

Digital Rights Management, Copyright, and Napster[†]

Nic Garnett^{*}

Digital Rights Management technologies in the field of copyright protection should meet four objectives:

- give consumers new freedom to enjoy music and other forms of content;
- give copyright owners and other value chain participants the means to manage and protect their rights in published works;
- implement elements of law, such as copyright exceptions, that ensure that rights are managed in accordance with the public interest;
- provide users with the means to manage their legitimate personal rights and interests.

We sketch how these goals can be achieved with current technology for peer-to-peer Digital Rights Management (DRM). This technology can ensure the neutrality, security, commercial reliability, and trusted interoperability of applications and services used to protect and manage rights in all forms of information, including creative works protected by copyright. The rapidly evolving area of digital commerce in information requires a framework of commercial trust comparable in scope, and at least as reliable, as the systems of trust that underpin commerce in the physical world.

1. INTRODUCTION

Great creators are normally great communicators, their individual voices collectively embodying and expressing the values and passions of their culture. Using digital technology expedites the accurate communication of creators' works. When employed in the proper context, digital technology can also support the universe of rights associated with most creative works – the rights of creators, value chain members, users, and societal organizations.

Although digital technology can greatly enhance the communication of creators' works, it can also create severe problems. Improperly used digital technology can deny content creators and their successors a commercial return on their labor and the ability to manage and exploit their own property. The use of digital technology to pirate

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^{*} Address:

Trust Utility, InterTrust Technologies Corporation, 4750 Patrick Henry Drive, Santa Clara, CA 95054, US;
E-mail: ngarnett@intertrust.com; <http://www.intertrust.com> .

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copyrighted content directly undermines basic building blocks of modern society, such as respect for the rights of others, and a proper return for one's creative output and labor. It also directly threatens the stable economic basis necessary for further development of creative art.

The issue is not just Napster and other content sharing systems. It is the changes that digital technology is bringing to the worlds of art, entertainment, and information. It includes the kind of society that electronic communities and digital technology, used in concert with copyright law, can create.

Many people are just now beginning to realize how profound those changes and possibilities are. In under two years, with very little in the way of direct investment, an electronic community of some 60 million Napster file sharers was created. Ordinary consumers used the Napster system to obtain unauthorized copies of copyrighted music without payment – when most of them (at least previously) would never have considered buying pirated CDs in the physical world. Other communities are springing up worldwide where individuals communicate electronically and reject any deference to traditional principles of commerce and property rights.

At times it appears that there is a call to revolt, to “free the content.” Such a call – if extended beyond fair use – obscures the real issues and seeks to legitimize people taking for free whatever they want. Others' rights be damned! But civil interaction between the rights and interests of multiple parties, and the maintenance of a market for goods and services, are basic underpinnings of democracy and commerce. Society will ultimately lose out if they are undermined in the service of convenience and self-interest.

The Digital Millennium Copyright Act was the first in the world to tackle the challenges of digital technology. Yet, for all its thoroughness, we are already past the point where copyright law alone is sufficient for the protection and management of rights in creative works. The ability of the creative community to legally enforce rights in their works has never really caught up with the technologies enabling anybody to make and distribute unlawful digital copies. Some leading academics now say that copyright law will become virtually irrelevant in practice.

Society simply cannot afford to accept copyright law becoming irrelevant. And we cannot afford to set the extraordinary example of dispensing with the rights of content providers because we are unwilling to develop a framework for proper commercial and civil behavior. It is essential that legislators continue to develop the body of digital copyright laws and regulation. We also urgently need a partnership between technology and law to provide a workable economic framework for the vital efforts of our musicians, writers, actors and artists. It must also accommodate and satisfy the legitimate expectations of citizens, including limitations on exclusive rights appropriate for an intelligent public policy (e.g., “fair use”). Such limitations must be sufficiently well formulated to be effectively implementable.

