancy Services v State of Andhra Pradesh*, the Supreme Court considered computer software as 'goods' and stated that notwithstanding the fact that computer software is intellectual property, whether it is conveyed in diskettes, floppy, magnetic tapes or CD ROMs, whether canned (shrink-wrapped) or uncanned (customized), whether it comes as part of

the computer or independently, whether it is branded or unbranded, tangible or intangible; is a commodity capable of being transmitted, transferred, delivered, stored, processed, etc., and therefore, as a 'good' liable to sales tax. The Court stated that, 'it would become goods provided it has the attributes thereof having regard to (a) its utility; (b) capable of being bought and sold; and (c) capable of being transmitted, transferred, delivered, stored and possessed. If a software whether customized or non-customized satisfies these attributes, the same would be goods.'³¹ Citing the decision of the US court in *Advent Systems Ltd v Unisys Corporation*,³² the Court held that 'a computer program may be copyrightable as intellectual property does not alter the fact that once in the form of a floppy disc or other medium, the program is tangible, movable and available in the market place. The fact that some programs may be tailored for specific purposes need not alter their status as 'goods'....In all such cases, the intellectual property has been incorporated on a media for purposes of transfer...The software and the media cannot be split up.'³¹

Labelling computer software as 'goods' would make them liable under different tax laws, viz. central excise duty³³, customs duty on imports³⁴, and royalty paid by the assessee for using the trademark of another person.³⁵ Once the software transactions are labelled as sale of goods or services, other laws related to goods will also be operative, viz., the Consumer Protection Act, 1986, the conditions and warranties, as contained in the Sale of Goods Act (Sections 11-17).

Licence Agreement

Even though nothing can stop the owner of IP in a software from selling, because of the nature and digital format necessities that make copying easy, certain restrictions are imperative, which can be met through a licence, that can also protect trade secrets in software easily. This has prompted software owners to structure their distribution transactions as licences instead of sale,³⁶ which are also governed by IP laws. Licences involve a substantial retention of rights and greater ability to control the use of software by the copyright owner. Licence may have provisions relating to the person who may use the programme, warranty, limitation of liability, distribution of the software, etc., as is evident in mass-market licences.³⁷ It may contain provisions related to upgrading the programme, access and Internet clauses, development

and support contracts. As a result, proprietary software when distributed off-the-shelf almost universally reserves all the rights to the owner except to run the software on the purchaser's computer. Internationally also, judicial acceptance of software licences has become usual even though some of the licence terms bespeak of a sale.³⁸

Sale of off-the-shelf software may be easily termed as sale but in such a 'buying', the title to the box, containing disk, manual etc., may pass to the buyer, but the title to IP in the software does not. Instead, the purchaser obtains a licence to use the software which, in fact, is the main purpose of the contract. But a software contract may be a licence of both — the physical carrier and the IP contained therein. In such a case, the ability of the licensee to transfer the copy of the software to a third party is restricted. Similarly, right to rental, lease, lending or similar act is granted to the owner of copyright in a software (Section 14(b)(ii), Copyright Act). Therefore, the licensee unless specifically authorized, cannot rent or lease the software for any direct or indirect profit.³⁹ Under the Indian contract law, incidents of contract are governed by the place where the contract is made.⁴⁰ This results into conflict of laws of different states on software contracts, particularly where they are not outright sales and the buyer buys off the shelf (Section 9, Contract Act).

