Dealing ‘Fairly’ with Software in India*

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Section 52(1)(ab) of the Copyright Act, 1957 deals with the fair use exception in case of computer software. This paper attempts to analyse the scope of this exception when applied to software as a work of art in India. The right to decompile, as found in different countries and enactments, is compared with the Indian position. It is argued that this right must be given very strictly. The Indian position on the right to decompile is very nebulous. The statutory guidelines are insufficient and poorly drafted, leaving the limits of this right uncertain. Allowing decompilation without placing distinct restrictions on how to use such extracted information, completely outweights the reasoning of fair use doctrine. Inadequate guidelines as to the extent to which a program may be reverse engineered and who is allowed to reverse engineer, leaves loopholes in the protection of software copyright, allowing circumvention of copyright and the defence of fair use while commercially exploiting competing interoperable programs. The paper concludes by stating that with the growing rate of peer-to-peer sharing in India, this exception, unless narrowed down in its scope, may go beyond mere fair use and may be used to circumvent liability for infringement of copyrighted software.

Keywords: Fair use, software, decompilation, copyright

Fair Use: Origin and Justification

Copyright is the term used for the bundle of exclusive rights which laws of most countries confer on authors to exploit the original works which they create. However, there exists a legitimate public interest in the creation of new, derivative literary works. Fair use is a privilege to persons other than owner of the copyright to use the work in a reasonable manner, without owner’s consent. The scope of doctrine of fair use thus offers a means of balancing the exclusive right of a copyright holder with public interest in dissemination of information in areas of universal concern. It allows use of copyrighted literary work for purposes such as criticism, review, comment, news reporting, teaching, scholarship and research. Its ultimate test is ‘whether the copyright law’s goal of encouraging originality would be better served by allowing fair use than by preventing it.’ In assessing fairness, the proportion of the work used and the proportion they bear to the new work will be important, as will be whether the usage competes with the copyright owner.

The US has a general fair use doctrine, based on factors including, (a) purpose and character of the use; (b) nature of the work; (c) amount or substantiality of the portion used in relation to the copyrighted work as a whole, and (d) effect of the use upon the potential market for or the value of the work (17 USCA §107). The United Kingdom has a statutory codification of the fair use exception to infringement. The onus of proof with regard to establishing that the dealing was fair lies with the defendant.

In India also, the list of exceptions is exhaustive (Section 52, Copyright Act, 1957), however to that extent, the scope of fair use in literary works is narrow. The Kerala High Court in the case of Civic Chandran v Amini Amma held that the Courts may sometimes look into (1) the degree of substantiality, (2) purpose for which it is taken, and (3) likelihood of competition between the two products. However, it is clarified that if the purpose of reproduction is not the same as the one enumerated in the statute, this defence does not arise. From the above line of argument it can be inferred that likelihood of the new work to be in competition with the old work needs to be seen and the purpose of reproduction must not be beyond the limitations set by the legislation.

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*The views expressed herein are solely those of the author and do not, in any manner, reflect the views and/or opinion of any law firm, organization and/or individual apart from those of the author.
Scope of Fair Use in Other Literary Work

Prior to elaborating upon the scope of fair use doctrine in computer programs, it would be essential to understand the scope of the doctrine in literary and artistic works, in general. As stated earlier, the fair use doctrine is a policy mechanism, which is used to serve the larger interest of public by allowing exchange of ideas and dissemination of knowledge. At the outset, it may be seen that the exceptions in terms of fair use for copyright infringement are exhaustively defined under the Indian copyright law. However, this scope has been widened by use of terms like research, criticism and review while defining acts which would not constitute an infringement of copyright [Section 52(1)(a), Copyright Act, 1957]. In fact, while adjudicating upon the meaning of criticism, Lord Denning held that ‘[A] literary work consists, not only of the literary style, but also of the thoughts underlying it, as expressed in the words. Under the defence of fair dealing both can be criticized. (Mr Vosper) is entitled to criticize not only the literary style, but also the doctrine or philosophy [of Mr Hubbard] as expounded in the books’.  

