

SUBMISSION TO THE DIGITAL AGENDA REVIEW

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This submission is broken into three main sections, discussing respectively the economic basis of copyright with a view to determining in which markets copyright owners have a legitimate interest, the problems currently presented in the copyright arena, and a range of suggested changes that may address these problems. Attached as appendices is some supporting evidence of some of the arguments made.

The author's interests in this matter are, as a programmer, in ensuring protection of new content technologies, and, as a consumer, in ensuring that purchased works can be enjoyed to their fullest.

A brief summary of points raised in this submissions follows.

1. The copyright owner has a legitimate market interest in the "first sale" of a work.
2. The copyright owner has no legitimate market interest in the use of a work, or in the subsequent resale of the work.
3. Service providers must not be liable for infringing acts of their customers.
4. Any takedown provisions must ensure appropriate review occurs before any actions are required.
5. The provisions for temporary copies and copies in material form are not technological neutral, and fail to adequately and consistently protect desired uses.
6. Caching proxies should be better protected.
7. Time and format shifting should be protected.
8. Digital libraries should be protected.
9. Provisions related to abandoned and orphaned software are effective to a limited manner, and the extent to which they can be extended should be cautiously considered.
10. The restrictions on circumvention devices are significantly harmful to consumers' interests, without adequately protecting copyright owners' interests.
11. Significant changes to the act to deal with P2P services are not required and may be harmful.

The conclusions of this submission are:

1. Clarification of the issues facing ISPs, and a codification of those issues in a Code of Practice is appropriate.
2. Generalisation of the exemption for temporary copies in an exemption for “auxiliary copies” would be appropriate and beneficial.
3. Reconsideration of consumers’ rights with respect to broadcast content is appropriate, and limited rights to time shift such content would be beneficial.
4. Development of source code repositories to protect consumers against problems due to orphaned and abandoned code is appropriate, and probably best done outside of the copyright act.
5. Distribution of circumvention devices should not be restricted.

Further exploration of these issues follows.

1 Economic Basis

This submission considers the primary basis for copyright as a limited economic incentive for the creation and publication of works. The necessity of such incentive is not examined, in favour of discussing the level of incentives required, and the side-effects of mechanisms that have been and might be implemented.

Traditionally, one of the key doctrines of copyright has been that of “the first sale”. In particular, that the copyright owner has no copyright interest in a copy after the initial sale: it’s legitimate to loan the copy out (as video rental stores and libraries do), or sell it (as second hand bookstores do), or give it away (as happens in swap meets), or destroy it. Traditionally, we expect the copyright owner to have no control over any of these activities (either legally or practically).

The control over publication of a work by the copyright owner leads to a potential monopoly-driven market failure in distribution of the work: due to either setting too high a price, or refusing to distribute the work at all, members of the public willing to pay the marginal cost of the work may yet be refused access to it. The existence of an aftermarket as described above traditionally provides an effective check on this form of market failure, by allowing individuals who cannot afford a copy of the work from the copyright owner to instead buy a second hand copy, or to peruse or otherwise make use of the work at a public library. A range of other variations are possible too: such as forming a small association and creating a private library from pooled funds, or recouping some of your initial investment in a work by selling it second hand.

This submission thus separates the market in copyrighted works into two distinct, technological-neutral areas: the first sale market and the aftermarket, and considers the former to be the traditional market in which copyright owners have a legitimate interest.

Technological developments make it feasible for copyright owners to be given control over both this aftermarket and indeed the mere use and enjoyment of works. This has only become reasonable with increasingly effective distribution and communication networks (both controls by their nature limit the audience for a work to those who can directly contact an agent of the copyright owner), and is plausible only with the support of law (in the end, technological measures of this nature can always be circumvented by other technologies).

There are two possible justifications for adding these restrictions: either that restricting the aftermarket or use is the only effective way for copyright owners to maintain their interest in the first sale market, or that extra incentives are needed in today's market and that these are a suitable way of providing them.

For the first issue to be the case, the possibility of distributing works in purely digital form would have to have severely upset the copyright balance. When the Digital Agenda bill was drafted, this was a very real possibility: the ability to make perfect copies of digital works does appear to up the ante. In actual fact, though, the primary examples of illegal copying over the past few years have tended to be deliberately degraded: the mp3 format (for music), and DivX format (for video) are both popular for distributing copyrighted works precisely because they are degraded – this is what allows them to be efficient enough to be worth distributing over the Internet. This leaves the digital age's main effects on the copyright balance to be issues of efficiency and scope: works can be copied much more easily and distributed much more widely than previously. But these are not new issues, they are simply a continuation of devices such as the photocopier and the video recorder, and services such as Australia Post. While these concerns must certainly be addressed, there does not seem to be a need to expand the fundamental reach of copyright to meet them.

