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**The Quest for Access in the Digital Era:  
Copyright and the Internet**

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## **Abstract**

Copyright in the digital era is changing. Both copyright owners, and users of works protected by copyright have much to gain. Both however, have much to lose. Works protected by copyright can be cheaply and easily disseminated over the Internet. Users have the opportunity of accessing a vast amount of information. However, because of copyright owners' fears that once a work is released on the Internet, it is almost impossible to obtain a financial return from further exploitation, technological measures for protecting access to these works have been developed. However, these access controls may have two consequences for the user of a work. First, those parts of the work in the public domain become inaccessible, except at the behest of the copyright owner. Secondly, access to works, and to the public domain may only be possible on a 'pay-per-view' business model. This article examines the current position in relation to the development and legal protection of access controls in the US and the EU, and concludes that urgent work needs to be undertaken by users to ascertain whether, and to what extent, access controls are changing the balance between owners of copyright, and users, to the detriment of the user.

**Keywords:** Copyright, Internet, Access, Digital, ECMS, Dissemination, Public Domain, Pay-per-view, WCT, Circumvention, Technological Measures.

## **1. Introduction**

The nature of copyright in the digital world is changing. Distribution of works protected by copyright in digital form over the Internet heralds remarkable opportunities for two constituencies. For the owner of the copyright in these works, whether the author, the licensee or assignee (hereafter the copyright owner); and for the users of those works, those who wish to access and use them, whether for personal pleasure, the advancement of knowledge, or in the creation of new works. Both sides have much to gain from digital distribution. Both, however, may have much to lose.

Copyright owners are faced with the most effective form of production and distribution of creative works yet known. It is quick, easy and cheap to make perfect digital copies of creative works from an original work, or from copies of an original. The costs of production could therefore tumble. Distribution of these works is easier than it ever was, where much is streamed in the form of 'digital bits' over the Internet.

The benefits for the copyright owner also come with potential drawbacks. If a work protected by copyright is released over the Internet without the consent of the copyright owner, the practical difficulties of either stopping that dissemination, or of obtaining redress for the unauthorised reproduction, are minimal. Not only may there be many jurisdictions which might be competent to hear the case, but there may be different laws to be applied to the unauthorised reproduction, depending on where that reproduction occurred. An Internet Service Provider (ISP) may be required to remove a work that infringes the copyright owners' rights from a server if the ISP knows it is there. But much

copying occurs between individual surfers; between individual computers linked to the Internet. Any copyright owner seeking redress for unauthorised dissemination may be faced with suing individuals in far flung jurisdictions, applying laws that may be expensive to ascertain and uncertain in application to the reproduction. Control over dissemination of creative works in digital form is thus vital to the copyright owner.

The user, too, is faced for the first time with the opportunity of unparalleled access to creative works. Whether the user wishes to obtain and use those works for the purposes of education, for the creation of new works, or simply for entertainment, the opportunities heralded by the digital age are almost limitless. Difficult or little known sources may become accessible, within short time scales. The development of increasingly powerful and intuitive search engines makes finding obscure sources of information much easier where those sources have been digitised and made available over the Internet. Sophisticated copying methods mean that the works, or parts of the works can easily and cheaply be copied and stored. Never before has there been such an opportunity for straightforward access to information and knowledge on an international scale.

The benefits to the user may also come with drawbacks. These drawbacks may become increasingly apparent from the enhanced control that copyright owners can, and will, be able to exert over access to works protected by copyright, and over further re-use. To control dissemination and copying of works, copyright owners have been developing technological protection measures through, among other methods, the use of encryption. These systems, in their most advanced form, allow the copyright owner to dictate when, and who, may access a work. Users fear two consequences will flow from this enhanced control exerted by copyright owners. The first, is that the public domain will be locked away, accessible and usable only at the behest of the copyright owner. The second, is that creative works will only be accessible on a pay-per-view business model, with the result that only those who can afford to pay will be granted access.