In technical-support contracts, which are mostly provided by non-shrink-wrap products, the terms can be negotiated by the parties. Generally licensing agreements followed in India in the area of computer software are in the standard-form with foreign right-holder where the terms of the standard agreement, mainly in the form of shrink-wrap agreements, govern all aspects, including the limitations on the use rights of the licensee. Some of them are contracted through the Internet. Apart from per-use licences, per-workstation licences, concurrent licences, the much talked about licences are 'shrink-wrap' and 'click-wrap' or 'browse-wrap', which are also the mass-market licences, distributed in the retail outlets in the market. Both click-wrap and browse-wrap licences are designed for Internet retails and hence are Internet contracts. The typical 'shrink-wrap' agreement is a single piece of paper describing the licence terms, contained inside the box and wrapped in cello-phane or transparent plastic along with the computer software installation diskettes or the owner's manual. End users will be bound and will be

considered to have agreed with the licence if they tear open the package or, in the event that the licence is not shrink-wrapped, if they use the software.³⁷ Shrink-wrap agreements do not follow the normal practice of an agreement between the parties, where the terms of an agreement are negotiated between the parties. In the absence of licence terms, circumstantial evidence surrounding the transaction is taken into account.²²

In these licences, software developers or information providers do not receive a signed agreement from the user; instead they rely on the customer's manifestation of assent via the Internet. Before agreeing to the terms of the licence, the user is generally asked to review the terms of the agreement and indicate the assent by clicking on the button with a mouse at the end of the licence. The buttons provided in these agreements include buttons on 'I agree' and 'I decline'. The 'I agree' or 'OK' button constitutes agreement to the click-wrap licence agreement. These agreements contain typical clauses on anti-reuse, anti-reverse-engineering and limited copying provision. Sometimes they may have clauses disclaiming of warranties and liabilities. It is doubtful whether the purchaser will have the right to decline the terms of the agreement by returning the software, where once the purchaser has clicked the 'OK' button after reading the terms. It may also contain the governing law clauses in case a conflict arises between the parties. There is no bargaining involved in these licences, whose terms are set by the licensor/vendor.

Such agreements are often far-reaching and contravene other applicable laws, viz., as under the Copyright Act, a licence has to be in writing and should not affect the right of the licensee related to 'fair use' clauses by preventing the user from copying, modifying, translating or converting the program for any purpose. On fair uses, these licences conflict with Section 52 (aa) to (ad) of the Copyright Act which allows making of archival copies and adapting the computer programme to ensure that it runs on the user's programme. They also severely limit the rights of the consumers, such as implied conditions and warranties in a contract. These agreements prevent the user from decompiling or disassembling the licensed program for any purpose. As the fair use doctrine indicates the legal requirement, it should not be constrained by the copyright owner in any manner. Since these agreements prevent the licensee from assigning its

interest to a third party, they conflict with the contract law that makes any agreement which restrains anyone from exercising a lawful profession, trade or business of any kind as void (Section 27, Contract Act). This prohibition conflicts with the 'first-sale' doctrine also. In addition to using mass-market licences to get around copyright law, copyright owners attempt to enhance their control over their property via technological restrictions such as encryption technology and transactional design. Thus they create a clear conflict between copyright law and contract law, which have different purposes and objectives. To avoid future controversies, it is necessary that all these aspects must be addressed in the agreement.

Enforceability of Software Contract/Licence

The legality and enforceability of these agreements have not been tested by the Indian courts so far. No software licence has been invalidated so far on the grounds of not being in writing or signed.⁴¹ Where the transaction is in the nature of sale, the parties may determine the terms and conditions of the contract, which will be enforceable, provided it is not against public policy. If the contract is merely for use or a service contract, the Consumer Protection Act will be applicable and the software vendor/developer may be held liable if the product or service is found to be defective/deficient, as the case may be. But it is also notable that click-wrap agreements may involve more than one jurisdiction, which may give rise to conflict of laws issues. Question may also arise regarding the extra-territorial application of the Indian law. Similarly, anti-trust issues may arise, which may be subject to competition law. The legality of shrink-wrap or click-wrap agreements, having restrictions on the development, use, services, may be called in question under the Competition Act, 2002. Whether Internet contracts would be covered by the Information Technology Act, which has very limited application in IP issues, has yet to be seen. So far as the contract law is concerned, the validity of the shrink-wrap/click-wrap agreements cannot be questioned as long as there is a sufficient offer, an acceptance of the offer, as well as a bargained-for exchange or consideration.⁴²