The second issue is whether additional incentives are required to encourage works to be produced and published. There does not seem to be any apparent reason to believe this. There are two particular areas that must be addressed: providing adequate compensation for the time and skill invested by the author in creating the work; and providing adequate compensation for the resources consumed in publishing and distributing copies of the work. Changes in technology are most likely to affect the latter, however the effect has generally been to make publication and distribution substantially cheaper, thus reducing the need for other incentives. The issues affecting the compensation authors should expect are more difficult to analyse, and are naturally entwined with the health of the economy in general rather than simple technological issues. An apparent outcome, though, is that the severe decrease in publication costs has allowed a number of authors to self-publish works developed during their leisure time, and a wide range of works are thus available for free over the Internet in the form of open source software, web comics, weblogs, and free mp3s (see A.1).

While the profits of copyright owners and publishers may be on the decline, the likely explanation is wide-ranging competition, resulting in price cutting and increased risk-taking, both of which are beneficial to society. Additionally, if the key factor in declining profits is competition, it is unlikely that any additional incentives will make a long term improvement, as any extra profits that become available due to additional rights granted to copyright holders will be swiftly reduced by continued competition.

As such, this submission considers owners' legitimate market interests to reside solely in the first sale of a work, and thus not in either the use nor the resale of the work, and encourages the review to do likewise.

2 Concerns

2.1 Service Provider Liability

Issues addressed: 12, 13

Relevant recommendations: 1

The previous section of this submission made much of the reduced costs of publication and distribution that have resulted from recent technical innovations. A key underlying factor in this result is that service

providers have been able to provide their services while avoiding any requirement to exercise editorial control, or running any significant risk of liability for the content published via their services.

An important aspect of the design philosophy (and thus the implementation and operation) of the Internet is that it is end-to-end: that is users are considered to communicate directly with each other, and the service provider is expected to do nothing more than facilitate that conversation. This minimalism allows both a wide range of innovation to occur at the endpoints, without requiring any significant changes in infrastructure, and allows service providers to specialise in optimising the infrastructure without being required to concern themselves with non-technical issues, such as editorial control.

The current legislation seems to have been admirably effective in establishing such a basis, and it is utterly essential that it remain so.

By contrast, “notice and takedown” measures that provide for service provider liability if they do not respond to notices of copyright infringement from copyright holders are a far poorer way of achieving this than existing mechanisms, due to the lack of checks and balances. In particular this lack results in service providers being required to remove content that is not infringing copyright. This submission recommends that third parties to copyright violations such as service providers have no liability in claims of copyright infringement until those claims have been validated by a court.

2.2 Service Providers and Discovery Related Information

Issues addressed: 14, 15, 16

Relevant recommendations: 1

While it is utterly inappropriate to hold a service provider liable for copyright violations performed by its customers, it is reasonable in most cases for the copyright owner to expect the service provider to provide contact details for its customers so copyright violations can be resolved.

Provision of information beyond this raises a number of concerns. Providing customers’ physical contact details, rather than an email address, can be a risk if the process is able to be abused by potential stalkers. Provision of information about customers’ Internet usage habits can similarly be abused in a number of ways, as well as revealing violations of copyright.

At another level, providing access to such information is a burden on service providers. While customers’ contact details should be easy to provide, tracking users’ activities and analysing them are both difficult and time consuming. Indeed, much of the tracking data is too expensive to keep at all, except when it is needed to diagnose and fix a particular problem. Any regulations or code of practice that requires specific data to be provided to copyright owners under any circumstances needs to take care to ensure that doesn’t place an onerous technical burden on service providers.

2.3 Temporary Copies and Copies in Material Form

Issues addressed: 17, 20

Relevant recommendations: 2, 6

An ongoing concern is that copyright law may limit the ability to access digital works, given that such access by its very nature requires making copies in one form or another. Currently Australia addresses such concerns via two considerations: an exemption for temporary copies made in the course of a communication, and determining that only copies that can be reproduced further constitute an infringement of copyright.

As discussed previously, this submission advocates the view that control over the enjoyment of a work is beyond the legitimate purview of copyright owners' interests, and as a corollary of that it is appropriate for actions required for that enjoyment to not constitute copyright infringement.

While the doctrines of temporary reproductions and immaterial reproductions have been successful in providing a basis for such exceptions, they are not particularly clear nor technologically neutral. For example, Justice Emmett's reasoning in the Warner case is limited to devices that make it impossible for the user to have full access to RAM. This is a technical limitation however, that may not be appropriate in other contexts: for example while it is probably impossible to access the RAM of a DVD player or a games console in any meaningful way, if the DVD is being viewed via a personal computer, or the game is being played using an emulator on a personal computer, standard development tools will usually allow complete access to the copy of the work stored in memory, and, at a technical level, such copies can then be further reproduced as desired.

Nor does the exemption for temporary reproductions in the course of a communication naturally apply, as a straightforward interpretation of communication would seem to imply that communication requires the active participation of both the consumer and the copyright owner.