The sides are polarised. To date, the copyright owners appear to be winning in the stakes. Legislation has been, and is in the course of being enacted, that gives legal backing for the technical measures used to control access to works. The purpose of this article is to compare the situation in the US with the developing position in the EU in relation to *access* controls used in connection with creative works disseminated over the Internet. Control over use, whether through licensing agreements, or copy control mechanisms is not the focus of this article.

## **2. Are Copyright Owners Fears Justified?**

Napster, and the furore surrounding the use of Napster is often cited as the definitive example of how the Internet, and the technologies developed to run on the Internet, render copyright unenforceable.

Napster, is an Internet-based company which distributes software facilitating sharing of MP3 music files on the Internet . Napster makes its proprietary MusicShare software available for surfers to download on to computers linked to the Internet. After downloading the software, a surfer can access the Napster system directly from the home

computer. The software on the computer interacts with Napster's software held on Napster's servers. When the surfer, who wants to locate an MP3 file (a compressed music file) logs on, there is an automatic connection to one of the 150 servers operated by Napster. The surfer enters the name of the artist on the search page. The music files are not located on Napster servers, but held on the computer belonging to another surfer who has downloaded the Napster software. The software provided by Napster indexes the location of music files and matches a request for a particular MP3 file with the location of that same MP3 file on another computer. Once the MP3 file is found, the surfer can download the file directly from the computer on which it is held. It has been estimated that 317,377 individuals, located all over the world, shared songs by one band. Napster states that it does not make any copies of MP3 files on its own servers.

Napster has been sued by record companies, and by several individual musicians and bands. On appeal, the US 9<sup>th</sup> Circuit Court of Appeals found that Napster was liable for both contributory and vicarious copyright infringement, but ordered that the original injunction be varied such that Napster would have to be notified of infringing material on their system before they have a duty to disable access. However, Napster must also increase its own monitoring of its system within certain limits. The court also found that the activities of the users of Napster constituted direct infringement of copyright by way of reproduction and distribution. If the record companies and individual bands wish to pursue individual users of Napster, litigation may have to take place in each separate jurisdiction where a reproduction of the work has been made.

Despite the apparent success for the record companies in the Napster case, the principle remains. If works are disseminated over the Internet without the consent of the owner of the copyright, it becomes almost impossible for the copyright owner to control further dissemination. There are programs other than Napster available on the Internet which can be used to share files, and which do not depend on a centralised indexing system. This, perhaps, makes them harder to control.

The result is that the economic incentive, at the heart of copyright law in the Anglo American traditions, is lost. If a financial return cannot be obtained from the exploitation of creative works, the copyright owner may not be so keen in developing new products for the market. Ultimately, so right holders argue, users are the ones to suffer as there will be fewer new works coming to the market in the first place.

## **2.1 Electronic Copyright Management Systems**

As indicated above, the response by the copyright owners has been to develop access protection systems (Electronic Copyright Management Systems (ECMS)) and seek a legal framework to protect against third parties circumventing these systems.

One type of ECMS is the simple, but widely used practice of digital watermarking. This is a technique whereby encrypted information is incorporated into a digitised work, or some alteration of the work is effected which is not visible to the naked eye. A surfer is unable to remove or change the alteration. This system allows the copyright owner to track and identify unauthorised copies made of the original work. These unauthorised

copies can be detected by sending out 'robots' to trawl through content of web pages. If an infringing copy is found, the copyright owner might require the ISP on whose server it is located, to remove that copy. Copies that have been downloaded from the Internet, and which circulate amongst users, will be capable of detection, as the copyright owner will be able to discover the digital alteration to the work. Thus, digitally watermarking a work tends to be a method of ascertaining when unauthorised reproductions are made of works after the event, rather than being a means whereby infringing uses can be prevented in the first place.

