

UNITED STATES PATENT AND TRADEMARK OFFICE

Docket No. 2003-C-006

TECHNOLOGICAL PROTECTION SYSTEMS
FOR DIGITIZED COPYRIGHTED WORKS

WRITTEN COMMENTS OF

COPYRIGHT CLEARANCE CENTER, INC.

January 14, 2003

I. INTRODUCTION

Copyright Clearance Center, Inc. (“CCC”), submits these written comments in response to the request of the Patent and Trademark Office set forth in its Notice published at 67 Fed. Reg. 72920 (December 9, 2002) in connection with its recommendations to Congress on Technological Protection Systems for Digitized Copyrighted Works (Docket No. 2003-C-006), as required by the new TEACH Act, enacted as an amendment to the Copyright Act through Subtitle C of Title 3 of Public Law 107-273 (signed by the President in November 2002).

Society rightly values education as fundamentally important to its growth and well-being, and distance education is increasingly a crucial part of that societal goal. Copyright Clearance Center strongly supports the goals of the distance education community as they harness the power of the Internet to push the frontier of quality higher education forward, while simultaneously complying with the TEACH Act’s requirement to incorporate copyright compliance as an element of distance education.

Copyright Clearance Center was created in 1978 at the suggestion of Congress and has become the leading clearinghouse in the world for processing rights for copyrighted text materials. It is a voluntary, not-for-profit, industry-led licensing and infringement protection system for both electronic and paper-based works. CCC has bilateral contracts with almost 20 counterpart organizations in other countries, completes approximately 2 million individual licensing transactions every year, collects over \$100 million in royalties per year, and has grown, on average, by 15% per year over the past five years. See Appendix A - “Summary Background of Copyright Clearance Center” for a detailed explanation of the services CCC offers. Among these many services, CCC is by far the largest licensor of rights for academic paper coursepacks in the U.S. through its Academic Permissions Service. And most relevant to this discussion of technology and copyright, CCC is also the largest third-party licensor in the U.S. of electronic access to coursepack-type materials for education in colleges and universities through its Electronic Course Content Service. This service was launched in 1997 and is growing at approximately 30% per year – a strong testament to the growing demand for distance education.

CCC summarizes its responses to the Patent and Trademark Office questions on the following page and continues to answer the questions in greater detail in the pages following the summary.

II. SUMMARY RESPONSES OF COPYRIGHT CLEARANCE CENTER

The overarching theme which Copyright Clearance Center would like to emphasize is that technology, its technology or anyone else's, is necessary but not sufficient. All parties in the intellectual property community will benefit from an ongoing effort to use technology – but only as part of a larger system which includes easy access to licensing at reasonable prices, a broad copyright education effort, a mechanism for an ongoing dialogue between rightsholders and users, and the flexibility available only through direct human involvement - rather than a reliance on technology as the answer in and of itself.

Question 1 What technological protection systems have been implemented, are available for implementation, or are proposed to be developed to protect digitized copyrighted works and prevent infringement, including any upgradeable and self-repairing systems?

- (i) **Systems designed to perform the actions required under the TEACH Act are, in general, available at relatively low cost today and the majority of academic institutions are likely to use these systems over time and as appropriate.**
- (ii) **Copyright Clearance Center offers a technological protection system in the form of an enterprise software solution for publishers that allows them to protect digitized, copyrighted works and which is used today by more than 20 major publishers.**
- (iii) **However, CCC's experience shows that a technology-centric solution has severe limitations: it can prevent "fair use" in a wholesale, non-discriminating manner, and any technology protection can always be breached and once breached no longer offers any protection.**
- (iv) **Technology works to facilitate the copyright system and prevent infringement only when it is encompassed by a larger system of easy access to licensing at reasonable prices, a broad copyright education effort, mechanisms for an ongoing dialogue between rightsholders and users, and the flexibility available only through direct human involvement.**

Question 2 What systems have been developed, are being developed, or are proposed to be developed in private voluntary industry-led entities through an open broad-based consensus process?

- (v) **Copyright Clearance Center is a private, voluntary, not-for-profit, industry-led entity which is effective because it: (a) incorporates technology into a larger system as described above, (b) has people who are experts in the fields of rights management, (c) has a scale of operations and a network of bilateral relations with foreign RROs which enable unique efficiency, (c) has a goal of making copyrighted works as broadly accessible as possible, and (e) makes its agreements non-exclusive.**

III. QUESTIONS FROM THE PATENT AND TRADEMARK OFFICE

Note: The summary points from the preceding page are used as bolded subheadings below.

Question 1

What technological protection systems have been implemented, are available for implementation, or are proposed to be developed to protect digitized copyrighted works and prevent infringement, including any upgradeable and self-repairing systems?