Sophisticated DRM technology can provide mechanisms to help effect this partnership. While technical complexities and challenges abound, the mission is achievable: to provide a combination of technical mechanisms and social compacts that allow the transfer of the basic features of traditional commerce into the digital market place. The means to achieve this goal are now at hand, and the means to continue developing a flexible, free, and safe commercial digital environment are readily accessible.

There are, of course, new and complex commercial, economic and social issues to be addressed. But this must not deflect us from the simple, basic responsibility that we all

have, not to settle for over-simplifications that result in distorting, unfair, and socially and commercially flawed solutions. Rather, we must strive to make the digital world live up to the principles that most of us would demand in the traditional, non-digital world.

The basic principles of granting rights to creators to control the use of their work and of maintaining trusted systems for commerce remain as valid as ever. We should not ignore opportunities that arise for reviewing current copyright limitations and other accommodations that were made before the advent of effective digital rights management, to ensure they continue to serve these principles. We should also be ready to reshape these limitations, where necessary, to fit the emerging digital marketplace. Above all we should be driven by a simple principle: to maintain a free and effective commercial society that, in a balanced fashion, supports the rights of all participants.

2. DIGITAL RIGHTS MANAGEMENT TECHNOLOGY

It is important to understand from the outset that when talking about DRM technology we are not referring to simple mechanisms that, say, carry protected material from a server to a client in return for a payment, and then lock that material to a single device, or to systems that “watermark” content to restrict its use. Such technologies offer nowhere near the degree of flexibility and coverage necessary to support either traditional or new business offerings. Post-delivery, persistent protection of commercial interests, flexibility in use of content across devices and locations, and flexible interaction with content, are all priorities for participants in the content value chain. For example, in the context of music, users want to play it online or offline, and they want the right and ability to combine it into playlists that are used to create a specific personal or group music experience, for use wherever and whenever they wish.

Full-fledged DRM, as conceived by InterTrust, protects content, such as music, on a persistent basis throughout its commercial lifecycle. It does this by binding rules governing content use to the governed content. It maintains this tamper resistant association persistently, regardless of the channel through which the music flows, the platform on which it is played, the number of intermediate handlers of the content, the passage of time, or its physical location. It creates a zone – independent of time, place, or device – where content is governed by technology and where rights-holders, including consumers, are free to express and protect their rights through the freedom to establish differing rules reflecting their individual interests.

Within this technical protection zone, digital information such as music can be offered to consumers via a virtually limitless range of models: sale of downloads; subscriptions; pay-per-listen; superdistribution (consumer A passing material on to consumer B and so on); and file sharing. This freedom can be used to provide a richly diverse range of policies that govern usage, and any consequences of usage, in relation to groups of any nature, including governments and special interest groups.

To accommodate limitations on copyright, special consumption rules can be created, either through law or through accepted practice of rights-holders, for particular consumers or classes of users: for schools and universities; for libraries and archival institutions; and for consumers with special needs, such as the blind. Whatever the needs, whatever the relationship between different participants, the digital information remains persistently protected, yet freely available according to agreed rules of use.

If this protection is to remain effective throughout the life of the content, it follows that it must be possible to change the rules relating to use. Content can have a succession

of different owners; it can change in value; it can be traded for different purposes; it can be used on multiple, different devices; and it can be loaned to other parties. DRM must anticipate and accommodate all these possibilities. Digital information and the rules governing its use by a particular user should exist and move independently of each other, coming together to give effect to the agreement between supplier, distributor, and consumer, and respecting whatever rules may be applied by governments or other institutions.

An efficient system of protection must do more than accommodate a wide variety of business offerings. It must also support the complex value chains through which many of the offerings will be delivered, based on traditional commercial principles. Each actor in the value chain should be able to create the rules it wishes to apply to the material in question, within the scope of authority granted to it by the governing actors in the value chain. A publisher could establish the commercial terms for a work within the authority granted by the author; the distributor could then set rules within the scope of authority granted by the publisher; and so on through the value chain, all in accordance with law and accepted practice.

3. REQUIREMENTS FOR DIGITAL RIGHTS MANAGEMENT

There are several requirements for effective digital rights management of content.