Much more sophisticated are the ECMS which prevent access being obtained to a work in the first place if authorisation is not given, and which thereafter can licence use of that work on certain terms and conditions. A number of elements are apparent in the composition of these ECMS. The first is a database, which contains information about the work. This may include the name of the author, the copyright owner, the work being protected, and other information necessary to authorise a third party to use that work for a specified purpose. The database may also contain the conditions on which a license may be granted to use the work. An extension of this system, and the most advanced, relies on the database and licensing system, but also incorporates the hardware (e.g. the computer, the modem, the printer) in which special semi conductor chips are incorporated. These systems are called by some 'rights management containers', because the container that is placed around the work (the © chip) automatically performs a number of functions. It can control access to the work protected by copyright. It is capable of encrypting and decrypting the content. The content itself (the work protected by copyright) is useless outside the container because it is encrypted, and only the container has the key. The container can store precise instructions detailing which uses to permit, and which to deny. Because the instructions are in the container, which must be passed through every time the content is accessed, the right holder can maintain complete control over every interaction between the surfer and the content. In time, it is anticipated that these ECMS will have a payment system incorporated, so the user can be automatically charged, and pay, for each use of a protected work.

Because the © chip needs to be inserted into the hardware, negotiations are on-going between various branches of the creative industries and makers of the hardware to develop common standards, through which the components necessary for each part of the system can be integrated, and the creative works in the ECMS exploited.

If these ECMS work effectively, the complex rules surrounding international litigation of infringement of works on the Internet would not arise, or at least not to the extent that they have in disputes such as those surrounding Napster. Creative works could not be uploaded and disseminated without consent because the hardware and the software that make up the Internet, combined with the instructions incorporated in the works themselves, would make such copying impossible.

However, these ECMS would be useless if it were possible, and indeed permissible for a user to circumvent the provisions and thereafter make the work available without the controls.

## **2.2 Legal Protection of ECMS**

Despite continuing scepticism from commentators, ECMS have been the subject of a raft of legislative measures at international, national and regional level.

### ***2.2.1 Standards of Protection***

Three different standards of protection for ECMS could be envisaged. The first, might outlaw any person circumventing the protection for a purpose not permitted by the law of copyright. For instance, if the purpose of overcoming the controls was to make a copy of the work to distribute to others, that would not be lawful. However, if a user wanted to gain access to a work to use it in a way permitted by the law of copyright, for instance to gain access to those parts of the work in the public domain, then such circumvention might be permissible. A second, and stronger standard, would be to prohibit the act of circumvention altogether whatever the motive. This test would focus on the access control to the underlying work. A third, and the strongest standard, would be to prohibit not only the act of circumvention, but also the making or circulation of any device which might be designed to overcome both access to the work, and controls determining the underlying use of the work, no matter the motive.

The first measures concerning the legal protection of copyright management systems were introduced in the WIPO Copyright Treaty (WCT) in 1996.

## **2.3 The WCT**

During the negotiations leading up to the finalisation of the WCT, it was suggested by copyright owners that the standard appropriate for the protection of ECMS was to outlaw technologies, the primary purpose or effect of which was to circumvent technical protection measures. Thus the standard of protection would be at its broadest, and focus on the technologies which might facilitate circumvention, rather than the act of circumvention itself. This suggestion proved to be highly controversial. Delegates considered that adopting such a standard might have meant that the copyright owner could prevent any access to a work, including access to a work to exercise one of the fair dealing limitations, or to obtain other material in the public domain. A second concern was voiced by representatives of the consumer electronics industry. If legislation outlawed technologies which made circumvention possible, this could serve to place limitations on the products, and parts of products, developed for the consumer market. At its most extreme, the cut and paste function, vital to a word processing application might be considered a technology which could circumvent a technological protection measure, because it allows the user to copy works protected by copyright.

