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## Technological Measures

Technological measures that currently exist that control copyrighted works include software encryption within dvd technology, proprietary binary only software distributions, including audio/video digital streaming server/client software.

All these technologies incorporate proprietary access methods of delivery which is meant to control the use and/or access that the consumer has to the copyrighted works; these copyrighted works takes two forms, one set of copyrighted works controls the use and/or access to the second set of copyrighted works.

I hope no new measures might exist in the future, to prohibit the consumers use and/or access to legally obtained copyrighted works, within the current copyright laws, of course.

Dvd encryption/playing technological access control measures prevents people who lawfully purchased dvd disks from accessing and/or using the work. Zone information is built into dvd-players players{rpc-2} by the manufactures, who are licensed through the dvd group to implement this technology according to the terms of that license agreement. When the dvd disks are made they also include Zone information. If the user legally purchased dvd-disk outside of his zone, he will be unable to access and/or use the copyrighted works. By forcing manufactures to implement their zone regioning scheme through their licensing agreement, the manufactures are stuck with expensive technology that denies the consumer access and/or fair use of the product. The dvd group did succeed in selling those expensive licensing contracts to the dvd makers. They are hoping to make additional revenue by selling more licenses to dvd manufactures, while seeking legislation that will deny customers fair use. In addition, the dvd group and their licensed manufactures have failed to make their dvd drives compatible with open source computer systems. Their inability to provide users of open source system with quality device drivers, makes their works contained on the dvd-disk inaccessible and denies the consumer the ability to have fair use of the copyrighted works. This is clearly not acceptable. {Note just within the last couple of weeks, I believe one computer dvd-drive vendor has posted a dvd driver for an open source system, however from what i hear the quality is inferior to drivers of other computer systems and only After linux users figured out how to access the works themselves}. Likewise, proprietary audio/video streaming technology is denying access to and/or use of copyrighted works for those who run open source computer systems; The three major players in the internet streaming digital content business do not make a client for available, for users of open source computer systems, which is needed for access to and/or use of copyright protected works delivered in their proprietary content delivery access controlled systems. They have refused to make their audio/video codecs available for open source developers to use in either proprietary or non-proprietary applications for the linux based computer systems. Moreover, since proprietary based formats account for over 95% of the streamed copyrighted works on the internet, the open source computer user is unable to access and/or use copyright protected works. These three companies also desire to control access and/or restrict use of the protected copyright works, denying the consumer fair use.

## Availability

There are Specific works or classes of works that have become inaccessible or less accessible to some users because of these access control measures. They include but not limited to the inaccessibility and/or prohibition of use of both copyright and non-copyright protected works contained inside these proprietary technological measures{formats}. Some of these are {dvd movies,

live digital broadcasts, pre-recorded digital broadcast, digital music, digital talk shows, all being transmitted or having the ability to transmit them over computer networks, ie.. the internet}, but the means in which to access these copyrighted works contained inside these proprietary technology formats are made unavailable to users who use open source computer systems; Mainly because these companies which produce proprietary digital technological software with these access measures in place, all focus on the same thing; Controlling the access and/or use the consumer has to the copyrighted works.

If the works exist in both restricted digital and non-restricted digital formats, the advantage for the users of the restricted digital formats can often be a better experience. Concerning restrictive digital media for example, the user of such technology will enjoy a much richer multimedia experience; the quality of restrictive digital multimedia streaming is far superior to any non-restrictive digital multimedia streaming technology, when you consider the road {internet} is heavily bogged down and these restrictive technologies are meant to handle busy network traffic and the non-restrictive digital media solutions are not. Also, since 95% of all interactive digitally streamed content is based on the proprietary restricted formats, the user of the restrictive proprietary client software enjoys a true multimedia internet experience, unlike the user of non-restrictive digital media over this high traffic internet network.