But a licence agreement, in spite of the fact it fulfills all the requirements of a valid contract, may not be enforceable if its stipulations conflict with the law governing it or it is an unconscionable or unreasonable bargain. In computer software, generally it is the tendency of software producers to do away

with the rights and privileges of the user, which are specifically conferred upon the user by copyright and other relevant laws. For example, in case of copyright, can the contract take away the fair uses of the licensee/buyer? Can by an agreement, these rights of the licensee/buyer be contracted out? In these cases the court would step in and may hold such a licence as unenforceable, which may happen in case of proprietary licences that are generally one-sided. As for escrow agreements,⁴³ it may again be stated that normally it will be governed by the contractual provisions.

Open Source Software

Beside proprietary software, there are open source software, that are available to the public in source code form and that do not have licensing restrictions that limit use, modification or redistribution.⁴⁴ The access to source code is subject to compliance with the terms of free/open distribution. Through open sourcing, the community of software developers makes freely available to anyone the source code of software, free for alteration, sharing and distribution.

The software released through open sourcing is under a special class of licence known as GPL (general public licence), encouraging and permitting users to use, redistribute and improve the source code. Licensing restrictions, nevertheless, exist regarding authorship right under copyright.⁴⁵ 'Copyright' term guarantees users the freedom of distribution, to receive the source code and the liberty to modify or alter the software or use it in new free programs. But the integrity of author's source code has to be respected, which means that the open source software must allow for the source code to be readily available and must also make sure that it is distributed as the original base source code and the patch files.

The distinction between open source software and proprietary software lies in the free use of the software and the licensing structure. While the proprietary software is released in the market by concealing the source code, under open sourcing the source code is made available with the object code.⁴⁶ In proprietary software, the consumer is bound by the terms of licence.⁴⁷ The basic principles of open source licensing are: open source licences must permit non-exclusive commercial exploitation of the licensed work, must make available the work's source code, and must permit the creation of derivative works from the work itself.

So far the validity of the open source licences has not been tested by the Indian courts. Once it is decided that they are valid contract with an offer, acceptance and consideration, in the form of the promise of the licensee to abide by the terms and conditions of the licensor, they become enforceable.

Conclusion

Computer software are principally protectable under the copyright law in India, but the scope of protection – literal and non-literal parts of the programme, author's rights, rights of 'fair use' particularly under licence agreements are yet to be precisely defined by the courts. On the other hand, it is eligible for patent protection provided it is not a software *per se*. When can it transcend this *per se* status and becomes eligible for patent protection is not clear in the absence of judicial exposition or any guidelines in this regard. Trade secret protection for software technology is similarly a limited choice in the absence of any clear legislation defining the extent and scope of protection.

Software transactions are either in the nature of sale or licences. Because of its peculiar nature, they are generally carried out through licences, which are generally biased towards the licensor. Without exception, ownership of IPR in software is retained by the licensor. There is also the issue of fair use by the licensee, and in proprietary licences, the use of encryption technology, which may subject them to competition law and conflict of laws. When the transaction is in the nature of sale, it becomes subject to normal conditions and warranties, tax, and product liability regulations. But the law is scattered and vague on these issues, which needs to develop this area more clearly.

References

- 1 Software does not have any universally accepted definition as yet and may cover in its ambit computer programmes, computer databases and may include items produced by the operation of a computer programme such as documents, drawings and other works stored or transmitted electronically or even printed out on paper. 'Computer software' and 'computer programme' have been used interchangeably in Brainbridge David, *Software Licensing*, 2nd edn, (CLT Professional, Publishing Ltd, UK), 1999, p. 6.
- 2 Matthan R, *The Law Relating to Computers and the Internet* (Butterworths, India), 2000, p. 276.
- 3 Karjala Dennis S, Recent United States and international developments in software protection, *European Intellectual Property Review*, 16 (1) (1994) 13.
- 4 Article 10(1) of the TRIPS Agreement reads: 'Computer programs, whether in source or object code, shall be