As a result of the negotiations, a relaxed test for protection was agreed for the WCT, which now provides:

*Contracting Parties shall provide adequate legal protection and effective legal redress against the circumvention of effective technological measures that are*

*used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorised by the authors concerned or permitted by law.*

The focus is thus on the act of circumvention, and not the technologies which might make circumvention possible. In addition, the test relates to what is not 'permitted by law'. This might suggest that it would be permissible to circumvent an ECMS if the purpose was to access materials that lay in the public domain.

## **2.4 The US**

In the US, protection for ECMS was first mooted in the Report of the Working Group on Intellectual Property Rights as part of the National Information Infrastructure Task Force (NII Report). This document examined the law of copyright in the US as it existed prior to any amendments being made directed towards Internet activities. In the NII Report it was suggested that the only feasible way in which works protected by copyright could be controlled by the copyright owner when disseminated over the Internet, was through the development of ECMS. In turn, it was argued in the Report, that rules against circumvention of these ECMS should be introduced because it was in the public interest to do so. The nub of the argument was economic. The public interest is the price at which access can be lawfully gained to a work. Because consumers of works protected by copyright pay for the acts of infringers (in the sense that there is an uplift in price), so the price will fall if such infringement were not possible. This, in turn, would allow the public to have access to more works protected by copyright, because the price would be kept low.

In response to the concerns of users who argued that such protection might inhibit access to materials in the public domain, the NII Committee considered that while technological protection may be applied to copies of works in the public domain, such protection attaches only to those particular copies, and not to the underlying work itself. Therefore protection against circumvention of ECMS was justified because it was not the work *per se* that was the subject of protection. So, by contrast with the approach taken in the WCT, the NII Committee suggested the strongest standard should be adopted. The focus was to be on outlawing circumvention for the purpose of obtaining *access* to a work. In addition, the Committee suggested that there should be a broad ban on products that could be used to circumvent ECMS.

Despite the more relaxed approach adopted in the WCT, the US administration remained enamoured with the rigorous approach suggested by the NII committee. The provisions have been enacted in Chapter 12 of the Digital Millennium Copyright Act 1998 (DMCA). Broadly, the relevant section provides firstly, that no person shall circumvent a technological protection measure that effectively controls *access* to a work protected under the Act. The focus here is thus on the act of circumvention which would facilitate *access* to a work protected by copyright. The second part prohibits trafficking in devices or services for circumventing technology measures that control *access*. Here the focus is on the *device* or *service* which would serve to facilitate access. The third part prohibits trafficking in devices or services for circumventing technology measures that protect the

rights of a copyright owner. Thus, this part focuses on devices which might prevent or inhibit the copying of a work.

The robust approach taken in the DMCA has been tested in court in the US in *Universal City Studios Inc v Shawn Reimerdes*. This case had its origins in Norway where a student, Jon Johansen, wrote a program (DeCSS) which could overcome the encryption (CSS) which limited access to Digital Video Discs (DVD's). The purpose of overcoming the control (it was alleged) was to allow DVD's to be run on the Linux operating system, rather than Windows, for which it was intended. However, once the control mechanism was overcome, the DVD's could be copied at will. The DeCSS program was copied on to web pages belonging to *inter alia*, Eric Corley (alias Emmanuel Goldstein) at <<http://www.2600.com>>. The major motion picture studios operated with some speed. A case was brought against Eric Corley and others, who they accused of violating the anti circumvention provisions of the DMCA by making details of the DeCSS code available on the web site, and by linking to other web sites containing the same code. The defendants were found liable for infringing the terms of the DMCA section 1201(a)(2), which is the section that prohibits the making available of technologies which are designed to defeat technological protections controlling access to a work. DeCSS was found to be just such a technology. The court did appreciate that by prohibiting circumvention of access controls, in some cases it may not be possible to use the underlying work in a way which might otherwise have been fair. However, it was also pointed out that the defendants were not being sued for infringement of copyright, but for offering and providing technology that could overcome the controls which guarded access to a creative work. Thus it would appear that these prohibitions against circulating devices and technologies designed to control access to creative works will be enforced in court in the US.