In the example given, it seems obvious that while the copyright owner has a legitimate interest in being reimbursed for the purchase of the DVD or game, that that interest does not justify any influence over whether the DVD or game is accessed via a specialised device, or a personal computer. Given that the existing protections do not appear adequate to convincingly protect such uses, changes to the law are likely to be beneficial.

2.4 Caching Proxies

Issues addressed: 17, 18

Relevant recommendations: 2, 6

A relatively early innovation in the technology of the World Wide Web was the creation of the caching proxy. Web browsers pass all their queries through the caching proxy, which then keeps a local copy of pages that are likely to be requested again (possibly by other users). This reduces both latency, as the page can be served locally, rather than requiring the remote host to be contacted, and consumption of external bandwidth, which is usually significantly more expensive than internal bandwidth. Caching proxies are employed both by Internet Service Providers and individuals and companies, to both improve the perceived web browsing experience, and to reduce costs. A number of ISPs in both Australia and overseas go so far as to force all web traffic to pass through their caching proxies (known as transparent proxies in this case), violating the end to end principle (to some extent) in order to reduce costs and improve the browsing experience.

Caching has two effects on copyright owners' interests. Reducing the accesses to their host normally proportionally reduces the expense in publishing the site – beyond a certain level of popularity, copyright owners generally pay per access. On the other hand, caching proxies make it difficult to analyse the audience for your website (since you will never be contacted at all for some page views, and will be contacted by a

proxy instead of the user himself for many others), which can affect the rewards (such as advertising revenue) and incentives (such as the glory of fame) for publishing.

This submission believes that in the balance, caching proxies provide a significant benefit to both consumers and service providers, and a small benefit to copyright owners.

Unfortunately caching proxies are not well protected by Australian copyright law. The closest exemption appears to be that for temporary copies made in a communication, but on its face that seems unlikely to protect most caching proxy services.

2.5 Time and Format Shifting

Issues addressed: 18, 22

Relevant recommendations: 2, 3, 6

A common desire amongst consumers of works is the ability to time shift and format shift works. Traditionally, this includes such things as creating compilation tapes of favourite songs from one's own cassette library for personal use, such as on long trips, or taping a television programme scheduled for when you are out at dinner. Modern technologies have only extended these desires: compilation tapes become libraries of thousands of songs stored on an iPod or an mp3 jukebox, and PVRs that can automatically select and record 40 or more hours of television and play recorded shows at the same time as recording shows replace the nightmare of programming a VCR and the nuisance of changing tapes.

In many cases it is difficult to see any interest for copyright owners in these matters at all: most broadcast programmes are not available for purchase at the time they are broadcast. This applies to live sporting events, television news, current affairs, and first-run series, which either don't become available for purchase at all, or only become available months or years after they are first broadcast. Similarly, compilation tapes that consumers might desire often can't be made because artists are signed to different labels, and while the mp3 format has been available for a decade, and readily usable and popular since 1997, it is still impossible to purchase most songs in that format or a similar one in Australia.

One claim that is made in this area is that copyright owners have an interest not so much in preventing time or format shifting per se, but preventing viewers from skipping advertisements. This is a more difficult issue, but in addressing it, it is important to remember that avoiding advertisements is nothing new: it is possible to do that by leaving the room, pressing mute, and channel hopping as well as pressing fast forward. Further, one would traditionally imagine that the consumer has a fundamental right to skip or skim parts of a work that is of little interest, rather than a legal obligation to attend to the work in its entirety.

Australian copyright law makes no provision for time or format shifting, and as such is thoroughly out of step with community expectations.

The relevance of this issue to the review is in relation to two issues: the effect on new technologies, such as PVRs (issue 20), and with consideration to the possible benefits of storing works at a point closer to the point of access (issue 18). The impact on new devices such as PVRs and iPods should be clear: while their primary uses are considered an infringement of copyright by the law, it is hard to provide any defense against contributory infringement suits, making investment in the area risky at best. The relevance to issue 18 is somewhat metaphorical: time and format shifting are in effect following the same principle as caching proxies: making copies of works in a form and location that is more easily accessible for consumers.

This submission thus strongly advocates that the copyright act be amended to ensure the legitimacy of time and format shifting of works.

2.6 Digital Libraries

Issues addressed: 17, 18, 22

The advent of two recent innovations on the web raises an interesting question for copyright law: the issue of purely digital library services. In their own words, the Internet Archive¹ “is attempting to archive the entire publicly available web.”² A similar service is being offered by the Google search engine³, which allows users to access cached copies of pages in response to search queries.

The two services are useful for different reasons: the Internet Archive is particularly useful for historical searches, such as determining the statements made on a website on a particular date, and determining if, when and how particular websites have changed over time. The Google cache is useful primarily when a site is temporarily unavailable due to technical problems, and essentially serves as a free backup of the web, and these different purposes are essentially forced due to the different tradeoffs made by the two organisations.

Presumptively both services perform copyright infringement on a massive scale: every page they serve to a user is an unauthorised copy of a copyrighted work.