It would be pertinent to observe here that while for the purpose of research, review and/or criticism, one is allowed to ‘fairly deal’ with the literary, dramatic, musical or artistic work, for the purpose of (i) reporting a judicial proceeding, or (ii) a work prepared by the Secretariat of a Legislature, or (iii) teachers and pupils in the course of instruction, or (iv) newspapers, magazines, or (v) research or private study, one is allowed ‘reproduction’ of the literary, dramatic, musical or artistic work. It may be argued that the reason for allowing reproduction of the copyrighted literary, dramatic, musical or artistic works in situations as illustrated above is that the originality of the author’s work is required to be studied and appreciated in such situations. While researching, reviewing and/or critiquing a work, the critique’s interpretation of an author’s work comes to the fore, and as a result a critique is only given a limited playground to toy with.

While the Indian law allows reproduction of a literary work for the purposes of criticism, the English courts are a little more cautious in giving this near total blanket licence. It has been held that while ‘[a] liberal view had to be taken of the expressions criticism or review and reporting current events, [h]owever, the nearer the user was to the original material, less likely was there a chance of the user succeeding in his defence of fair dealing.’ The English courts have further gone on to explain that while reporting a current event, ‘motives of the user were relevant when considering whether the dealing was fair.’ This is in contrast with Indian copyright law, where the motives of a critic, reviewer or reporter do not play a role in determining whether the dealing is fair or not. In some cases involving literary works, the Indian courts have looked at the substantiality of the prior work used and the purposes for which such prior work is used, rather than the intention of a subsequent user.

It may thus be said that while adjudicating upon the scope of dealing fairly with literary, artistic, musical and dramatic works, the Indian courts tend to look at the degree of substantiality between the two works, the quantity of the work that has been borrowed and the purpose of which such work has been borrowed. Software programs, on the other hand, while being treated as literary work under the Indian law, have been dealt with under different sub-sections of Section 52 as compared to the rest of the works.

Computer Programs as Literary Work

Computer programs are treated as literary work in the copyright laws of most jurisdictions. The copyright law of United Kingdom defines literary work as ‘any work other than a dramatic or musical work, which is written, spoken or sung and accordingly includes a computer program’ [Section 3(1)(b)]. Computer program which is capable of causing a computer to perform a particular task or achieve a particular result is included in literary work in India. Article 4 of the WIPO Copyright Treaty, 1996 and Article 10 of the TRIPS Agreement also specifically protect computer programs as literary works. As a result, the exception of fair use which is applicable to literary works also extends by definition, to computer programs. It can be seen that while the scope of this defence in other literary works has been listed quite fairly in India through both the statute and case laws, the same is not the case with respect to computer programs. Even in the United Kingdom, there are not many relevant case laws on the application of the principle of fair use in the context of decompiling computer programs. This essay attempts to analyse whether and to what extent, fair use might provide a defence to an infringement...
action, where a program has been reverse engineered for the purposes of achieving interoperability with other computer programs.

**Concept of Fair Use in Software Programs**

It needs to be analysed as to how fair is reverse engineering of the computer program for the purpose of creating a competing and interoperable program. While the validity of such conduct has been hotly debated, several courts have held that reverse engineering is fair use if needed merely to achieve interoperability with independently created software. It is submitted that while this proposition maybe correct, there are no strict and clear statutory guidelines in India, that demarcate the extent to which decompilation of a software program shall remain fair use.

However, prior to undertaking this analysis regarding the fair use doctrine in terms of interoperable software programs, it is necessary to understand some of the terms and processes which are used in relation to software programs, in order to appreciate further arguments made. Some of these terms are being briefly discussed in the following sections.

**Reverse Engineering: Infringement or Fair Use?**

The concept of software decompilation first requires a general understanding of reverse engineering, and the possibility of infringement through this process. In United States, general reverse engineering has been held a legitimate form of discovery in certain statutes. It includes an exclusive reverse engineering privilege, allowing semiconductor chip designers to study the layout of circuits and incorporate that knowledge into the design of new chips. It also allows the defence industry to inspect and analyse the spare parts it purchases in order to facilitate competition in government contracts. The Supreme Court of United States addressed this principle in *Kewanee Oil v Bicron*. This case involved trade secret protection over synthetic crystals manufacturing. Reverse engineering was defined as ‘a fair and honest means of starting with the known product and working backwards to understand the process which aided in its development or manufacture.’ However, in most cases of software reverse engineering, the creators of a competing product do not have access to the source code of the original product. Instead, they study how the original product operates in order to develop their product.