## **2.5 The EU Proposals and Debate**

It would appear that history is repeating itself in the debate in the EU over the protection of ECMS. Many of the EU proposals, as currently drafted, fairly closely follow the developments in the US.

In 1997, in the Proposal for a Directive on Copyright and Related rights in the Information Society, it was suggested that protection of ECMS was not to be directed against the circumvention of technological measures as such (the standard adopted in WCT). Rather the focus was to be on preparatory activities. This was seen as fundamental:

*'because the real danger for intellectual property rights will not be a single act of circumvention by individuals but preparatory activities to produce devices or offer services to circumvent.*

So there was to be a wide ban on the act of circumvention which would in turn allow a wide ban on circumventing technologies. The proposals in the current Draft Directive are to be found in Article 6. This article obliges Member States to:

*'provide adequate legal protection against the circumvention of any effective*



*technological measures*'.

In addition, Member States are to:

*'provide adequate legal protection against the manufacture, import, distribution, sale, rental, advertisement for sale or rental, or possession for commercial purposes of devices, products or components or the provision of services which: a. are promoted, advertised or marketed for the purpose of circumvention of, or b. have only a limited commercially significant purpose or use other than to circumvent, or c. are primarily designed, produced, adapted or performed for the purpose of enabling or facilitating the circumvention of, any effective technological measures*'.

Given that the phrase 'technological measure', is defined as:

*'any technology, device or component that, in the normal course of its operation, is designed to prevent or restrict acts, in respect of works or other subject matter, which are not authorised by the rightholder of any copyright or any right related to copyright as provided by law or the sui generis right provided for [by the database Directive]'*,

it might appear the standard differs from that to be found in the DMCA. The definition does not refer to *access*, and would appear only to prohibit circumvention, and devices, which facilitate reproduction of a work where that is not *'authorised by the right holder or as provided by law'*. Thus, circumvention of a technological measure in order to gain access to a work, or parts of a work, in the public domain might be permissible because the work is not protected by copyright, or can be used without permission of the owner of the copyright. However, that is clearly not the intention, as the Draft Directive goes on to provide that a technological measure shall be:

*'deemed 'effective' where the use of a protected work of other subject matter is controlled by the rightholders through application of an access control or protection process, such as encryption, scrambling or other transformation of the work or other subject matter or a copy control mechanism, which achieves the protection objective*'.

Thus, the focus here is also on protection of *access* to works, and is not limited to circumvention for infringing purposes.

### **3. Access**

It becomes clear from the position taken by both the US and current position by the EU, that the focus of protection for creative works disseminated over the Internet is to be on *access*. But what of the twin fears of the users? That by giving such power to the copyright owner, the public domain will be inaccessible, and use of creative works will be subject to a pay-per-view system.

### 3.1 The US

To deal with these access concerns, the House Committee on Commerce on the Digital Millennium Copyright Act of 1998 provided that the prohibition against circumvention:

*'shall not apply to persons who are users of a copyrighted work which is in a particular class of works, if such persons are, or are likely to be adversely affected by virtue of such prohibition in their ability to make noninfringing uses of that particular class of works under this title'.*

To ascertain whether there were any such 'class of works' which should be exempted from the prohibition against circumvention, the relevant section of the DMCA was not to be brought into force until October 28 2000. During this time the Librarian of Congress was charged with making a determination as to which (if any) classes of works should be exempted. After extensive consultations two classes of works were exempted from the prohibition on circumventing access controls. These are:

*Compilations consisting of lists of websites blocked by filtering software applications;*

*Literary works, including computer programs and databases, protected by access control mechanisms that fail to permit access because of malfunction damage or obsolescence.*

During these consultations it had been argued that an exemption should be introduced to permit circumvention of access control measures for the purpose of accessing materials in the public domain, in particular where the use of that work might fall under the head of 'fair use'. However, the Librarian had difficulty with this proposal. The first problem was because the exemption was sought in respect of certain *classes of users, or uses for certain purposes*. This was beyond the scope of the Librarian's task which was to determine whether to exempt any *particular class of works*, and not to consider the use to which the work was to be put. Secondly, those who argued for the exemption were unable to demonstrate that they had been unable to engage in such uses because of access control measures. The concerns related to use of a work once accessed, rather than to failure to obtain access. In other words, the technological controls that prevent access to the underlying works did not thereby prevent non-infringing uses.