The user cannot lawfully use the restricted proprietary formats if they want to run an open source computer system to access the work, because the technology holders refuse to make their restrictive formats available for access and/or use of the copyrighted works contained therein, for the users of the non-restrictive open source computersystems. The user can lawfully use the unrestricted format. However, in the case of restrictive digital media, there is no current unrestricted counterpart that would offer the user the same accessibility and useability to the copyrighted works contained in the restrictive digital media format, which would be useable over a hostile and heavily congested network like the internet. Since no usable unrestricted digital format exist for the streaming that is being used by 95% of all sites, the open source computer user is unable to legally access copyrighted materials with either widely used restricted or an unrestricted formats.

Fair Use cannot be achieved when the technology holder denies the end user the right to access and/or use the works in the way the consumer chooses to. The cost to the user is excessive and not only speaking from a monetary standpoint, in the case of dvd technology as well as binary only software. There is a hidden cost of having to use proprietary technological formats, ie.. some people feel that running binaries (closed source device drivers for dvd players) or (closed source client software for media streaming software) or (just plain closed source software in general) in which the source code is not made available, could some how threaten their privacy as well as security on their open source computer systems. Moreover, these closed source technology companies have licenses which exempt themselves from liability, making nobody accountable. Most open source system users probably would use binaries of these proprietary restrictive digital media formats to access the works, If the technology holders actually provided them with the means(binaries) to access the copyrighted works contained within their technologies. However, given their responsibilities to their shareholders, if they did such a move, one could expect inferior software products on open source computer systems.

Classes of works that are only available in electronic formats would be digital movies, dvd's, digital talk shows, digital music, live digital broadcast, pre-recorded digital broadcast, online software and online software based services, web-based long distance services , digital networked online games, proprietary wireless and non-wireless network protocols, as well as all other proprietary and non-proprietary software.

Criticism, Comment, Reporting, Teaching, Scholarship, or Research

Technological measures that affect the ability of persons to criticize, comment, report, teach, or do research regarding the product, is the users

inability to examine and access the source code {blueprint} for the technology. The inability to examine the source code for security/privacy weaknesses restricts people's ability to comment, report and criticize such weaknesses. Often times the licensing agreement forbids the disclosure of performance testing with their technology products, which have a similar result.

The impact of technological measures have on fair use is tremendous. The restrictive technological "access control" measures deny the end user the right to access and/or use the works he paid for in a way that reflects his purchasing motives, hence the consumer is stuck without an acceptable way to access and/or use the works for his originally intended purpose. Additionally, with current EULA licenses, the binary only software maker discloses the terms to the consumer only after he purchases and opens the package and if he doesn't like the terms he is unable to return the software for refund, because he opened it and read the terms.

I would say bottom line is that manufactures are being classified as publishers. In the case of software, the source code is the "works" and a binary file is a "manufactured product" derived from such works. The problem is very obvious; some manufactures are NOT liable for defective products or products which may and do cause harm, ie.. binary only software distributions as well as any closed source software technology which proclaim themselves exempt from harm in their licensing, ie.. EULA. The nature of closed source binary only software often leaves the end user in the dark as to the harm that the end user unknowingly may have experienced, which makes claims of harm against the maker practically impossible to prove; However it really doesn't matter because the EULA exempts the binary only software maker from any liability even if harm was proved.

I would liken dmca without an exemption for anti-circumvention for consumers like a book publisher saying you cannot read the index or summary, and you must leave the book cover on at all times, reading no more than {we pick the number} of chapters a day and if you violate these terms, you have violated the publisher's copyright. The end user needs to have complete control the method in which he accesses the underlying works and the way in which he uses the copyrighted works, that gives him the power to make the product fit for his fair use. Without the user maintaining control on how the underlying works are accessed and/or used, the user cannot get fair use out of the works he bought.