First, it must provide creators of digital information the ability to manage and protect their rights throughout content lifetimes, however the content may be exploited. This means that a DRM system must be secure and resilient to tampering, and certain elements of the protection system must accompany the copy of the work as it is passed from party to party, format to format, platform to platform.

Second, it must support commercial flexibility, so that it can accommodate the arrangements struck between copyright owners, their customers, distributors, retailers and other value-adding participants. This means that a rights management system must provide content creators and/or publishers the means to allow consumers choices appropriate to the commercial circumstance. Consumers must be able to enjoy copyrighted works, and the system must permit consumer arrangements to vary based on the terms agreed to by the participants.

Third, it must provide a neutral and trusted environment, in which technology enforces these agreed-upon arrangements. The rights management technology must be unimpeachably neutral, that is, it may not in any way give an advantage to any hidden interests. Furthermore, it is essential that the rights management technology not give a hidden advantage to the rights management technology provider. Neither a rightsholder, nor a consumer, nor the rights technology provider should be able to alter or tamper with any agreed-upon commercial arrangements or impede the expression of any party's rights or interests.

Unless a rights management system meets these requirements – that is, unless the trust system is itself unquestionably trustable – it will fail to satisfy the legitimate interests of businesses, consumers, and government. Further, a rights management system must maintain its trust attributes regardless of the underlying digital commerce platform, device, or application. Otherwise, it will either

- lack reliability in protecting participant rights, since a loosely coupled array of rights systems, without a unifying maintained rights environment, will readily succumb to hackers, or

- lack interoperability, and consumers and commercial participants alike will lose the convenience and efficiency essential to content commerce, and risk having their interests subordinated to the interests of a party controlling a narrow, proprietary environment.

In the domain of music, advanced DRM technology is now capable of permitting consumers to listen, record, and distribute music online in ways that do not compromise the rights of artists, record labels, and other copyright owners. It is capable of managing the rights in copyrighted works in a secure manner in the context of peer-to-peer distribution. It enables new business models for the distribution of music on-line.¹

Effective DRM solutions require more than sophisticated technology. They also require credibility and trust. That is why we believe that DRM technology providers must restrict themselves to building platforms that support third party businesses. They cannot themselves be distributors of copyrighted works; builders of commercial consumer applications, such as electronic music players; or credit card transaction processors. They must facilitate – but refrain from intruding into – the business models and distribution channels for copyrighted works. Their function is not to dictate the arrangements for digital rights management, but to establish and maintain a platform that ensures the neutrality, security, commercial reliability, and trusted interoperability of services, software applications, and devices used for the protection and management of rights in digital information of all kinds. A trusted, neutral infrastructure is essential to the long-term effectiveness of DRM solutions, and to their acceptance by copyright owners, distributors, and consumers alike.

4. CONCLUSION

DRM technologies can and should give consumers new options for legitimately acquiring and enjoying music and other forms of online entertainment, while ensuring that copyright owners and other commercial participants have the means to manage and protect their rights. Enabling peer-to-peer distribution of music and other copyrighted works without compromising copyright is an obvious example. In our view, acceptable DRM solutions must support the fundamental principle of any effective copyright system: that of striking the correct balance among: protecting the rights and interests of copyright owners, promoting the interests of the wider community, and facilitating the efficient and flexible dissemination of, and greater access to, copyrighted works.

Ultimately, sophisticated DRM technology is about far more than Napster, online entertainment, and copyright law. Policy makers, consumers, and business globally will come to realize that the “Napster issue” isn’t just about music and the Internet. It is about constructing a civil digital society in the Internet Age, where rules created for and by its citizens can be implemented and respected wherever and whenever legitimate interests are in play.

¹ A leading international music group, Daft Punk (<http://www.daftpunk.com/>), for example, recently accompanied the release of its latest album with a novel application of DRM technology. The band is encouraging traditional retail relationships and creating digital economy value for its fans by enabling those fans who have purchased the CD to access the group’s web site and to download additional music – at no further cost, but protected by DRM.