In relation to the second main fear, that access controls would result in a 'pay-per-view' business model, the Librarian pointed out that contributors to the debate had failed to show any hard evidence of the model in operation. There were merely 'speculative and alarmist' fears. What was more, such a pay per use model could be 'use facilitating' Consumers given the choice between paying \$100 for permanent access to a work, and \$2 for each individual occasion may prefer the latter. This in turn may make access to the work more widely available, thus enhancing use.

*'The record in this proceeding does not reveal that 'pay-per-use' business models have, thus far, created the adverse impacts on the ability of users to*

*make non-infringing uses of copyrighted works that would justify any exemptions from the prohibition on circumvention*'. However, it was also hinted that *'If such adverse impacts occur in the future, they can be addressed in a future rulemaking proceeding'*.

There are thus, for the next three years at least, to be only limited exemptions to the rule making circumvention of access controls unlawful in the US.

### **3.2 The EU.**

Perhaps influenced by the vociferous debate which had surfaced in the US as a result of the adoption of a strong standard of protection against circumvention in the DMCA, the EU has proposed in the Draft Directive certain rather complicated provisions relating to exemptions to the rule against circumvention. However, these measures do not extend to access controls, but implicate activities that may thereafter take place.

Contained within the Draft Directive, Article 5, are a series of mostly permissive measures aimed at harmonising the limitations and exceptions to the reproduction right, and the rights of communication to the public and making available to the public. These range from limitations where the use is for the:

*'sole purpose of illustration for teaching or scientific research', to 'use of political speeches as well as extracts of public lectures or similar works or subject matter to the extent justified by the informatory purpose'.*

Article 6.4 of the Draft Directive aims at facilitating the exercise of some of the limitations to be found in Article 5, while at the same time upholding the integrity of ECMS. The first paragraph of Article 6.4 provides that:

*'Notwithstanding the legal protection provided for in paragraph 1, in the absence of voluntary measures taken by rightholders, including agreements between rightholders and other parties concerned, Member States shall take appropriate measures to ensure that rightholders make available to the beneficiary of an exceptions or limitation provided for in national law in accordance with article 5.2a, 2c, 2d, 2e, 3a, 3b or 3e the means of benefiting from that exception or limitation, to the extent necessary to benefit from that exception or limitation, where that beneficiary has legal access to the protected work or other subject matter concerned'.*

Paragraph 1 refers to the obligation on Member States to provide legal protection against the circumvention of any effective technological measures. A beneficiary of protection would appear to refer to a third party who wishes to exercise one of the limitations specified. Concentrating on Article 5.3, the limitations referred to are those for the illustration for teaching or scientific research, for the benefit of people with a disability, and for the purposes of public security and parliamentary or judicial proceedings. So despite the fact that the circumvention of ECMS is to be made unlawful, it would appear that those who are entitled (wish) to exercise a limitation for the purposes of *inter alia*

illustration for teaching or research, must be able to do so. However, before being assisted in exercising such a limitation, the beneficiary of protection must have *legal access* to the protected work. So it would appear the help given in respect of exercising the limitation refers to overcoming controls which would prevent a use being made of the work for the purposes of illustration for teaching or research, for instance if the cut and paste functions, or the print command were disabled. The help is *not* to be given in respect of overcoming the access control. Thus, if implemented in its current form, the position under the Draft Directive would appear to be the same as that found under the DMCA, as far as the protection of the access control, and the prohibition against circumventing those controls is concerned.