Interoperability, fitness for use, purpose of use, can only be decided by the consumer, not the manufacture. Having full access and/or use to the blueprints {source code which IS the copyrighted works}, gives the consumer a sound foundation upfront on which to judge his purchasing decision upon. Without full access and/or use to the underlying copyrighted works, the consumer is denied his fair use of such works. People buy works for different reasons, but they all buy it for the reason they originally intended; If the reason is different than what the binary software manufacturer intends, the manufacturer is denying the original author and his publisher, their audience's fair use of the underlying works.

The function of the publisher is to publish the works; Controlling access to and/or use of copyrighted works should not be the function of a publisher and by not providing the source code to the software which controls the access to the underlying copyrighted works, they have crossed the lines into manufacturing, and should be liable just as any other manufacturer would be, however the EULA exempts the binary manufacturer from any liability.

Also controlling access is a true disservice to the consumer and the author. By the manufacturer limiting the scope in which the underlying works can be accessed and/or used, it directly effects the publisher's ability to get the authors copyrighted works delivered to the consumer for fair use. Copyright protection is one of that publishers have to take in good faith; If it's violated, current remedies are already provided for by existing copyright laws. The current access controls do nothing to prevent unlawful duplication and only infringes on the users ability to get fair use from the underlying works.

The specific works or classes of works that are effected in this manner are technologies which use encryption{dvd's}, proprietary binaries, as well as hardware technologies that use proprietary binaries.

Some, not all works are available in non-restrictive formats. For the dvd technology, there is the vcr, however the vcr is not a substitute for dvd. The advantages of the vcr is that there is a readily available supply and they are relatively inexpensive. The disadvantages of using the vcr, is that the vcr's audio/video are of a significantly inferior quality and the vcr cannot be streamed over a digital network. The advantages of the dvd technology is that it can be streamed over a digital network and offers superior viewing of content. The disadvantages to dvd technology the limited dvd-disk selection along with the it's restrictive licensing agreements which denies the user fair use in accessing and/or using the copyrighted works. The Consumer should decide what his compatibility needs are, along with the ability for the consumer to choose the device of their choice for the accessing and/or use{viewing} of the dvd disks. Also, the dvd hardware is realatively expensive.

For the proprietary audio/video streaming server/client software over the net, their is not any non-restrictive formats available for the viewing of Most of the content that is available on the internet. There are other non-restrictive formats available, however it is not a Viable solution for streaming/viewing the content over the heavy traffic internet network.

For an option to binary only software, the free software is a superb choice. The non-restrictive gnu/linux operating system and applications provides users with excellent stability, reliability, performance and cost. The disadvateges to proprietary binary only manufactured software products is security and privacy exploits can and do exist, unknowingly to the end user, which can cause harm that may or may not ever be made known to the enduser. Also, binary only software often is unreliable and expensive. Also proprietary binary only manufactured products with restrictive licenses give the consumer no recourse when harm is caused. With the free software, the source is provided "as is", just like the expensive binary only counterpart, however with one huge difference; the open source free software user can modify the source code to make it fit for his fair use, whereby the closed source binary only user cannot do this{access and change the code to address security and privacy weaknesses}, and if that isn't bad enough, the end user cannot hold the binary manufacture liable for harm caused by the manufactured binary only software.

There should be an exemption to the anti-circumvention for parties using the work to engage in criticism, comment, reporting, teaching, scholarship, or research. Free Speech is something that shouldn't be legislated against.

There should be an exemption to the anti-circumvention for access to works that do not constitute copyright infringement. Fair use is a well known and accepted part of all current copyright legislation, and leaving out strong consumer fair use wording would be contrary to all existing copyright laws. Again, i feel access controls and are in direct conflict with existing fair use laws, provided by existing copyright legislation. A ruling is needed that spells out the illegality in which {binary manufactures} restrict access and/or use of any of the underlying copyrighted works which would infringe on the consumers ability to have fair use of the underlying copyrighted works, would have heafy fines placed on the binary manufacture who violates this rule, along with remedies to the consumer.