The two services balance this infringement on copyright owners’ rights in a number of ways. Both go to some lengths to ensure that served pages are viewed in their original contexts, and that the authorship is clear to the consumer. Both offer website administrators mechanisms that may be used to indicate that pages should not be cached. Neither service is a profit centre; the Internet Archive operates as a non-profit organisation, and the Google cache is a free add-on to its popular search service. In both cases the works archived are (or were) freely available to all comers, so the financial impact on owners is minimised. Further minimising the impact on copyright owners, in both cases, obtaining works directly from the copyright owners’ websites (when they are available) is a more pleasant experience than obtaining them from these services.

These services are surprisingly useful at a practical level, and it seems reasonable to claim that there is a societal interest in maintaining these services for historical and research purposes in the long term.

It is probably reasonable to note that the Digital Agenda amendments have failed to adequately cope with this new technological development, although it is hardly surprising that this is the case: there are no strong analogies to be drawn between these digital library services and traditional libraries.

This submission makes no strong recommendations as to how to address this issue. A possible approach may be to allow organisations to register as digital libraries, providing they follow a code of practice. Other, possibly complementary approaches, might be to limit the works being archived to those that are available at no cost, or for works that are priced, to require the digital library to pay the copyright owner for each reproduction of the work distributed.

¹URL: <http://web.archive.org/>

²URL: http://www.archive.org/about/wb_press_kit.php

³URL: <http://www.google.com/>

2.7 Abandoned and Orphaned Software

Issues addressed: 19

Relevant recommendations: 4

In the context of the Y2k bug, limited additions to the copyright act were included to allow users of copyrighted computer programs to legally reverse engineer and update those programs to fix bugs, under certain limited conditions. This submission considers those changes to have been successful in their goals, and not to have caused any significant harm to copyright owners' interests.

The issues paper raises the possibility of extending these considerations to provide more flexibility to copyright users when attempting to maintain existing software systems, and in particular raises the possibility of a "code repository". It is appropriate, then, to consider the drawbacks of the current system, that might be addressed by such a change.

A significant drawback is in the difficulty of reverse engineering computer programs into a form in which modifications can reasonably be made. This is an area of ongoing research, and generally requires very specific, expert knowledge. Reverse engineering is not always required – some software is distributed and used in source form, rather than being compiled, but for various reasons this is relatively rare. Complicating matters, a significant number of programs are distributed not only in a compiled form that must be reverse engineered to be modified, but in an obfuscated compiled form, which has been deliberately altered to make it difficult to understand.

These difficulties are significant enough that, in a large number of cases, they make the existing exemptions for orphaned and abandoned software useless: there is no value in being allowed to do something that you are physically unable to do. This generally means that shortly after computer programs become unsupported, they become increasingly unusable: either because they rely on an old operating system that cannot be used with other programs, because they do not support new standards, or because new bugs are uncovered that render the software too risky to rely on. This decreases the ability of the aftermarket to counter the negative effects of copyright owners' monopoly powers, and causes extra costs to companies in upgrading systems and retraining, when such costs are above and beyond the cost of continuing to support the older software.

It is thus the opinion of this submission that providing legitimate purchasers of copyrighted computers programs the ability to access the source code to those programs and support themselves would provide significant economic benefits. This must, however, be weighed against the copyright owners' legitimate interests in protecting the trade secrets embodied in their source code. An additional concern is that it is significantly difficult to identify copyright violations at the source code level without access to the source code, and copyright owners' have a legitimate interest in being able to monitor this activity in any scheme that may be proposed.

2.8 Technological Protection Measures and Circumvention Devices

Issues addressed: 23, 24, 25, 26, 27, 28

Relevant recommendations: 5

One of the more important approaches to preventing large scale digital copyright infringement has been

the introduction of technological protection measures (TPMs) and the prohibition on circumvention devices. This submission argues that this approach is unjustified and has failed at its primary task, and further that it has unduly upset the traditional balance between owners' and consumers' interests.

TPMs are a special protection for digital works that are, by and large, not conceivable for traditional works. But recent history has demonstrated that the primary difference between digital copying and traditional copying – that is, the possibility of making a perfect copy – is not particularly important; but rather the real risks have come from making copying and distribution cheaper and easier. These are not new risks, nor qualitatively different risks to those already faced by copyright owners, however, and without a clear economic justification demonstrating that the quantitative differences are large enough to amount to a difference in quality, there is no justification for special protections for digital works.

Additionally TPMs are by and large not successful at restricting copying. In spite of TPMs there are a number of ways of making copies of works; it is simple, eg, to put a copy protected CD into a stereo system, put a microphone in front of the stereo and attach it to a computer. Similar activities are possible for other works. In particular, copying is, by its very nature, composed of two acts: accessing the original work, and based on that knowledge creating a new work that is as similar as possible. Opening a book and writing down every word you read onto a pad of paper and selling your finished work is a copyright violation, and cannot be restricted by TPMs.