- (i) Systems designed to perform the actions required under the TEACH Act are, in general, available at relatively low cost today and the majority of academic institutions are likely to use these systems over time and as appropriate.**

The TEACH Act requires distance education programs to institute technological protection systems before the digital use of any copyrighted work. These systems must include the following functionality: (i) limit access to students enrolled in that particular course “to the extent technologically feasible”, (ii) prevent “retention of the work in accessible form by recipients of the transmission...for longer than the class session”, and (iii) prevent recipients of the work from engaging in “unauthorized further dissemination of the work in accessible form”.

Numerous technological systems have been developed and implemented to protect digitized copyrighted works, both by limiting access and by preventing or detecting unauthorized uses after access has been obtained. To the extent that CCC’s experience with technology indicates general trends, such technological protection systems meet, in general, the technology architecture prerequisites of enterprise software. They are secure, robust, scalable, user-friendly, extensible, and compatible with existing systems. These systems are, in general, software programs based on Internet architectures or n-tier client server architectures that meet the standards of the enterprise software industry regarding reasonable time, money and effort to upgrade.

Technological protection systems which protect digitized copyrighted work by limiting access to content are, in general, more mature, robust, and broadly adopted than technological protection systems which protect digitized copyrighted works by preventing or detecting unauthorized uses after access has been obtained. Limiting access to authorized users can be accomplished in a number of ways. Password systems are the most prevalent throughout the academic world, but numerous other methods of authenticating users exist. These methods, which include biometrics and physical tokens, are readily available but are significantly more expensive to implement and may be an unnecessary level of security for the majority of distance education programs. Effective technological protection

systems also include other elements ranging from standard systems such as firewalls, to less commonly implemented measures such as commercially available encryption techniques or limiting access to specific Internet Protocol addresses and domain names.

Preventing unauthorized use or dissemination after access has been obtained is also a crucial part of protecting digitized copyrighted works in a distance education environment. For example, one software company offers a document format which is proprietary but which it makes “portable” (that is, potentially transferable between different hardware and software platforms) by offering free downloads of the viewer software. The creator of a document in this format can specify whether the recipient has the ability to copy the document or export the document to another format. Access to content can also be limited to the “class session” by making a document available, but embedding technology which specifies the objective (rather than subjective) conditions under which a user can open or view it. The range of these conditions might include: (i) a pre-defined number of uses; (ii) a pre-defined interval after the right is granted; or (iii) a fixed interval defined by a start date and end date. Limiting access to certain time periods and preventing unauthorized further dissemination can also be accomplished in a variety of other ways, including, for example, providing the content via a website, accessible only by enrolled students via a password for the duration of the “class session”, that allows only viewing the content and prevents copying, printing or forwarding.

- (ii) Copyright Clearance Center offers a technological protection system in the form of an enterprise software solution for publishers that allows them to protect digitized, copyrighted works and which is used today by more than 20 major publishers.**

In another example of a technological protection system, Copyright Clearance Center has created an enterprise software solution for publishers which allows them to protect digitized, copyrighted works made available on their websites. More than 20 major publishers have currently adopted this solution for hundreds of their publications, including *Dow Jones & Company*, *The New York Times Company*, *The Washington Post Company*, *Knight-Ridder Digital*, *MSNBC*, *Euromoney Institutional Investor*, *VNU eMedia*, *Thomson Media* and the *Institute of Electrical and Electronics Engineers*. CCC believes that this solution, (“Rightslink™” - described in Appendix B - “Summary Description of Rightslink™ Functionality”, offers functionality that meets and exceeds the criteria described above and required in the TEACH Act. CCC also believes that this solution is secure, cost-effective, robust, scalable, user-friendly, extensible, compatible with existing systems, interoperable with industry standards, and easily upgradeable. This particular technological protection system provides an example of a technology being used today by publishers to provide content to users of all types, including distance education programs. Distance education programs may find working within the framework of technological protection systems provided by publishers to be

an effective part of the overall solution which meets the requirements of copyright law in general and the TEACH Act specifically.