Here, it is important to note that the most valuable aspects of a computer program reside in the dynamic behavioural impact it achieves by means of functionally determined combinations of sub-programs. Thus, the decision to entrust protection of computer programs to copyright law as literary works, without corresponding prohibition against the copying of unprotected functional components, may boomerang against its proponents. It may be argued that by extending the protection of copyright to a computer program as a whole and not to individual functional components, Indian copyright law has left it open to creative software code – writers to copy the functional components, without violating the copyright provisions. In effect, it endows competitors everywhere who are willing to master lawful techniques of reverse engineering with promising prospects. Indian laws particularly can be manipulated to achieve multiple uses of this ‘information’ extracted, without having infringed any copyright, in the absence of clear provisions on the right to decompile a software program.

**Meaning of Decompilation**

Decompilation may be understood as follows. Manufacturers of toy-train sets produce pieces which can interlink with each other to form train systems and allow additional features to be plugged in. Such joining points should be compatible. Similarly, a computer program and the additional features need to ‘interoperate’. Interoperability is defined as ‘the ability of two or more systems or components to exchange information and to use the information that has been exchanged.’ If manufacturer ‘A’ wishes to make a program which will interoperate with the programs of manufacturer ‘B’, he will have to decompile manufacturer B’s program. Unless authorized, this act of reproduction and translation will infringe manufacturer B’s copyright in the program. Interoperability enters the field of copyright and related rights as a limitation on them. Interoperability allows circumvention, disablement or deletion of technical measures, subject to certain conditions, even though it is a recognized, essential feature for the development of computer techniques and the facilities which can be made available to the public.

**Right to Decompile**

As stated earlier, exceptions to copyright infringement have been enshrined in national legislations. However, according to TRIPS
Agreement and Berne Convention, all exceptions must (a) be confined to certain special cases which (b) do not conflict with the normal exploitation of the work and (c) do not unreasonably prejudice the legitimate interests of the right holders (the Berne three-step test).

The question that needs to be answered here is, whether forcing right owners with valuable copyrights to license their intellectual property rights (IPR) to competitors for such decompilation unreasonably prejudices their legitimate interests? In the light of the Magill case, if courts continue to follow this approach, it could severely impact the IPR. In order to be valuable, this right needs to be provided exclusively to its owners and licensees. Are not such rulings in conflict with the copyright owner’s natural right of exploitation? This kind of merger of antitrust doctrines with IPR only leads to compromising the rights of one of the two parties.

In the IMS case, the copyright in question was an essential input for operating a secondary market. This may be crucial. The person seeking a licence of the copyright must also be intending to offer new products or services not offered by the copyright owner and not merely duplicate those already provided by the owner, or to merely make his products compatible with the copyright owner’s products. However, while this forced licensing of a digital copyright owner’s rights is subject to statutory restraints in Europe, the situation in India is almost a disaster for copyright owners of computer programs. It has been argued that as ‘[U]sers’ needs evolve from traditional modes of communications into newly emerging trends … this evolution, along with the real competitive forces, would bring out new policy problems vis-à-vis identification of the balancing points between the incentive to invest in R&D and rivalry between network and service providers. However, in the aftermath of decisions such as IMS Health, Magill and Microsoft, the Competition Commission seems to have created a strain between the IP based problems and competition law rules.

Scope of Decompiling and Purposes: India, Compared and Impaired

The European Council Directive on the legal protection of computer programs was adopted on 14 May 1991. This Directive conferred a ‘right to decompile’ under Article 6. This right is available in the United Kingdom in almost the identical words of the Directive; however, subject to statutory limitations. In the following sections, the decompilation right granted by the EU Directive, its Indian counterpart and the position in United States and United Kingdom are compared.

What May Be Done?