Fundamentally, the only ways of restricting copyright violations is to restrict access to a work (so that it can't be read in the first place), or to restrict the creation of new works. The TPMs used to protect DVDs and CDs generally fall into the first category (by attempting to restrict the devices on which you can view CDs and DVDs to those that make it difficult to make copies), while the design of the PlayStation 2 limits the creation of new works (so that it is not possible to make a backup of games, nor is it possible for independent software developers to develop new games without Sony's permission). Both these acts are harmful to consumers: the former blocks legitimate use of the work, and the latter blocks competition, and acts as a disincentive to creation of new works.

Both systems also encourage rent seeking: in the case of DVDs, parallel importation is blocked by tying region locking into the TPM. As such, watching a DVD bought overseas, or imported by a store, generally requires reasonably complicated tricks that may void the warranty on your DVD player. In the case of the PlayStation 2, it is impossible to write software for the console without Sony's specific permission for each game, which requires both payment of a significant fee, and designing your game to Sony's specification. It is not possible to enter into private transactions with owners of the console independent of Sony, without the console owner installing a modchip, which are generally unavailable, and, again void your warranty.

The limitations on circumvention devices further limit reasonable uses of legitimate works. For example, the terms under which the DVD Copy Control Association is willing to license the knowledge to avoid the TPM used to protect DVD, DVD-CSS, are unacceptable to open source software developers (due to requiring royalties, or to requiring that the source code to the software not be given out, either of which are incompatible with open source licenses). As such Linux distributions in Australia cannot provide the ability to watch most DVD movies, even though the software has already been written, and may be downloaded from overseas websites. This is harmful to consumers, who are thus required to fend for themselves, or to view their legally purchased works in less preferred ways, and of no benefit to copyright owners.

The Electronic Frontiers Foundation have released a summary (see A.2) of circumstances in which the corresponding provisions of the DMCA have been used for reasons other than preventing large scale digital copying. This submission believes that all such additional uses of TPMs should be considered examples rent seeking, as they extend the effect of government regulation in the area beyond its intent.

To reiterate, this submission believes that the past few years' of experience with technological protection measures demonstrates they do not provide significant protection of copyright owners' legitimate interests, and are considerably damaging to consumers' interests.

This submission does not believe there are significant problems in the drafting of the protections for TPMs or in the definition of circumvention device.

2.9 P2P Services

Issues addressed: 22

Relevant recommendations: -

“Peer to peer” software is not a recent development, but rather is a direct offshoot of the “end to end” nature of the Internet. The difference between peer to peer and the more traditional arrangement of “client/server” software, is simply that in the latter situation, one host operates in a dominant role, whereas in the former, neither do. In many ways, it is reasonable to consider both the DNS (hostname to address mapping) infrastructure and the SMTP (email) infrastructure of the Internet to be operating in a peer to peer manner, rather than a client/server manner. It is possible to use client/server protocols in a peer to peer manner (by having both machines act as the server at different times), and possible to use peer to peer protocols in a client/server manner (by having all requests go from one machine to the other).

These are technical issues, and are relevant only in clarifying the traditional use of the term “peer to peer”. To distinguish the technologies under discussion, this submission will use the term “P2P” to refer to software such as Napster and Kazaa that is the focus of the issues paper.

The key difference between peer to peer software under the traditional, technical definition and today's P2P software, is that the latter has generally be designed to escape copyright enforcement at the expense of other issues, such as reliability, authentication and efficiency.

In particular, there are a number of filesharing protocols available for use over the Internet. FTP (literally “file transfer protocol”) has long been available, although it has been largely replaced by HTTP (“hypertext transfer protocol”, the basis of the World Wide Web) recently, and a number of more specialist protocols are also available. These protocols rely on users knowing the domain name of the service, such as www.phillipsfox.com, which by and large renders them unsuitable for copyright infringement as given a domain name, it is usually easy to find the administrator responsible using the `whois` protocol.

The key feature of P2P technologies has thus been an attempt to provide an indexing service that is not based on the domain name system, and that is useful only for finding files, not for determining who is offering them; indeed, in a number of P2P systems HTTP is used to transfer the file once it has been found. Napster provided such a service by allowing users to add a list of files they were willing to copy and distribute, and associating that with their IP address⁴. When the maintenance of such an index proved to be sufficient for claims of contributory infringement, similar systems were developed that removed that choke point, such as Gnutella and Kazaa, at a cost of significantly reduced efficiency and greater complexity (see A.3).

While this submission recognises and supports copyright owners interests in restricting the illegal trading

⁴It is generally possible to associate an IP address with an ISP, but usually far more difficult to find out which customer was using that IP address; further complicating matters, different customers may use the same IP address at different times, and an individual customer will likely use different IP addresses at different times. An IP address is all that is needed to contact another machine on the Internet.

of copyrighted works over P2P networks, it is important to act with some restraint in addressing these issues.