- (iii) **However, CCC’s experience shows that a technology-centric solution has severe limitations: it can prevent “fair use” in a wholesale, non-discriminating manner, and any technology protection can always be breached and once breached no longer offers any protection.**

However, it is important to also consider the larger question of inherent limits on the efficacy of these technological protection systems. Can any of these systems ensure a well-functioning market that preserves the finely crafted balance between rightsholder and user “rights”, including those embedded in the critical goals of distance education, as well as in copyright law? Our experience shows that a purely technology-centric solution has the following limitations:

- Technology can prevent “fair use” in a wholesale, non-discriminating manner: Technological protection systems can be used to prevent an entire range of user actions which would very likely be construed as “fair use”. Because “fair use” can only be determined after application of a set of subjective tests tailored to particular circumstances, it is difficult if not impossible to codify them into a set of specific allowable practices for each document in advance of its publication. “Fair use” is an important part of how copyright law seeks to carefully balance the rights given to copyright holders. Many educators fear that widespread adoption of technological protection systems by publishers will significantly diminish their ability to exercise fair use and thus diminish their effectiveness. Technological protection systems can also be used to prevent access to documents that are not protected by copyright – that is, works in the public domain, such as works whose copyrights have expired, government works (often of particular significance in both scientific and social science research) and works which are essentially lists of facts.
- Technology is susceptible to security breaches: Effective security in a technology setting is not a “product” but a process composed of many layers, including software, hardware and people. No piece of hardware or software alone can guarantee the security of any individual document. We agree with the “Report on Copyright and Digital Distance Education”, released by the Copyright Office in May 1999, when it states

“Although many of these technologies are highly effective, none provides absolute certainty. Any code can be broken, and any mechanism can be circumvented, with enough effort and investment.”

And, of course, once circumvented, technology usually ceases to provide any protection. This underscores the importance of education, policy and mindset regarding the immense value to

society of copyright compliance that copyright law in general, and the TEACH Act in particular, attempt to advance.

- (iv) **Technology works to facilitate the copyright system and prevent infringement only when it is encompassed by a larger system of easy access to licensing at reasonable prices, a broad copyright education effort, mechanisms for an ongoing dialogue between rightsholders and users, and the flexibility available only through direct human involvement.**

The experience of Copyright Clearance Center over the past twenty-five years has shown that technology systems unquestionably must be surrounded by a larger system, whether that system is put in place by a rightsholder or a third party processor of rights. These systems will be effective only when they encompass the components highlighted below:

- Easy access to licensing at reasonable prices is crucial to reducing infringement, both as a specific matter by satisfying demand and as a general matter by making compliance a convenient and easy habit for users.
- Similarly, a broad effort to educate users about copyright is crucial, providing flexible protection in a way that technology never can. Only by motivating users to comply and by giving them detailed knowledge of how to comply does the intellectual property community construct a system flexible enough to succeed in an environment where the rate of change is accelerating.
- A mechanism for ongoing dialogue between rightsholders and users is also crucial to maintaining flexibility in an environment such as copyright. For example, CCC regularly sponsors working groups of publishers and users (most often the librarians, information specialists and in-house counsel who are responsible for copyright within institutions) to address practical licensing problems.
- Finally, only direct human involvement gives the flexibility needed to accommodate the innumerable possible rights clearances desired by users. For example, direct human involvement can give the rightsholder the ability to vary pricing as they wish on what are an almost infinite number of combinations of volume, specific collections of rights and specific collections of materials. Rightsholders also gain unique insight into customer motivations and ideas for new products through direct human involvement.

Question 2

What systems have been developed, are being developed, or are proposed to be developed in private voluntary industry-led entities through an open broad-based consensus process?

- (v) **Copyright Clearance Center is a private, voluntary, not-for-profit, industry-led entity which is effective because it: (a) incorporates technology into a larger system as described above, (b) has people who are experts in the fields of rights management, (c) has a scale of operations and network of bilateral relations with foreign RROs which enable unique efficiency, (d) has a goal of making copyrighted works as broadly accessible as possible, and (e) makes its agreements non-exclusive.**

Copyright Clearance Center is just such a system. It was launched by the voluntary efforts of interested parties at the explicit suggestion of Congress and has evolved over time through an open broad-based consensus process to become the leading private, voluntary, industry-led entity in the world for processing rights for copyrighted text materials. As noted in the “Introduction” section preceding these questions, and as described at length in Appendix A, CCC has a twenty-five year history of successfully developing numerous new services in response to requests from rightsholders and users. CCC has been able to do this because:

- It incorporates technology in a larger system that includes easy access to licensing at reasonable prices, a broad effort to educate users on copyright, mechanisms for an ongoing dialogue between rightsholders and users, and direct human involvement.
- Its people are expert in the field of rights management with a unique mandate and commitment to preserving the balance between and enabling commerce among rightsholder and users. These experts have developed systems and procedures which serve both groups well and which continue to evolve.
- Its scale of operations and the bilateral relations built with similar foreign entities allow it to deliver services cost effectively on a global basis. These services would otherwise not be efficient (and in most cases not profitable) on the rightsholder side and would be prohibitively expensive to obtain on the user side.
- CCC seeks to make copyrighted works as broadly accessible as possible while still ensuring that rightsholders are fairly compensated. In contrast to a technology-centric solution, which can prevent fair use in a wholesale and non-discriminating manner, CCC’s services, enabled by technology, allow academic

institutions to access and pay for copyrighted material in a simple and convenient manner, while still allowing these institutions to avail themselves of fair use privileges when appropriate.