A program may be decompiled to obtain ‘application programming interfaces’, where they are ‘indispensable to achieve the interoperability with an independently created computer program.’ Access to the program through its interfaces is not protected because interfaces are systems of operation and creating interoperability between systems is fair use. Thus, the reference to ‘indispensable’ is intended to mean that decompilation should be the last, rather than the first resort. Secondly, Article 6(1) of the EC Directive states that only ‘reproduction’ and ‘translation’ of the code is permissible. On the other hand, by allowing ‘any act necessary…’, [as in Section 52(1)(ab)] , the Indian statute unreasonably enlarges the scope of fair use as a defence by not defining ‘permissible acts’ to achieve interoperability. In fact, the law in New Zealand has been amended as recently as in 2008 (ref. 39), wherein Sections 80A to 80D have been added to the existing Copyright Act, 1994 to define decompilation only to mean ‘to convert a computer program expressed in a low level language into a version expressed in a higher level language’ or ‘to copy the program as a necessary incident of converting it into that version’[Section 80A(4)]. Further, the criteria for making a non–infringing decompiled copy of a software program have been very narrowly defined. Not only does the Act express what decompilation means in an exhaustive definition, it sets out conditions when a lawful user of a copy of a computer program expressed in a low level language does not infringe copyright in the program by decompiling it [Section 80A(2)]. In particular, decompiling of a computer program would be an infringement if (i) the lawful user gives the information obtained from decompiling the computer program to any person when it is not necessary to do so for creating an independent program, or (ii) the lawful user uses the information obtained from decompiling the computer program to create a program that is substantially similar in its expression to the program that has been decompiled, or (iii) the lawful user uses the information obtained from decompiling the computer program to do any act that is restricted by copyright [Section 80A(3)(c)]. Such definitions are therefore far more restrictive,
than the open ended doing of ‘any act necessary’ under the Indian law, and far more illustrative about the conditions and actions done pursuant to decompilation of the software program which would constitute infringement.

Who May Decompile?

Further, according to the EU Directive, ‘...acts are to be performed by the licensee …, and these acts should be confined to the parts of the original program which are necessary to achieve interoperability.’ Thus, reproduction and translation are restricted only to licensees and to some parts of the code. In the United Kingdom, this right is further restricted since the decompilation may only be carried out where the information sought by the program user has not been previously made readily available to him. This is in sharp contrast with the Indian law, where ‘any lawful possessor’ may decompile the program and no such limits to the parts of the program that may be decompiled have been prescribed. This clearly would allow any private user to legally decompile a program, and permit such information to be used for the development, production or marketing of a computer program substantially similar in its expression, or for any other act which infringes copyright.

Author’s Right v Fair Use

Finally, since the author’s right of reproduction is involved, Article 6(3) provides that the EU Directive may not be interpreted in a way as to allow its application to be used in a manner which unreasonably prejudices the right holder’s legitimate interests or conflicts with the normal exploitation of the computer program. In India too, the author’s reproduction rights are recognized under Section 14 (ref. 44). However, without a similar explicit safeguard in the Indian law, a further loophole is created, broadening the scope of fair use. This not only allows producing program interfaces, but also makes reproduction of such information in any tangible form, a non-infringing activity. This can be contrasted with Australia, where reverse engineering is not generally permitted unless it incidentally comes within the fair use defence. Fair use has allowed decompilation of computer programs in order to ‘understand techniques’ subject to the explicit qualification that only non-commercial activities be allowed.

Position in the United Kingdom

Statutory limitations aside, the scope of protection for computer programs in actual cases has been a matter of continuing debate in United Kingdom copyright law. In Total Information Processing Systems Limited v Daman Limited, the decision rested on whether the material reproduced by TIPS through reverse engineering amounted to a substantial part of Daman’s program. The judge decided that it did not and adjudged that the two pieces of software bore no similarity to one another in terms of either code or functionality. The same line of argument was followed in John Richardson Computers Ltd v Flanders, a case concerning an infringement action on a computer software. The defendant had worked in the plaintiff company to create a software program. Eventually, the defendant had set-up his own company and created a similar program for an IBM-compatible computer. The defendant stated that he had produced the alleged infringing program without using the plaintiff’s source code. In upholding the infringement action, Ferris J stated that English courts first decide whether the program as a whole is entitled to a copyright and then decide whether any similarity attributable to copying, amounts to taking a substantial part of the first program. In Ibcos Computers Ltd v Barclays Mercantile Highland Finance Ltd also, a former employee of Ibcos Computers developed another program which was fairly similar to an earlier program that he had assisted in making for his former employers. This new software program was however, more user-friendly than the earlier one. Sustaining the infringement action, Jacob J stated that applying the ‘core of protectable expression’ test or the ‘abstraction-filtration-comparison’ test as used in United States merely would complicate things for the English Courts. He stated that while the copyright law cannot protect ideas, it can protect the copying of a detailed idea.