The most important issue of new legislation in this area is that new technologies whose uses are primarily beneficial and proper may be harmfully limited. The development of P2P software, eg, has encouraged some significant research in the areas of grid computing and automatic redundant failover, which have potentially important applications in improving the efficiency and reliability of Internet systems. Similarly, care needs to be taken to ensure that the liability of legitimate service providers is not increased.

This submission believes the best approach to take in addressing these concerns involve careful considerations of contributory infringement and authorised infringement, given that existing P2P systems are suboptimal for distributing legitimate works to the degree that copyright infringement is almost the sole purpose of the systems, rather than introducing significant new rules.

In addition, it is important to note that while the copyright owners have a legitimate moral and market interest in preventing copyright infringement by P2P networks, it is not clear that P2P networks result in a net economic loss to copyright owners. Instead, there is some evidence (see A.4) that P2P filesharing can be used to increase copyright owners' revenue. If this is true, it indicates that moderation may be called for when dealing with P2P.

This submission makes no detailed recommendations on addressing this issue.

3 Recommendations

3.1 ISP Code of Practice

This submission recommends that a code of practice for Internet service providers be drawn up, and that compliance with the code guarantee indemnity from copyright infringement claims for acts performed on behalf of customers.

The code should ensure that ISPs cooperate with copyright owners in the event of copyright infringements, such as by identifying a customer and providing contact information, and should that not be enough to resolve the infringement, the ISP should provide appropriate for legal proceedings to function.

More care needs to be taken when considering discovery related information, as such investigations are likely to have raise serious privacy concerns. Investigations of this sort should likely only occur when there is existing evidence of large scale copyright infringement, and only when this evidence has been evaluated by a judge. It is appropriate for a code of practice to advise the ISP on how to respond to these requests.

The code of practice should not require responding to takedown requests from copyright owners without the agreement of the ISP's customer, or a ruling from a court.

3.2 Auxiliary Copies

The key economic value of copyright is the ability of an author to restrict consumers from selling or giving away a copy of a work, while retaining a copy themselves. While removing this right would necessarily reduce the value of each copy to its marginal cost, thus removing the incentive we wish to provide for production

of new works, as argued previously, allowing copyright consumers more flexibility in how they access the work, and in how they access the work, and allowing the existence of an aftermarket in works has numerous benefits without constricting the incentives to owners.

As such, this submission recommends that the considerations for copies not in material form, and temporary copies made in the course of a communication be extended to a general exemption for “auxiliary copies” to better support this distinction in a technologically neutral way.

In particular, this submission recommends that individual owners of a copy of a work be permitted to make any number of “auxiliary copies” of a work for personal use. While copyright should not be considered to be infringed by the making of such auxiliary copies, their sale or transfer to another party should in general be considered an infringement in order to protect copyright owners’ legitimate interests.

This policy has a significant flaw if extended from individual owners to group owners: in particular, it would allow a company to make an auxiliary copy of a software program for each employee, and thus purchase only a single copy rather than one for each employee or some form of site license. This submission considers copyright owners to have a legitimate interest in being able to control this form of copying, and that removing this ability in a change to the Act would have a significant and harmful effect on the software industry.

Thus, this submission recommends that group owners, such as associations and companies, have a restricted right to make auxiliary copies of a work so long as that does not confer on them greater access to the work at any one time than a single copy would.

In addition, this submission recommends that redistributors of works be permitted to make as many auxiliary copies of a work as they wish, provided such works are not accessed except as part of the technical process for distributing legal copies of the work. This latter provision aims to ensure that future developments in proxying technology are adequately provided for.

The key aim of these provisions is to express, in technologically neutral terms, the areas in which copyright owners do not have a legitimate interest in forbidding copies, but in which consumers do have a significant interest in making copies. This submission believes that such an approach is preferable to the existing approaches based on consideration of the nature of the copy (material form or temporary).

Additionally worth considering is the ability to transfer auxiliary copies. The simplest possibility is to require auxiliary copies never be transferred, and to be destroyed when the original copy is transferred. Other possibilities that still protect copyright owners’ interests, are to allow auxiliary copies to be transferred along with the original copy (and to require the destruction of any auxiliary copies that are not so transferred), or to allow auxiliary copies to be transferred in place of the original copy (and to require the destruction of the original copy, as well as any auxiliary copies that are not so transferred).

An additional possibility is to allow the transfer of auxiliary copies of a work between owners of copies of that work – eg to allow someone who has made an mp3 of a song from a CD to give a copy of that mp3 to someone who owns the same CD. In the case where the second party would be allowed to make an mp3 on their own behalf, copyright owners have no interest in preventing such a transaction, and allowing such transactions is likely to have significant economic benefits, both for the parties involved in the transaction and for encouraging innovation and economic growth in general.

This submission strongly recommends this approach to the review team, and believes it to better satisfy the policy goals of the Digital Agenda amendments, and in so doing to better meet consumers’ interests while retaining appropriate protection of copyright owners’ interests, than the current considerations in the

Act.

