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**Fair Dealing of Computer Programs in India:
Working through the Interoperability Fair Play**

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Outline of the presentation

- Copyright Protection for Computer Programs: The 'enemy' within copyright?
 - Uses that should be covered: Different Rationale
 - Analysis of the nature and scope of fair dealing provisions
 - Fair dealing as an exception to anti-circumvention measures under the draft Copyright (Amendment) Bill
 - Contractual Restraints on Fair dealing
 - TRIPS Compliance: Of conflict or coherence?
 - Conclusions and recommendations
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Copyright Protection for Computer Programs

- The nature of computer programs: primarily utilitarian, but protected as a literary work
 - The legislative history in US and EU suggests the tensions in protecting it under copyright law, but it has now grown as a distinct sub-discipline in copyright systems across the world
 - Copyright protection for computer programs can swathe copyrightable & non-copyrightable expressions within the continuum of ideas, expressions and algorithms
 - Copyright protects only originality in expression. It extends to non-literal elements in a computer program. However, not all non-literal elements are protected expressions
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Copyright Protection for Computer Programs

- What is protected in a computer programme appears to be fairly settled after the AFC test in *Altai*
 - However, copyright law *de facto* covers unprotected elements and interoperability information thus preempt functionality. It is so because computer programs are licensed in object code (is only machine readable). The source code in most cases (except open source) is not distributed
 - Hence copyright law should allow access to what is beyond the scope of copyright and sometimes even within the scope of copyright
 - Interoperability (both vertical and horizontal) is a norm for innovation in software- but this is debatable and can be subject to empirical economic analysis. However, it is by now widely accepted that interoperability is a fundamental to a competitive market framework for software products. This has implications for how we understand fair dealing.
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Copyright Protection for Computer Programs

- It must also be noted that such interoperability information may get additional monopoly through *de-facto* standardisation (by the working of market forces), or by *de-jure* standardisation
 - Hence there can be two legal instruments for allowing access to un-protected elements in a computer program and interoperability information:
 - *Ex-ante* limitations and exceptions under copyright law (Focus of this paper)
 - *Ex-post* treatment under competition law
 - Copyright law should *primarily* address the enemy within itself, as it is the same law that provides for allocation of rights to computer programs
 - Competition law may have to pass a different set of tests, but may also be helpful to bypass *ex ante* exceptions under copyright by requiring mandatory sharing of copyright protected information (*EU Microsoft Judgment 2007*)
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Copyright Protection for Computer Programs

- There are also arguments why competition law should not apply:
 - Kills the incentive of the monopolist and the rivals to invest in essential facilities (interoperability information)- *Trinko* arguments (*US Judgment*)
 - Specific reverse engineering exceptions (and not mandatory sharing) provided for under the copyright law so that the original developer gets the first mover advantage.
 - However, there is a rationale for competition law to step-in if there is indispensability of access to interface information in the light of specific exceptions under copyright law. (E.g. the EU Directive's specific reference to Competition law predates its reverse engineering exceptions)
 - What is the relationship between copyright law (specific law providing exceptions) to competition law (general law) providing for compulsory licensing of such information in the Indian situation?
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Uses that should be covered: Different Rationale and purpose

- Traditional fair use
 - Making of copies for use and back-up
 - Making of multiple copies for personal use
 - Creative use (transformative in nature): Necessarily evolved out of first principles of competition
 - Adaptation
 - Reverse engineering other than decompilation
 - Methods of reverse engineering and its usefulness
 - Decompilation (highly debatable as it may allow access to program's recipe including trade secrets)
 - Error correction, maintenance and research
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Analysis of the nature and scope of fair dealing provisions [Sec. 52 (1) (aa)]