In relation to ‘pay-per-use’, the Draft Directive appears to anticipate that this business model may be a reality. None of the limitations in Article 5.3 specifically state their exercise is conditioned on payment, but the copyright owner could condition access on such payment. In addition, Recital 24ter of the Draft Directive states that:

*‘Member States may provide for fair compensation for rightholders also when applying the optional provisions on exceptions which do not require such compensation’.*

So, if the UK, or any other Member State chooses to implement any of the limitations found in Article 5, they may do so subject to the requirement that a fare be paid for each use. Recital 24bis does recognise that in certain circumstances, a payment might not be appropriate:

*‘In certain cases of exceptions, rightholders should receive fair compensation to compensate them adequately for the use made of their protected work or other subject matter. When determining the form, modalities and possible level of such fair compensation, account should be taken of the particular circumstance of each case. When evaluating these circumstances, a valuable criterion would be the possible harm to the rightholders resulting from the act in question. In cases where rightholders have already received payment in some other form, for instance as part of a licence fee, no specific or separate payment may be due. The level of fair compensation should take full account of the degree of use of technological protection measure referred to in this Directive. In certain situations where the prejudice to the rightholder would be minimal, no obligation for payment may arise’.*

It would appear from this recital that circumstances are envisaged when access to a work for specified purposes should be obtained without paying for such access. One example might be where a library has taken on a subscription to an on-line journal in hard copy form, where the work is also available over the Internet. The Internet access might be considered as a part of the fee already paid for the hard copy, and no further payment should be due where access is required either to exercise one of the limitations specified in the Draft Directive or, it would appear, more generally.

### **3.3 Comparison**

In relation to the questions of access and 'pay-per-view' business models, the US and the EU appear to have adopted, or be in the process of adopting, similar standards. The US has made it clear that circumvention of access controls is outlawed under the DMCA. While the EU appears to be making an attempt to allow for circumvention of controls, these only apply once lawful access has been gained to the work. The US appears to accept that the 'pay-per-view' business model may become a reality, but would seem to prefer to leave it to market forces to solve the problem, if indeed there is a problem. The EU has recognized that this model may have undesirable implications, but in so doing has done little more than to make suggestions that in certain circumstances a charge should not be levied for access. It would appear that access to the public domain, and the price of that access, will be dictated by market forces.

### **4. The Future**

The Librarian of Congress was given the opportunity to relax the rules against circumvention of access controls for specified classes of users in the US. However, the determination, as noted above, has resulted in two narrow exemptions. In so restricting these exemptions, it was said that a number of factors needed to be balanced, none of which to date, had been proved to operate in a way that was detrimental either to access to materials in the public domain, nor to the availability of creative works. These factors included:

- (a) whether access control measures increase or restrict the availability of works to the public in general;
- (b) what impact access controls have on nonprofit, archival, preservation, and educational activities;
- (c) what impact access controls have on the ability to engage in fair use; (d) to what extent circumvention of access controls affect the market for, and value of, works protected by copyright.

It is becoming clearer that the digital era is advantageous for copyright owners. With the growing momentum for protecting access controls surrounding copyright works, copyright owners have much to gain. What is not at all clear as yet is what, if anything, users are losing. Urgent empirical research needs to be done so these questions can be answered, one of the most crucial aspects of which will be to find a formula by which access to the public domain, and the yardstick by which failure to obtain that access can be measured. Many commentators have voiced unease in relation to access controls, but perhaps such fears are unjustified. Until this research is done, we will not know. For the time being at least, the upper hand is with the copyright owners. In something of a reversal of the normal burden of proof in copyright cases, where it is up to the copyright owner to show that there has been infringement, if the user believes that the balance has tipped too far in favour of the copyright owner, then it is up to the user to prove the case.

The lines have been drawn and the gauntlet thrown. It is up to the users to deal with these concerns if there is to be any prospect of re-injecting a balance between owners and users into digital copyright.