- The non-exclusive nature of CCC's agreements enables the convenience of one-stop-shopping for users without limiting the direct relationships in which users and rightsholders may also wish to engage.
- CCC embodies a commitment to service, both to rightsholders and to users, whether academic or corporate. As a not-for-profit organization, the goal of service to both rightsholders and users is paramount at CCC and not constrained or sidetracked by a profit motive.

IV. CONCLUSION

Copyright Clearance Center is pleased to play a role in the growth of distance education in its capacity as the leading clearing house in the world for processing rights for copyrighted text materials. CCC believes that (i) systems designed to perform the actions required under the TEACH Act are, in general, available today, (ii) CCC offers such a system, in use today by more than 20 major publishers, which meets or exceeds TEACH Act requirements, (iii) a technology-centric solution has severe limitations, (iv) technology only works when it is encompassed by a larger system, and (v) CCC is effective because it incorporates technology into a larger system, has expert people, has significant scale, acts to make works as broadly accessible as possible, is non-exclusive and not-for-profit.

The overarching theme which Copyright Clearance Center has sought to emphasize in this submission is that, in this market as with other markets, technology is necessary but not sufficient. All parties to the intellectual property community will benefit from an ongoing effort to use technology as part of a larger system - which includes easy access to licensing at reasonable prices, a broad copyright education effort, an ongoing dialogue between rightsholders and users, and the flexibility available only through direct human involvement - rather than a reliance on technology as the exclusive answer.

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Appendices

- A. *Summary Background of Copyright Clearance Center*
- B. *Summary Description of Rightslink™ Functionality*

Appendix A

Summary Background of Copyright Clearance Center

Copyright Clearance Center was created at the suggestion of Congress in the legislative history of the Copyright Act of 1976, and has been engaged in the licensing of the copyrighted works of others for twenty-five years. We have acted and are regarded as a trusted intermediary between copyright rightsholders and copyright users, making centralized copyright licensing simple and seamless through a variety of programs offering different levels of rights/uses, user privacy/confidentiality, royalties, and security depending upon the respective needs and interests of the parties. As a not-for-profit corporation established by publishers, authors, and users, and continuing to this day with each group represented on our Board of Directors, CCC has created and maintained markets that have served all parties well.

Copyright Clearance Center was launched in 1978 with a simple transactional service by which rightsholders and users could exchange, one-by-one if they chose, permissions and royalties relating to the licensing of photocopying on an as-needed basis (which has evolved into our Transactional Reporting Service, primarily used by businesses and information services). Since that time, in response to requests from both rightsholders and users, we have regularly established new licensing services, including (i) repertory licensing for internal corporate use of photocopies (our Annual Authorizations Service, begun in 1983),¹ (ii) coursepack licensing for academic use (our Academic Permissions Service, begun in 1991),² (iii) various custom-designed licensing arrangements for the electronic use of text within corporations (begun in 1995), (iv) electronic access to coursepack-type materials for education in colleges and universities (our Electronic Course Content Service, begun in 1997), (v) licensing of the republication of materials from one rightsholder into the published works of another, whether in paper or electronic form (our Republication Licensing Service, begun in 1998), (vi) repertory licensing for internal corporate use of digital copyrighted works (our Digital Repertory Amendment, begun in 2000), (vii) a technology protection system which allows publishers to engage in point-of-content licensing of materials published on websites (our Rightslink™ service, begun in 2000 and discussed further in Appendix B), and, most recently, (viii) transactional licensing of electronic uses in businesses and other non-academic markets (our Digital Permissions Service, begun in 2002).

Each of these services has required Copyright Clearance Center to deeply understand the needs of rightsholders and users in the particular market, to construct an appropriate set of licensing documents of maximum acceptability to all participants, and to then solicit the actual participation of thousands and thousands of separate parties, a task that

¹ The Annual Authorizations Service was discussed at some length in both the trial court and appellate decisions in American Geophysical Union v. Texaco Inc., 802 F. Supp. 1 (S.D.N.Y. 1992), aff'd, 60 F.3d 913 (2d Cir. 1994), cert. dismissed, 116 S. Ct. 592 (1995).