- Section 52(1): *“(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 utilise the computer programme for the purposes for which it was supplied; or*
 - (ii) to make back-up copies purely as a temporary protection against loss, destruction or damage in order only to utilise the computer programme for the purpose for which it was supplied;”*
 - Nature of the provision is a general exception granted to users of computer programs and for the purpose of archival use.
 - Every such use involves full reproduction of the program.
 - restricted to “making of copies” and “adaptation”
 - Clarification needed as to why “adaptation” is included in this exception
 - Creates anomaly as it may involve transformative uses (consider section 2(a), specifically sub clause (iii) and (v) in the context of literary or any work, the term “adaptation” in the computer program context may logically extend to abridgement, rearrangement or alteration.
 - “lawful possessor” is not defined: broad interpretation to include sublicensee possible unless specifically barred by the End User Licensing Agreement (EULA). However, can broad interpretation specifically provided by this clause be subverted?
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Analysis of the nature and scope of fair dealing provisions [Sec. 52 (1) (aa)]

- utilizing the program for the purpose for which it was supplied.
 - EULA can be the reference point as there is no practical guidance in the Act
 - Is decompilation covered?
 - *Vault Corp. v. Quaid Software Ltd* (US): held that section 117 of the US Copyright Act does include the intermediate copying used in the decompilation process as “an essential step in the utilization of the computer program.”
 - A broader meaning to the word “adaptation” may warrant us to consider if “transformative” use by a competitor is covered by this clause.
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Analysis of the nature and scope of fair dealing provisions [Sec. 52 (1) (ab)]

- *(ab) doing of any act necessary to obtain information essential for operating inter-operability of an independently created computer program with other programs by a lawful possessor of a computer program provided that such information is not otherwise readily available;*
 - This provision is specifically in the nature of reverse engineering exception, treated as fair dealing under the Act. Interestingly, the Act does not use the word “decompilation” or “reverse engineering”, but still allows both allegedly infringing and non-infringing methods of reverse engineering
 - The clause allows “doing of any act necessary to obtain information”
 - What is implied by “doing”: Does a programmer still need permission from the copyright owner to incorporate/use such reverse engineered information into his independently created program
 - However, it frustrates the very purpose of providing the exception.
 - If this provision envisages impact on the right of the copyright holder; also compare with other class of fair use exception- it envisages use.
 - All type of reverse engineering acts, including the most contentious ‘decompilation’ method covered
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Analysis of the nature and scope of fair dealing provisions [Sec. 52 (1) (ab)]

- The quantum of copying is not fixed. Since decompilation leads to a version of the source code similar to that contained in the program, decompilation or disassembly of the code of a full program is clearly allowed
 - statement is qualified by the word “necessary”
 - The only clue that can be taken in this regard is from the phrases “provided that such information is not otherwise readily available”
 - Should it mean that the programmer has to try all other methods or other non-infringing ways before resorting to a more contentious method like decompilation?
 - Does it also mean that one particular act has priority over another or it is dependent on the alleged infringer’s justification of necessity at any given point of time?
 - the provision was designed keeping in mind the decompilation prong as the best mode to achieve interoperability.
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Analysis of the nature and scope of fair dealing provisions [Sec. 52 (1) (ab)]

- Scope of “interoperability” is preceded by the word “essential” connoting a rider attached to the interoperability. The Copyright Act does not provide for any definition of interoperability, nor does it provide any test to assess interoperability, but for the use of the word “essential”
 - “interoperability” strikes the essential balance?
 - Decompilation for research included?
 - The clause is also not clear as to the possible purpose of interoperability. Would it include “operating interoperability” for the purpose of targeting interfaces so as to constitute a competitive market replacement for an existing program?
 - Communication from the Commission to the European Parliament of Jan. 18, 1991, PARL. EUR. DOC. SEC (91) 87 FINAL-SYN 183, 5 (1991) clarifies that “decompilation is permitted by Article 6 to the extent necessary to ensure the interoperability of an independently created computer program. Such a program may connect to the program subject to decompilation. Alternatively it may compete with the decompiled program and in such cases will not normally connect to it”
 - Why not decompilation for purposes moving beyond “operating interoperability”? What about unprotected elements in a computer program that may need decompilation?
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Analysis of the nature and scope of fair dealing provisions [Sec. 52 (1) (ab)]