- protected as literary works under the Berne Convention (1971).' Article 4 of the WIPO Copyright Treaty (WCT) states: 'Computer programs are protected as literary works within the meaning of Article 2 of the Berne Convention. Such protection applies to computer programs, whatever may be the mode or form of their expression.' Thus by referring to the Berne Convention, copyright protection for computer software has been suggested.
- 5 Section 2(ffc) Copyright Act, 1957. Compare it with the definition given in the Draft Model Provision for Legislation in the field of Copyright, adopted by WIPO in October 1998: 'A computer programme is a set of instructions expressed in words, codes, schemes or in any other form which is capable, when incorporated in a machine readable medium, of causing a computer-electronic or similar device having information - processing capabilities to perform or achieve a particular task or result'; *Computer Law*, edited by Chris Reed and John Angel, 5th edn, (Oxford University Press, NY) 2003, p. 195.
 - 6 <http://www.nasscom.in/indian-itbpo-industry> (10 May 2012).
 - 7 Datta Ameet, Dhakad Keshav & Virk Azad, Managing the growth of software, *Managing Intellectual Property*, India Special Focus, April 2004.
 - 8 Section 2(ffc) Copyright Act, 1957, computer programmes became protectable in 1984 under the Copyright Act.
 - 9 Stewart S M, *International Copyright and Neighbouring Rights*, Vol 1 (Butterworths, USA), 1989, p. 57.
 - 10 *Sham Lal Paharia v Gaya Prasad*, AIR 1971 All. 182.
 - 11 *Govindan v Gopalakrishna*, AIR 1955 Mad. 391; *Burlington Home Shopping v Rajnish Chibber*, 61 (1996) Delhi Law Times, 6.
 - 12 *Fiest v Rural Telephone*, 499 US 340, 111 S Ct. 1282, 113 L. Ed 2d 358 (1991).
 - 13 *R G Anand v Delux Films*, AIR 1978 SC 1613.
 - 14 *V T Thomas v Malayala Manorama*, AIR 1988 Ker. 291.
 - 15 Arjun Krishnan, Testing for copyright protection and infringement in non-literal elements of computer programs, *Journal of Intellectual Property Rights*, 10 (1) (2005) 10; *Nicholas v Universal Pictures*, 45 F. 2d 119, at 121.
 - 16 *Microsoft Corporation v Vijay Kaushik and Anr*, 2011 (48) PTC 127 (Del); *Sap Aktiengesellschaft and Anr v Mr Sadiq Pasha Proprietor, Neologik India*, 2011 (46) PTC 335(Del).
 - 17 *Nichols v Universal Pictures*, 45 F. 2d 119. The case, however, was not referred in the judgement.
 - 18 *R G Anand v Delux Films*, AIR 1978 SC 1613, pages 59-62. Compare this approach with the British case, *John Richardson Computers v Flanders* [1993] FSR 497.
 - 19 *Barbara Taylor Bradford v Sahara Media Limited* [2003] 47 SCL 445 (Cal); *Raja Pocket Books v Radha Pocket Books*, 1997 (40) DRJ 791 (Delhi); *Zee Telefilms v Sundial Communications*, 2003 (27) PTC 457 (Bom) also endorsed the same view.
 - 20 *Computer Associates v Altai*, 982 F. 2d 693 (1992).
 - 21 Bainbridge David, *Software Copyright Law*, 4th edn (International Specialized Book Services Inc, USA), 1999.
 - 22 Lai Stanley, *The Copyright Protection of Computer Software in the United Kingdom* (Hart Publishing, UK), 2000, p. 21, 169.
 - 23 Inserted in 1994 and 1997 in Section 52(a).
 - 24 This is on account of the fact that the use of a computer programme necessarily involves temporary copying or reproduction of the programme on the random access memory (RAM) of the computer.
 - 25 *Srimangal & Co v Books (India) Ltd*, AIR 1973 Mad. 49.