Despite these cases, the position of non-literal copying of software programs remained unclear in the United Kingdom. This position was clarified in the subsequent judgments of Cantor Fitzgerald v Tradition and Navitaire Inc v easyJet Airline Co. From these two judgments, the following is deduced. Firstly, in the context of computer program, there need not be a literal copying of the code. ‘Substantiality’ has to be judged in the light of the skill and labour in coding which went into the piece.
of code alleged to be copied. It is not determined by
whether the system would work with or without the
code, or by the amount of use that the system makes
of the code. Secondly, no copyright protection maybe
accorded where only the functional effects of a
program are in issue. In fact, Justice Pumfrey held
that ‘[T]o emulate the action of a piece of software by
writing another software that may have no internal
similarity but is designed to ‘look and feel’ the same
way is far from uncommon. If the plaintiffs are held
successful, much of such work may amount to
infringement of the original software, even if the
alleged infringer has no access to the source code, or
could not decompile the executable program’. It has
been stated that ‘[B]y refusing to protect the business
logic of Navitaire program, the Judge was signaling
that it is not the place of copyright law to protect the
functionality produced by running code where the
code has itself not been copied.’ Amongst the latest
ruling in the English Courts on the subject of
interoperability is that of SAS Institute Inc v World
Programming Limited, wherein in relation to the
reproduction of a substantial part, the Court referred
to the decision of the Court of Justice of the European
Union in Infopaq, and held that when considering
whether a substantial part of a software has been
reproduced, it is necessary to focus upon what has
been reproduced and to consider whether it expresses
the author’s own intellectual creation.

Thus, it is concluded that the English courts allow
the right to decompile, with the stipulation that the
interoperable or new program should not be
substantially similar to the old one. The Indian law
places no such restrictions on the substantial
similarity of making a new program interoperable with
an old one.

Position in the United States

While the EU Directive sets a high standard to
check circumvention, in the United States, these
standards keep fluctuating. The different Circuits and
the Supreme Court have given several decisions, and
most decisions have followed separate sets of
reasoning and different outcomes.

In Sega v Accolade, the Ninth Circuit held that
Accolade could lawfully engage in decompilation in
order to circumvent the software locking mechanism
used by Sega to gain an understanding of the
unprotected functional elements of the program. The
Court concluded that in the light of public policies
underlying the copyright law, ‘when the person
seeking the understanding has a legitimate reason for
doing so, such disassembly is as a matter of law a fair
use of the copyrighted work.’ The defendant’s
identification of the functional requirements led to an
increase in the number of independently designed
video games which is ‘precisely the growth of
creative expression…that the Copyright Act intends
to promote.’ In Bonito Boats Inc v Thunder Craft
Boats Inc, the Supreme Court regarded reverse
ingineering as ‘an essential part of innovation’, likely
to yield variations on the product that ‘could lead to
significant advances in technology’. Similarly, in
Chamberlain v Skylink, plaintiffs tried to ban
Skylink from producing an interoperable and
competing garage door opener. It was said that the
plaintiffs did not forbid its customers from using
alternative openers and therefore there was no
infringement.

However, in Universal City Studios Inc v
Reimerders, the Federal Circuit held that DeCSS, a
tool for circumventing the DVD encryption scheme,
was prohibited by the Digital Millennium Copyrights
Act’s anti-circumvention provisions. The defendant
argued that DeCSS came under the reverse
ingineering exception by allowing circumvention to
achieve interoperability and that it was an important
tool enabling DVD users to effectuate their fair use
rights. The Court held that the exception only permits
to make the information acquired by such means
available, not the tool itself. Further, the exemption is
limited to circumvention measures whose sole
purpose is interoperability. In Whelan v Jaslow, also,
the Circuit Court of Appeals for the Third Circuit,
upheld infringement when the defendants prepared a
program significantly and structurally similar to that
of the plaintiffs, although in a different programming
language. In the case of Allen-Myland Inc v IBM
Corp, the Court found that the defendant’s activities
constituted copying, not reverse engineering.