² The Academic Permissions Service was discussed at some length in Princeton University Press v. Michigan Document Servs., Inc., 99 F.3d 1381 (6th Cir. 1996) (en banc), cert. denied, 117 S. Ct. 1336 (1997).

all entities seeking to create centralized licensing or digital rights management structures will report is the most daunting one of all. Most directly relevant to distance education is of course our Electronic Course Content Service, a service which is growing at approximately 30% per year. This growth is a strong testament to the demand for convenient copyright licensing systems from the same academic-environment customers who have helped build CCC into by far the largest licensor of rights for academic coursepacks in the United States through its Academic Permissions Service.

The scope and magnitude of Copyright Clearance Center's services have deepened as well as broadened over the past twenty-five years of operations. Today we complete approximately 2 million individual licensing transactions every year (approximately 60% for business and 40% for academic institutions and their students) and a majority of these transactions are processed through our interactive site on the World Wide Web (www.copyright.com) or through electronic data interchange (EDI). We also issue repertory (blanket) photocopy and digital use licenses that cover more than fourteen million U.S. employees of thousands of corporations, professional service organizations, government agencies and not-for-profit entities (such as health organizations and trade associations) each year. CCC also exchanges rights and royalties through bilateral contracts with almost 20 counterpart organizations in other countries (each of them a member of the International Federation of Reproduction Rights Organisations), thereby ensuring the availability of licenses for use of U.S. works in various markets in other countries and for use of foreign materials in the U.S. As a result of these transactional and repertory licenses covering both photocopy and digital uses of copyrighted materials, as well as its bilateral international contracts, CCC collects over \$100 million per year in royalties for distribution, after expenses, to participating rightsholders.

In addition to all these licensing programs, Copyright Clearance Center engages in copyright education as an integral part of the services that it provides to both rightsholders and users. As explicitly recognized by the TEACH Act itself, copyright education is a necessary – and frequently lacking – component of any effort to fulfill the Constitutional mandate of promoting the progress of science and arts through protection of intellectual property. CCC staff members not only provide advice and guidance to customers seeking licenses and permissions but also engage in a thoroughgoing program of copyright education – leading seminars both in person and over the Internet, distributing materials on visits to campuses and businesses and in attendance at trade shows, and answering questions that arrive from all directions. Through efforts such as these, CCC seeks to further serve the balance of interests of both rightsholders and users that has traditionally comprised the copyright system in the United States.

Appendix B

Summary Description of Rightslink™ Functionality

Rightslink™ is a technological protection system that allows publishers to engage in digital content licensing and delivery. Publishers can use Rightslink™ to grant permissions, automatically generate paper reprints, secure high value content and deliver digital content. More than 20 major publishers use Rightslink™ today, including *Dow Jones & Company*, *The New York Times Company*, *The Washington Post Company*, *Knight-Ridder Digital*, *MSNBC*, *Euromoney Institutional Investor*, *VNU eMedia*, *Thomson Media* and the *Institute of Electrical and Electronics Engineers*. Rightslink™ also provides commerce capabilities including credit card processing and corporate account billing/collections. Real-time web based reporting provides the publisher with an up-to-the-minute picture of what content is selling, who is buying it, and generically how they are using it. Rightslink™ is a modular system giving publishers the freedom to implement only the functionality that they need when they need it. The separate but integrated modules are *Permissions*, *Security*, *Reprints* and *Metrics*.

The *Permissions* module allows a publisher to set the business rules for the reuse of their content. For example, emailing an article might be free, republishing it as part of a brochure might cost \$10 per copy, and republishing it in a competing publication might only be allowed after 30 days from the time of first printing. Implementation is straightforward and requires only that a link be placed on the web page containing the content.

The *Security* module of Rightslink™ can be deployed for sensitive or high value content. Designed to prevent the unlawful distribution of intellectual property, it allows the publisher to control distribution of text, images, and photography. *Security* allows content to be viewed in a standard web browser but prevents it from being saved, forwarded, printed, or screen captured without proper authorization.

The *Reprints* module offers publishers the ability to automate requests for reprints, either electronic or paper-based. Customers wishing to order reprints simply complete an order and delivery form. Rightslink™ handles the entire transaction, from order generation through on-line proofing, printing, delivery, billing, account management and the distribution of revenues back to the publisher.

The *Metrics* module offers publishers the ability to obtain comprehensive reporting and tracking on how end users are using content, subject to user consent. Publishers can enforce license compliance and get access to valuable marketing data on what users are reading, printing and forwarding. *Metrics* has been designed with the corporate and academic end user in mind and doesn't require administrative privileges for installation or any type of plug-in. Users access content through any standard web browser while a Java™ applet collects usage data, prohibits certain types of use and manages the decryption and display of the content.