- Can this clause be used when 52(1) (ac) does not provide information about unprotected elements?
 - Future compatibility included?
 - The *Atari* court has held that such forward compatibility was not essential to the present purpose of obtaining compatibility and hence constitutes protected expressions in a program, thus precluded by fair use. Criticism that it may cover functionality not protected under copyright
 - “operating interoperability” is restricted to “other programs”
 - Error fixation may go beyond interoperability- this provision is of no help
 - no updates or maintenance is provided by the copyright owner
 - if the update is available, but not accessible on reasonable grounds
 - The wordings “independently created computer programme” is meant to ensure that “any act” that involves discerning of the information for the purpose of interoperability from a target program is not conducted prior to the existence of an “independently created computer program”
 - Maintenance of paper trial possible
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Analysis of the nature and scope of fair dealing provisions [Sec. 52 (1) (ab)]

- The fair dealing acts allowed under this clause can be carried out only by a “lawful possessor of a computer programme”.
 - Operating interoperability different from other acts- the indispensability argument
 - This requirement may be strictly applied for purposes other than interoperability
 - However, the acts allowed under this section can be performed in the absence of “such information is not otherwise readily available”
 - for decompilation to achieve interoperability, there is no priority set
 - For decompilation beyond interoperability
 - Another interpretation that pops up in this context is whether fair dealing under this section would prevail if such information can be available through a contract with the copyright owner?
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Analysis of the nature and scope of fair dealing provisions [Sec. 52 (1) (ab)]

- The Act envisages no permission by contract as it frustrates fair dealing
 - “readily available”- to mean all type of information that is readily available without entering into any further contract or permission
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Analysis of the nature and scope of fair dealing provisions [Sec. 52 (1) (ac)]

- *(ac) the observation, study or test of functioning of the computer program in order to determine the ideas and principles which underline any elements of the program while performing such acts necessary for the functions for which computer program was supplied;*
 - It is in the nature of allowing certain specific acts of reverse engineering (in contrast to “any act” under the previous clause) for the purpose of program analysis in whole. This is carved out more in the nature of a limited research exception (reverse engineering not involving decompilation or other methods involving intermediate copying) and a broad fair use provision. This provision basically invokes the idea-expression dichotomy to emphasize that unprotected elements in a computer program dictated by lack of originality are not within the protective gear of copyright
 - Balk-box analysis included
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Analysis of the nature and scope of fair dealing provisions [Sec. 52 (1) (ac)]

- The above identified acts are again directed to a broad purpose. It reads: "...in order to determine the ideas and principles which underline any elements of the programme..."
 - The most serious limitation placed in this clause is that all acts are allowed for the purpose of "...while performing such acts necessary for the functions for which the computer programme was supplied".
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Analysis of the nature and scope of fair dealing provisions [Sec. 52 (1) (ad)]

- *(ad) the making of copies or adaptation of the computer program from a personally legally obtained copy for non-commercial personal use;"*
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Fair dealing as an exception to anti-circumvention measures under the draft Copyright (Amendment) Bill

- Section 65A of the draft Amendment Bill provides certain measures for protection of technological measures. Section 65A (1) reads:

“Any person who circumvents an effective technological measure applied for the purpose of protecting any of the rights conferred by this Act, with the intention of infringing such rights, shall be punishable with imprisonment which may extend to two years and shall also be liable to fine”.

However, the Section makes an exception in this regard. It states:

“Nothing in sub-section (1) shall prevent any person from:

- (a) doing anything referred to therein for a purpose not expressly prohibited by this Act:*

Provided that any person facilitating circumvention by another person of a technological measure for such a purpose shall maintain a complete record of such other person including his name, address and all relevant particulars necessary to identify him and the purpose for which he has been facilitated;”

Contractual restrictions on Reverse Engineering

- Prof. Lawrence Lessig in his illustrative book, *'The Future of Ideas'* puts it very succinctly:
 - “Often a copyrighted work is sold or licensed subject to a set of terms imposed in a license. Sometimes the terms imposed by the license are inconsistent with the balance that copyright law aims for. If the balance in copyright law is important, then it should not be undermined by a different kind of law – contract law. While not every license is in conflict with copyright law, many licenses are in conflict with the limited protection copyright law is to give”.
 - EU Directive specifically bars contractual restraints on reverse engineering
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TRIPS Compliance

- Argued that all elements discussed here are compatible
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