3.3 Broadcast Content

This submission recognises a legitimate distinction between content distributed via broadcast technologies and the direct sale of works to an individual consumer. While it is appropriate for consumers to be given limited rights to resell or transfer ownership of works obtained in most cases, this principle would likely cause significant harm if applied to broadcast content. For example, the ability to record a movie from television to video tape, then sell the video tape would cause unfair competition with owners' DVD sales.

In order to balance copyright owners' and consumers' interests in this area, and to allow the balance in other areas to be improved without impacting this area, this submission recommends that works broadcast to consumers be under more restricted terms than works obtained by other means. In particular, it recommends that it be considered infringement of copyright for copies of broadcast content to be distributed (whether freely or for profit).

An additional reasonable restriction may be to require such copies be destroyed after, eg, six months, to allow for time shifting, but not creation of a video library. This submission does not consider there to be a significant economic interest in this latter question: television and radio broadcasts are frequently of sufficiently inferior quality to ensure that, eg, DVDs of the works will be purchased in place of recording from television wherever possible.

The issue of what communications should be considered to be a broadcast is an important question. As well as purely technical definitions, a number of other considerations are possible, such as the number of people who can receive the communication, and whether any particular fee is required to access the communication. This submission believes that the most suitable definition for broadcast content is that the communication be available only at a particular, strictly limited, time.

This definition allows us to consider television as a broadcast medium, whether free to air or cable/satellite, which seems economically desirable, and continues to consider most sites on the World Wide Web to not be broadcast, thus preserving consumers' interests in being able to continue to enjoy works obtained from the web. Its technologically neutrality allows it to cope with new developments such as Internet radio in a sensible way.

An additional useful qualification for broadcast content is to ensure that the audience able to access the broadcast channel is larger than the audience for the work itself; in particular, "pay per view" programs broadcast to a range of subscribers who have specifically paid to access one particular program have no significant economic differences to content distributed in a traditional manner, and thus there is no justification for limiting the rights of consumers in comparison to traditional works.

In particular, this submission believes that permission to make limited copies of broadcast works adequately satisfy consumers interests in time shifting works, without impacting copyright owners' interests.

In addition this submission notes that a useful distinction can be made between the mere use of works, public performance or display of works, broadcast of works, and duplication of works, and that copyright should primarily restrict the latter activities to most appropriately protect owners' and consumers' interests.

3.4 Source Code Repository

The existence of a source code repository for software that can be accessed by consumers when the owners of the copyright of that software are no longer willing or able to maintain the software has significant benefits to consumers. This is balanced though, by some costs to copyright owners, most notably the risk of risks of revealing trade secrets, the risk of copyright infringement at the source code level, and the cost of maintaining the archive. Naturally these costs will be passed through to consumers.

This submission believes that the balance of interests is in favour of creating such repositories, and encouraging their use, and there is some evidence for this in the form of Microsoft's Shared Source programme and the Open Source movement. It is unlikely that any significant encouragement can come through the use of the copyright act, as most such considerations would be in violation of international conventions on copyright.

Instead, this submission encourages the government to work towards a private solution in this area, and to support such activities by preferentially purchasing software whose source code is available in escrow in this form. This submission recommends that source code repositories be required to be run as independent companies, to ensure that the source code repository can remain operational even if the copyright owner ceases operations.

3.5 Distribution of Circumvention Devices

There does not appear to be a balance to be obtained between significant protection of copyright owners' interests via technological protection measures, and consumers' interests in accessing works. As such, this submission recommends that limits on the creation, importation and distribution of circumvention devices be removed.

This submission does not see any benefit in considering the use of a circumvention device to infringe copyright to be an additional infringement in itself.

4 Conclusion

While the Digital Agenda amendments have largely been successful in ensuring copyright protection for digital works, they have not maintained the traditional copyright balance, and a number of economic and social failures have resulted, affecting both consumers and copyright owners. Affected individuals and companies are currently attempting to remedy the failures that affect them by court intervention, and by technological arms races to ensure that no one can stop them from the activities they wish to pursue. This submission believes that this process harms both consumers and copyright owners, and that this review's efforts at redressing the legal balance in a manner that protects the interests of all parties is an important step in ending this harmful behaviour.

A Supporting Evidence

A.1 Free content

Numerous examples of free content are available that much of it seems commonplace, but their significance is worth noting, particularly in contrast to what was available even ten or fifteen years ago.

The Open Source Debian GNU/Linux distribution⁵, to which the author of this submission contributes as a developer, provides a complete operating system and application environment over the Internet at no charge. The system is comparable in functionality to the software offered by Microsoft (incorporating comparable functionality to Windows, Office, Exchange, Visual .NET, and various other products), and operates on a wider range of systems. It is developed and maintained by its user community, in some cases for profit and in some cases in a spirit of volunteerism, and the primary motivations for its continued development are that the development process is cheaper and more effective than developing software in house or buying it from a vendor, and that the work is considered enjoyable or morally valuable. A large number of other free software distributions exist, providing both compatible and competing products to Debian's; much work is shared, much is not.