#### Effect on Market Value of Copyrighted Works

Technological measures which protect access to copyrighted works can be circumvented, but the reasons for circumvention are ones which allows fair use, Not ones that make it easier to pirate copyrighted works. With dvd's, the css {content scrambling system} encrypts the underlying works that needs to be unencrypted before the copyrighted works{movies} can be played. There are two ways to do this, one is buying a dvd player and the other is using DeCSS. Both methods implements the decrypting of encrypted dvd's, so that the underlying

copyrighted works can be accessed and played. By using regular cdrom drive along with DeCSS, the user is able to play legally purchased dvd-disks on a system of his choice. Without DeCSS, the purchaser of the dvd disk is limited to playing the dvd-disk on an expensive dvd player or limited to playing it on proprietary binary only operating system which offers software compatibility {device drivers} with the expensive pc-based dvd player, expensive when you consider being able to play the dvd-disk, without a dvd-player. The decrypting of the dvd-disk with DeCSS doesn't allow superhigh quality viewing of the dvd-content; Though the quality is better than what a vcr offers, it falls short of the quality and functionality derived from using the restrictive technologies to play the dvd-disk. Concerning binary software, a method exists which can strip the binary down in a way for the user to get alternative use from the binary. It is called a decompiler, which is disallowed by binary only software makers EULA.

The anti circumvention efforts by the dvd/mpaa group, most probably increases the price of getting the underlying copyrighted works onto the restrictive format. It cost them more to design{code} and implement technologies {manufacture binaries and hardware} which attempt to control ones access to the underlying copyrighted works. Not only that, but the cost is even higher since the access controls are effecting consumer demand for their products.

The anti circumvention efforts by the dvd/mpaa groups has probably reduced the availability of the underlying copyrighted works, by making it more expensive for authors/artist to get their works on this dvd format, the small time artist /authors of copyrighted works are not in a position to effectively publish their works in this format, which is Anvantagious for preventing serious competition within their own industry. As far as the circumvention methods reducing piracy of copyrighted works, It has No Effect in restricting one's ability to make illegal copies, rather it effects only the consumers ability to get fair use from the underlying works.

Anti Circumvention or "access controls" with dvd technology has effected marketing of the underlying works; The price of authors to put thier works on dvd-disks is relatively expensive, hence the author cannot expect to get a fair return on their investment since few people actually have the "access controlled" dvd-devices.

The answers to these questions depend on class or work. When the class is proprietary, "access controlled" manufactured binaries which doesn't allow viewing of the source code, the answer is yes. Works made available under these restrictive technology gives big companies have a huge advantage in having being able to afford to publish their works contained in this restrictive format{they may in fact own this restrictive format}. It is related to the the actual Type of Works themselves, by saying All those underlying works which are made available in binary only restrictive formats are effected.

I feel all these impacts are directly the result of circumvention alone.

Technological measures which have "access control" have made the underlying works less widely available in different formats or completely unavailable; I'm not talking about piracy by the making of exact duplicates of works, i'm talking about authors getting their works published and in the hands of consumers. In the case of binary only software {dvd's and other shrinkwrapped binary only software}, the works{source code to these binaries} are not made available and yet in each case, the access controls DO NOTHING to prevent piracy. The underlying works contained within these restrictive formats are only made available only in the format which the technology holders allows, which eliminates the ability to make available the underlying copyrighted works available to a larger audience of people for fair use. Restrictive licenses{EULA} with their technology, ie.. the inability of one to backup or play the underlying copyrighted works in the format of his choice, limits the availability of the underlying works to those seeking fair use from those underlying copyrighted works.

I can afford a dvd player as well as microsoft windows software, but the reason

that I don't own any of these binary closed source technologies, is more about the lack of control i have accessing the underlying works, than it is about price. I dislike vcr's very much as well as not being able to get live internet media streams, but i dislike loosing control even more. In closing i'll refrain from purchasing copyrighted works that are delivered in a restrictive format, until the underlying works become available in non-restrictive formats, so that privacy, security and fair use can be achieved.