 - 26 The Draft Substantive Patent Law Treaty (SPLT) of the WIPO in Article 12 provides that subject matter eligible for protection shall include products and processes, which can be made and used in any field of activity. The wording 'in all fields of technology' is suggested as an alternative. Mere discoveries, abstract ideas as such, scientific and mathematical theories and laws of nature as such are excluded from patent protection.
 - 27 The IBM has been granted two patents: one granted in February 1996 (patent no 176178) for 'System for creating an application programme package' and not to software as such and another in 2001. The Digital Equipment Corporation, USA has been granted two patents on licence management in February 2001 (patent no 185548) and January 2002 (patent no 187072). Under the revised Act, however, there are no instances of patent grants on computer software. In March 2012, out of the 24 applications before the Patent Office under Section 3(k), decisions rendered in 15 cases were of non-grant of patent.
 - 28 Manual of patent office practice and procedure, <http://www.ipindia.nic.in/ipr/patent/manual/main%20link.htm> (2 May 2012).
 - 29 *Zawels v Edutronics Inc*, 520 NW 2d 520 (Minn. App. 1994), where the misuse of confidential information about a computer based teaching system was held to constitute misappropriation of trade secrets; Mittal Raman, *Licensing Intellectual property: Law & Management* (Satyam Law International, India), 2011, p. 499.
 - 30 The draft National Innovation Act, 2008 has provisions on trade secrecy or 'breach of confidence'.
 - 31 *Tata Consultancy Services v State of Andhra Pradesh*, 271 ITR 401 (2004), 418.
 - 32 *Advent Systems Ltd v Unisys Corporation*, 925 F 2d 670 (3rd Cir 1991).
 - 33 *Commissioner of Central Excise v ACER India Ltd*, 137 STC 596 (2004) [SC]; [2001] 4 SCC 593.
 - 34 *Associated Cement Co Ltd v Commissioner of Customs*, 124 STC 59 (2001) [SC]; *State Bank of India v Collector of Customs* [2000] 1 SCC 727, [2000] 1 Scale 72.
 - 35 *35 S P S Jayam and Co* (2004) 137 STC 117 [Mad].
 - 36 Mtima Lateef, Protecting and licensing software: Copyright and common law contract considerations, *The Computer & Internet Lawyer*, 22 (3) (2005) 13.
 - 37 Singsangob Anuya, *Computer Software and Information Licensing in Emerging Markets: The Need for a Viable Legal Framework* (Kluwer Law International, The Netherlands), 2003, p. 21, 68.
 - 38 *Novell Inc v Unicom Sales Inc*, 2004 WL 18391 17 (ND Cal. 2004); *Adobe Systems Inc v One Stop Micro Inc*, 84 F. Supp. 2d 1086 (ND Cal. 2000).
 - 39 Mittal Raman, *Licensing Intellectual property: Law & Management* (Satyam Law International, India), 2011, pp 505-507.
 - 40 *Shankar v Manaklal*, 42 Bom. LR 873.
 - 41 The Copyright (Amendment) Bill, 2010 seeks to do away with the requirement of signature for the purpose of constituting a valid licence. The Bill has been passed on 17 May 2012 by the Parliament.
 - 42 It may be expected that the courts in India would follow the American precedent of *Pro CD v Zeidenburg*, 39 USPQ 2d, where such a licence has been held to be a valid contract.

- 43 An escrow agreement is one in which the source code or any other property is placed in the hands of an independent third party for safe keeping, normally for the licensee's benefit.
- 44 Open-source software: What is it? Why use it? And what's gotten into netscape? <http://www.tux.org/~niemi/opensource/customer-case.html> (2 May 2012).
- 45 <http://www.gnu.org/licenses/gpl> (12 May 2012).
- 46 Potter Shawn W, Opening up to open source, *Richmond Journal of Law & Technology*, 6 (5) (2000) 24.
- 47 St Laurent Andrew M, *Understanding Open Source and Free Software Licensing*, 1st edn (O'Reilly Media Inc, USA), 2004, p. 5.