A vast range of online comic strips are also available at no charge. These are interesting in that they generally require a reasonable amount of skill and time to create, and that there is very little direct economic incentive for their creation. Examples of long running web comics include Sluggy Freelance⁶, a daily web comic running since August 1997 and Penny Arcade⁷, a thrice-weekly full colour computer games web comic running since November 1998. Keenspot⁸, hosts a number of popular web comics and offsets the hosting costs with advertisements and fees for access to premium areas.

In the area of news and opinion, the Internet offers the "weblog" or "blog". Examples include Slashdot⁹, Kuro5hin¹⁰, Glenn Reynolds' Instapundit¹¹, Front Line Voices¹², Tim Blair's site¹³, Ken Parish et al's Troppo Armadillo¹⁴ and a wide range of others. Blog*Spot¹⁵, LiveJournal¹⁶ and a range of other businesses exist to host and otherwise assist users in writing weblogs.

Many of these sites have some difficulties in meeting the financial costs inherent in providing popular content at no charge over the Internet. While these costs are small individually, when a work is popular, they can add up to significant amounts. This context thus does not provide an argument that the economic benefits copyright provides have no value; but rather provides evidence that even when the economic incentive is unavailable, a significant amount of creative work is produced in a wide range of fields. This appears to significantly undermine any argument that existing incentives provided by copyright are insufficient.

⁵URL: <http://www.debian.org/>

⁶URL: <http://www.sluggy.com/>

⁷URL: <http://www.penny-arcade.com/>

⁸URL: <http://www.keenspot.com/>

⁹URL: <http://slashdot.org/>

¹⁰URL: <http://www.kuro5hin.org/>

¹¹URL: <http://www.instapundit.com/>

¹²URL: <http://www.frontlinevoices.org/>

¹³URL: <http://timblair.spleenville.com/>

¹⁴URL: <http://troppoarmadillo.ubersportingpundit.com/>

¹⁵URL: <http://www.blogspot.com/>

¹⁶URL: <http://www.livejournal.com/>

A.2 DMCA Experience

The Electronic Frontiers Foundation, an American-based organisation, has issued a report¹⁷ describing a number of cases “where the anti-circumvention provisions of the DMCA have been invoked not against pirates, but against consumers, scientists, and legitimate competitors.”

¹⁷URL: http://www.eff.org/IP/DRM/DMCA/20031003_dmca_unintended_cons.pdf

A.3 Analysis of P2P systems

The following two Gnutella analyses are offered for consideration.

The first, “A Quantitative Analysis of the Gnutella Network Traffic”¹⁸, by Demetris Zeinalipour-Yazti and Theodoros Foliass of the University of California Riverside, concludes “The Gnutella communication overhead is huge. More specifically we found that ping/pong messages occupy 63% percentage of all messages while the useful utilization of the network (i.e. query/queryhit) was only 37% percentage.”

The second, “Measurement, Modeling, and Analysis of a Peer-to-Peer File-Sharing Workload”¹⁹, by Gummadi et al, concludes that the lack of locality and caching in Kazaa results in an estimated 63% overhead due to redundant downloads.

¹⁸URL: <http://www.cs.ucr.edu/~csyiazti/courses/cs204/project/html/final.html>

¹⁹URL: <http://www.cs.washington.edu/homes/tzoompy/publications/sosp/2003/abstract.html>

A.4 Filesharing Benefits

Baen Books²⁰ is a publisher of science-fiction and fantasy books, both in book form and electronically. In October 2000, the Baen Free Library²¹ was created, which provides a selection of complete books by Baen authors freely downloadable in a number of formats. The impetus for the creation of this service was a debate on online piracy and a comment from Jim Baen that “if one of his authors [..] were willing to put up a book for free online that the resulting publicity would more than offset any losses the author might suffer.” The Free Library currently includes fifty-six books by twenty-eight authors.

On the economic effects of the Free Library, in “Prime Palaver #6”²², an essay written in April 2002, Eric Flint notes that publication of his co-authored book “An Oblique Approach” in the Free Library resulted in an increase in sales to the order of almost 250% for the six month period following the release compared to the six month period preceding the release, reversing what had been a steady decline in sales up until that point.

Also indicative of the beneficial effect of freely available content on the bottom line is the report from Wired Magazine²³ describing BigChampagne, a company that monitors P2P networks to provide data to record companies recommending which songs are currently popular with filesharers. This data can then be used to change radio playlists to emphasise songs that filesharers enjoy, but that aren’t widely known, resulting in more sales.

²⁰URL: <http://www.baen.com/>

²¹URL: <http://www.baen.com/library/>

²²URL: <http://www.baen.com/library/palaver6.htm>

²³URL: http://www.wired.com/wired/archive/11.10/fileshare_pr.html