The Ambiguity in Indian Copyright Law

India is still at a stage of infancy when it comes to
instances of interoperability of software. However, it
needs to be appreciated that in this age of rapid
technology enhancements, the works that may be
privately copied and modified have increased dramatically. Critics may argue that Section 52(1)(ad) provides some sort of restriction on commercial exploitation and puts a check on circumvention techniques, but a closer perusal of the same will disclose that this section is merely a generalization of Section 52(1)(aa) rather than a limitation on Section 52(1)(ab). This is because ‘adaptation’ or ‘making copies’ of a program is vastly different from decompiling a program to achieve interoperability and then using the information obtained to make substantially similar software. It is this second use that the legislation needs to prohibit. Currently, there is a lack of any Indian judicial precedent on the right to decompile. It remains to be seen how narrowly or broadly the Indian courts shall construe this provision, when faced with an infringement action. Easy access to computers and software programs substantially adds to the ability of individuals to copy digital material, sometimes even object codes. The normal means of exploiting software and other programs is likely to be through their transmissions from the personal computers of the individual consumer. However, there is also no way to check the entry of larger corporations in this business of doing ‘any act necessary..’ to obtain information essential to achieve interoperability. Further, while achieving interoperability may be desirable, without necessary statutory limitations, it would be impossible to know for what use the information so achieved has been put to use.

Conclusion

Despite having strict statutory restrictions on the right to decompile, the courts in the United Kingdom and United States are yet to clearly define the scope of copyright protection in the functional aspects of a computer program. This makes it apparent that the extent of copyright protection for software is a nebulous area. As a result of this, the limitations on reverse engineering and right to decompilation should be extremely strict and narrowly defined. The approach of United States to accord limited protection to the functional aspects of a software program is a favourable one. The reason is that unlike the plot of a literary narrative, the commands and codes of a software are not merely ideas. They are integral to making a computer program achieve a certain result. Thus, the core abstraction, if not the codes and commands, of a program must be protected while allowing it to be decompiled. The Software Directive also lays forth the precise technique in which a program maybe decompiled. It places stringent limitations so that decompilation is done only to achieve interoperability with another program, and only as a last recourse. Further, it provides this right only to licensees, and no one else. Thus, the Indian statute must be amended to include such limitations explicitly. This will bring the Indian copyright law in consonance with the software protection standards of several advanced countries. Also, in an era where software programs are no longer territorial in nature and are crossing boundaries, it makes sense for the copyright law to accord a standard of protection to computer programs that is similar to other countries. Further, the concern for big software copyright owners would be that if the scope of fair use defence in India for computer programs continues in its present form, technology will allow users to harm the copyright owner’s market. This might be done through cumulative effect of individuals accessing interface applications via personal computers, and reproducing them for their commercial gains. Hence, without narrowing down the scope of ‘fair use’ in the Indian law, the good intentions behind allowing this defence could instead deter the very object of copyright protection.

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29 Article 13, TRIPS, 1994 and Article 9(2), Berne Convention, 1971.


32 Case C-418/01, IMS Health GmbH & Co OHG v NDC Helath GmbH & Co KG, in particular the opinion of Advocate General Tizzano, at page 61, 66 and 80 and his conclusion.


36 EU Software Directive was implemented by the Copyright (Computer Programs) Regulation 1992 and the Copyright, Designs and Patents Act, 1998 was amended accordingly to insert Sections 29(4), 50B and 296A.

37 The reasons behind the provisions on decompilation are set out in Recitals 10 to 12, 20 to 24 of the Directive.

38 The ECJ acted to restrain IP rights which involved functional works as in the Magill and IMS Health cases.


40 Article 6(1) and 6(3) of the Software Directive.


42 These are restrictions given in Article 6(2) and 7(1)(c) of the Software Directive.

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